Innovating the development of Work Focussed Learning in higher education

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Portfolio of evidence submitted in partial fulfillment of the requirements of the University of Bolton for the degree of Doctor of Philosophy on the basis of practice.

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Prologue

This section outlines my work and life experience that has shaped my beliefs about learning and teaching.

My years before work can be summarised succinctly as a rural upbringing, educated in a small village primary school followed by a Comprehensive School. This had recently changed from a Secondary Modern School in the old Tripartite System of Eleven Plus examinations. Reflecting back, with a few notable exceptions, this was for the most part an educationally barren experience. On completion of my A Levels at Goole Grammar School, I studied Geology at the then named City of London Polytechnic.

My working life started out in the oil fields of the North Sea working as a 'mud logger' in line with my degree in Geology. This was a short and personally unrewarding episode in my career and resulted in my swapping the oil industry for civil engineering, again making use of my first degree, but this time as a geotechnical engineer. Over a three-year period, I had an enjoyable time and learned at lot about the civil engineering business. However, for some reason this was not satisfying enough and I felt drawn towards working with people in a developmental or educational role. I think, in part, this was a reaction to my own educational experiences that resulted in me wanting to contribute to giving other people better educational opportunities in life. Without wishing to sound too grand, I believe that educational opportunity is a right for all.

As a way of making a change, I gained my teaching qualification in 1992 and set forth as an enthusiastic geography teacher at the Sowerby Bridge High School. The key lesson of the first year of my teaching career taught me how ineffective some schools could be. However, in 1993, I joined Brooke Weston City Technology College (CTC) in Corby, an initiative by the then Secretary of State for Education, Kenneth Baker, to 'transform' the education system to make schools more like the workplace. It was not a philosophical decision to join a CTC, at the time it was an initiative that was very politically charged; for me it was about job security. However, it turned out to be the single most important formative experience in the development of my values and beliefs around learning and teaching.

During this period I became convinced of the following learning, teaching and assessment aphorisms:

1. from the perspective of the educational institution, the most effective way of organising and delivering education is by using team teaching approaches;
2. learning designs can describe a process that allows for differentiation through outcomes rather than through setting of students by ability for constraining inputs;
3. effective feedback should include the formal and informal, self, peer, and teacher evaluation;
4. with the support of teachers, learners can, from an early age, identify their own personal learning trajectory.

These ideas have informed the subsequent work that forms the basis of my PhD claim.

Being a new school, the Principal of the CTC was able to establish a strong ethos amongst students and staff alike, and embed teaching practices that included team teaching, inquiry based learning, differentiation through outcome, and the use of emerging Information and Communication Technologies (ICT) to underpin these approaches. To set this in context, the school was designed for flexible group working and, from 1993 was equipped at a high ratio throughout with Macintosh LC III (Performa 450) computers boasting colour monitors and the integrated ClarisWorks 2.0 productivity applications. In 1996, this was followed by the arrival of Internet connectivity that allowed access to resources on the World Wide Web. All of this had a big impact on my thinking about learning and education and the affordances that ICT offered by way of allowing a greater range of ways for learners to achieve. Around this time, I began a part time Masters in Education at the University of Leicester. Reflecting back, this was the start of a process of moving my perception as teaching as a craft to a more informed and research led theoretical understanding.

In August 1998, another important milestone marking development in my professional life came when I joined the Tesco SchoolNet 2000 project, run by the Ultralab research unit at Anglia Polytechnic University (APU), through a

secondment from the CTC. The job itself required me to support schools in the East Midlands in getting school children to undertake inquiries, linked to the National Curriculum and then publish them on the web through a form based interface – not dissimilar to the now familiar blog.

As this project drew to a close in December 1999, I was fortunate to be employed by APU in the Ultralab on the Talking Heads project, as a part of the establishment of the National College for School Leadership (NCSL). It proved successful in offering new forms of frequent access to knowledge for headteachers and senior managers in schools who, because of their busy schedules, were unable to readily make use of face-to-face courses that would have met their changing needs. My role in this was initially as an online facilitator of communities, and then as one of the project managers where I had a strategic input, including negotiating with the NCSL on a wide variety of online initiatives and coordinating the activities of the facilitation team of around 20 people until the end of 2003.

This was my first experience of working in online communities to support learners, who were educational professionals, on both formal programmes and in non-formal communities. The enduring memory of this experience was the difficulty in making the potential value of online communities a reality. The exception being when there was a clear purpose and requirement to participate or where there was a high profile event and limited activities.

These reflections were sharpened by the continuation of my Masters at Anglia Ruskin University, culminating in 2004 with a dissertation, presented online, which was, 'An enquiry through personal experience into new technology and an alternative approach to MA dissertation'. This was based on my work-practice at the time and provided a starting point for the central premise of my PhD thesis that, 'work can form the basis for learning, which can then be accredited by Higher Education'.

What followed were three other significant projects that form the basis of my claim for PhD by Practice between January 2004 and July 2012. My motivation for undertaking the PhD was that I wanted to gather my experiences of projects in different contexts into a credible body of thought, that has been critically evaluated

and reflected upon. This is to consolidate my knowledge and prepare me for a continuing professional and academic career.

Abstract

This thesis presents my practice as an action researcher in higher education (HE) over a ten-year period, developing courses for students who were unable to take advantage of the existing provision in the institutions in which I worked. The knowledge I gained and practices that I developed contributed to a series of cycles of action research and the conclusions I draw at the end of the thesis are used to propose a further cycle. The curricula that I developed and delivered were designed for students who had a strong commitment to their work and wanted to improve it, but at the same time wanted to gain academic qualifications; the central premise behind this work being that, 'work can form the basis for learning, which can then be accredited by higher education'. Although study was based around the work that a student did, their employer had no formal relationship with the university offering the courses. Students were attracted to a package that offered personalised and flexible learning at a cost that was affordable to them. The contributions to knowledge that I make relate to the organisation of teaching, the nature of the innovative curriculum design and the collaborative curriculum change processes carried out. Using this approach, learners make improvements in their work context to gain academic credit from the scholarly practices they have applied to inform and evaluate their activities. The findings suggest that a curriculum design using a teaching and learning strategy based on action-inquiry, delivered entirely online, can be successful in enabling students to work full-time and gain academic credit at a full time rate. However, the results also revealed that there are significant institutional barriers that need to be overcome to implement such a curriculum design that is radically different in having a non-traditional curriculum and unique ways of working. The key recommendation from this body of work is that radical curriculum innovations in HE are more likely to be successful if a separate business unit is established with control over its own capability development. By having control over processes, staffing, and a technical systems infrastructure, a separate business unit is able to respond to the new and different demands placed on it, developing its own culture and identity that fit with a new business model.

1.0 Introduction

1.1 Section Summary

This section first explains the approach of Doctor of Philosophy (PhD) on the basis of practice including some of the methodological challenges it brings. I briefly outline my original contribution to knowledge that forms the basis for my claim for a PhD on the basis of practice with the title, 'Innovating in the development of Work Focussed Learning in higher education'. The background to my practice is given, followed by a description of the context and narrative of my work and employment. I explain and justify my methodological approach and the basis of my claim for an original contribution to knowledge is introduced, and the further sections of my submission are outlined.

1.2 Approach of PhD by Practice

My choice of the PhD by Practice route was made possible by the validation in 2008 of Regulations and Procedures governing the award of the degrees of Doctor of Philosophy by Practice at the University of Bolton. The university is not alone in adopting new approaches; there is sector-wide interest in the development of new forms of doctorate as institutions seek to respond to external pressures for change by developing new routes and provision, albeit with slow sector-wide adoption (Park 2005, 201-202). Costley and Leicester (2011) review different types of PhD for professionals and identify different examples as work-based doctorates with particular characteristics:

> Candidate-driven, emerges from context-based concerns, effects professional development for the candidate, and uses an (action-oriented) research perspective to create practical development and change (ibid., 259).

The above description could be applied equally well to the model of Work Focussed Learning that has been at the heart of my work in developing new courses. The learner in their work context is the starting point and it is they who identify their action-oriented learning needs that form the curriculum, rather than an academic discipline or professional subject.

Costley and Lester refer to a study based on a leading provider of work-based doctorates that examined the characteristics of the projects undertaken by students and from this identify four types. The fourth fits well with a PhD on the basis of practice:

> A fourth group of outputs (18%) were essentially syntheses, taking collections of substantial work that ranged from closely-related projects to outputs over a substantial part of career [sic], and reflecting on them to produce material for dissemination or with which to take forward a development or agenda (2011, 262-263).

My own doctoral practice is summarised well by the above quote. In practical terms, the approach I took has involved me in assembling my past ten years of research and scholarly practice into a portfolio, and with this accompanying commentary I am seeking to bring coherence to the body of work. The portfolio includes peer-reviewed papers, internal documents, project reports and a reflective journal maintained as a blogs. In my claim, portfolio elements are identified by square brackets with a reference to the portfolio and page number thus, [P5 p33].

It is my intention that this PhD submission, based on my portfolio, is reflective and scholarly in nature to address the UoB criteria for PhD by practice in that it, "contextualises, analyses and discusses the portfolio and sets out the case for it to be considered an original and independent contribution to knowledge" (UoB 2008, 3). The regulations require a minimum of 10,000 words for this form of PhD. This thesis has around 30,000, and it should be considered along with the portfolio of work that accompanies it.

I wish to make clear at the outset that in authoring my claim I encountered a significant methodological challenge that is probably inherent in all PhDs by Practice where the work was collaborative in nature. This difficulty lies in the identification of the extent of the contribution that I can claim to have made, and the nature of practice that makes, "an original and substantial contribution to knowledge" (ibid., 2), as they include contributions that were mine alone, as well as those that were shared and developed in collaboration with others. To partially address this, in the portfolio I have identified a percentage of the work that was

mine and have agreed this with my collaborators. Another complication is that in some cases contributions were theoretical in nature, and in other cases resulted in the development of innovative practice.

1.3 My Original Contribution to Knowledge

My contributions to knowledge are explained and developed in chapters 3-7 of my thesis, which include, a description of my work practices that they are based upon. These are outlined in Section 1.7. It is probably helpful to outline my contribution at the outset:

1. conceptual development of new working practices in higher education that delivered the model of Work Focussed Learning. This was developed through my work on the Ultraversity project, and is discussed in Section 3, Organisation of Teaching;

2. the IDIBL Framework as a strategic mechanism to bring about cross institutional adoption of the model of Work Focussed Learning. This was developed through my work on the IDIBL project, and is discussed in Section 4, Innovative Curriculum Design;

3. cybernetic analysis of the pedagogy of the model of Work Focussed Learning in delivering a personalised curriculum. This was developed through my work on the IDIBL project, and is discussed in Section 4, Innovative Curriculum Design;

4. critical analysis of institutional barriers to adoption of the model of Work Focussed Learning. This was developed through my work on the IDIBL project and is discussed in Section 5, Collaborative Curriculum Change; and

5. critical analysis of the challenges faced by radical curriculum innovation in higher education developed as a synthesis of the above contributions and is discussed in Section 6, Summary of Conclusions and Reflection.

In contribution 5, I am seeking to understand systemic change in complex human systems – why is it so hard? This is the culmination of this phase of my professional practice and is addressed in the concluding Section 6, Summary of Reflection and Conclusions.

1.4 Background

The background to my PhD by practice is outlined, including my recent employment history, motivation for undertaking this work, and the context and narrative that shows the progression between the projects I have worked on.

1.4.1 My Employment

I am currently employed as reader in Inquiry-based Learning in the Institute for Educational Cybernetics (IEC) at the University of Bolton. I have held this post since August 2007. Prior to that I was employed at Anglia Ruskin University (ARU) between January 2000 and December 2006, working in the Ultralab research unit. My practice as an innovator in higher education (HE) spans these two institutions over the nine years from 2003 to the present. Both of these institutions have strong traditions of innovative curriculum developments for undergraduate provision, with ARU at the forefront of developing approaches to negotiated, practice-oriented curricula in the workplace through initiatives such as the ASSET programme (Dann 1990, 53; Winter and Maisch 1996).

1.4.2 My Motivation

In the work I have undertaken, my concern has been to develop new approaches in HE to meet the needs of learners not attended to or catered for. This general interest in providing educational opportunities has its roots in my teaching career in secondary schools, and is further informed by a belief that opportunity for education and personal growth is a right for all, as explained in the Prologue. Personally, I have been fortunate to be able to align my work with my values, and when the opportunity arose to develop these values in HE, I decided to pursue it.

1.5 Context and Narrative

A chronology of the three curriculum development, action research projects and the aspects of my practice that were developed in them are shown by Figure 1, The Doctoral Journey. Although there is some correlation between the practice aspects and individual projects, there is also significant overlap between theory, and reflective practice that is consistently present throughout each cycle of action research, each being informed by, and building on the preceding. The common

thread running through the projects is the proposition that, 'work can form the basis for learning, which can then be accredited by Higher Education'. This applies to the work of the projects and the creation of this PhD submission.
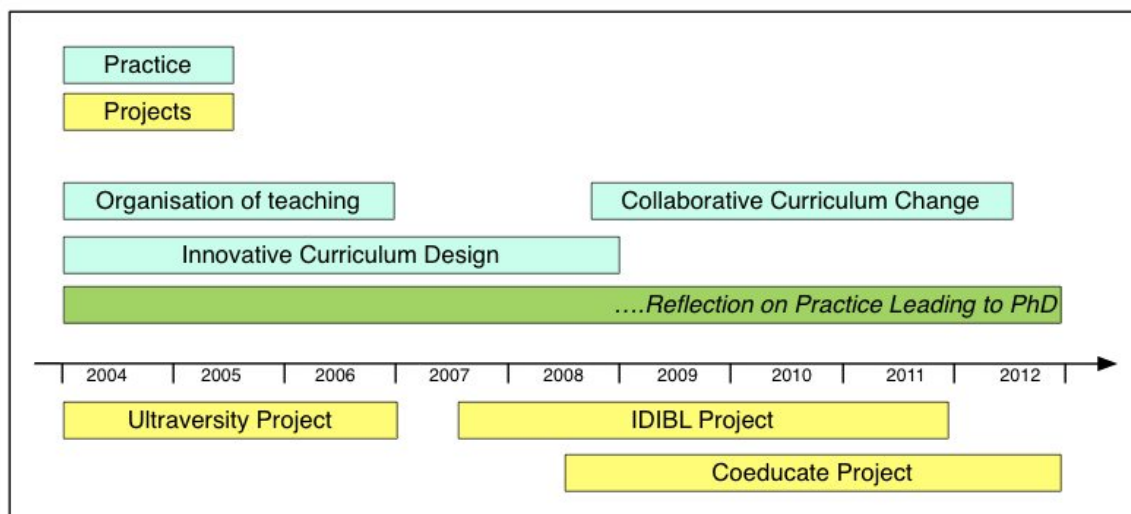
Figure 1. The Doctoral Journey

This submission constitutes for me a cycle of reflection and a planning opportunity for my career next steps. In alignment with the action research approach I have pursued, for dissemination purposes, I have chosen to publish my PhD as a website. This approach has allowed me to 'walk-the-talk' by using an action research approach in my own work as the basis for my submission, in much the same way that projects I have worked on require learners to use an action research approach for their study.

Throughout this practice, I have often worked with like-minded others who challenged and debated not only the design of Work Focussed Learning, but also the development processes employed to achieve it and bring about a change in the system. This constituted a double-loop learning in my action research (Argyris and Schon 1978, 2-3) - hence the key verb in the title 'innovating' applies not only to the courses developed, but increasingly and consciously to the development processes applied to effect change.

1.6 Methodological Approach

My academic practice is described and my overall inquiry strategy set out, and this is followed by and explanation of how I constructed my PhD claim.

1.6.1 My Practice

The methodological approach for my PhD by professional practice has evolved as my academic practice has matured. In 2003, my experience of academic research was limited, and consequently I had contributed to only a few academic papers. At that time, I would describe myself as consciously working in a critically reflective way within a constructivist paradigm where the credibility of my interpretations to others and myself was the most important factor in my work. Over time, my competency as a researcher developed. I gained a Masters in Education that required significant engagement with methodological considerations. As I became the lead author for peer reviewed papers, the range of research methods for collecting data and research strategies that I used broadened. I took a pragmatic approach selecting the research tools and strategies to address the task at hand, taking the stance of the qualitative researcher as bricoleur (Denzin and Lincoln 2005, 4-5). My portfolio of publications in peer-reviewed journals, weblog entries, other published documents, conference presentations and reports demonstrate this.

1.6.2 Overarching Inquiry Strategy

In undertaking my work, I have been guided by the principles of action research (AR) as described by Kurt Lewin in a paper in 1946, *Action Research and Minority Problems* (Lewin 1973, 205-6), who gave momentum to the pivotal idea of planning cyclical interventions for improvement. This is based on initial fact finding around an idea, planning an overall strategy and identifying first steps, taking action and then evaluating the outcomes, and using this to inform modifications to the overall plan and informing next steps. In particular, in relation to my work practice, I subscribe to the notion that, "Research that produces nothing but books will not suffice" (ibid., 203). The action research approach has provided me with a way of establishing coherence in my work over time, with each new cycle of activity informing the planning of the next and so on.

I also subscribe to the idea that AR should be embarked upon as a "systematic enquiry undertaken to improve a social situation, then made public." (McNiff and Whitehead 2009, 11), and this is evidenced by the online publication of this PhD claim. As a qualitative researcher, it is incumbent on me to make clear my own

values that are a part and parcel of the research I have undertaken, determining the actions I took and colouring my evaluation of them. In the Prologue to my submission, these are further outlined and explained.

For the purpose of my thesis it is also my aim to develop theory, and the validity of the action research I have undertaken comes, in part, from the extensive collection and analysis of qualitative data including online surveys, questionnaires and semi-structured interviews that I have carried out as part of my work, but most importantly through the shared development of knowledge with critical collaborators. Throughout the period I have maintained an online reflective journal to note critical incidents for subsequent reflection and analysis. Reference to action research will be found throughout the portfolio accompanying this claim in relation to my practice and the curriculum that I designed for learners as students in HE. The implications of this approach are discussed below.

1.6.3 Locating my Inquiry Paradigm

Guba and Lincoln (1994,108), use three questions to identify the 'basic beliefs' that underpin different inquiry paradigms:

1. The ontological question. What is the form and nature of reality and, therefore, what is there that can be known about it?

2. The epistemological question. What is the nature of the relationship between the knower or would-be knower and what can be known?

3. The methodological question. How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?

Based on these questions, Guba and Lincoln (ibid.) identify four paradigms: positivism; postpositivism; critical theory; and constructivism. In 2005 (195), based on the work of Heron and Reason (1997, 274-294), Guba and Lincoln adopted inquiry into their schema as a fifth paradigm. It is this inquiry paradigm that I identify as most relevant to the action-oriented work and research that I have undertaken. However, as pointed out by both sets of authors, there is much commonalty with the basic beliefs of the constructivist paradigm. Guba and Lincoln (2005, 192) point out that there has been a dramatic growth in practitioners

who follow new paradigms, those that are non-positivist and further that these paradigms are beginning to "interbreed".

In aligning myself with a particular inquiry paradigm, I am bound in my thesis to explain its relevance to the particular approach to research that I have undertaken. The implications of this for the nature of my contribution to knowledge are discussed below using the three questions identified by Guba and Lincoln as well as a fourth question of axiology, or values, added by Heron and Reason as part of their characterisation of an inquiry paradigm. I address each of these questions in turn.

1. "Ontology: participative reality - subjective-objective reality, co-created by mind and given cosmos." (Heron and Reason 1997, 289). I subscribe to the belief that it is our active participation in the world that, "is the ground of our being and knowing" (ibid., 276), and that our understanding of this interaction is framed by our own prior experience. Thus, I believe that we learn and come to know through a process of 'negotiation of meaning' and that those I have worked with, give validity to knowledge created through their criticality and sense making of their actions. Although for the purpose of my thesis I am bound to express my knowing using propositional language.

2. "Epistemology: critical subjectivity in participatory transaction with cosmos; extended epistemology of experimental, propositional, and practical knowing; co-created findings" (Ibid., 276). Heron and Reason (ibid., 280-283) identify for ways in which we articulate what we know about the world "experiential, presentational, propositional, and practical". Their key argument is the importance of us recognising the interrelationships between the different ways of knowing and how at a given point in time, the way in which we know something. Their view of knowledge places the practical that is 'knowing how to do something', as the most substantial way of knowing, as it expresses itself by using the other three forms. As an action researcher, it is this ability to bring about positive change that had driven my work, and I would argue that my claim demonstrates this combination of forms of knowledge in that the nature of my original contribution to

knowledge (portfolio section 1.3) was: developed from my experience; is presented through the artefacts in my portfolio, informed through the use of existing concepts and theories as well as making its own theoretical contribution to understanding curriculum design, curriculum change, and the organisation of teaching; and its value and significance is manifest through the practical actions I have taken with others. The evidence of the quality of this knowledge is demonstrated by the impact that transformed participants (teachers and students) experiences of higher education where it continues to be developed, refines and accumulated. I believe that in my thesis, I demonstrate the intrinsically collaborative nature of the work I have undertaken.

3. "Methodology: political participation in collaborative action inquiry; primacy of the practical; use of language grounded in shared experiential context." (Ibid.) There are many different approaches to action research. Broadly, I would argue that the work I have undertaken is best described as Cooperative Inquiry (Heron and Reason 2006, 144-152), although no one model was slavishly followed "grounded in our experience, expressed through our stories and images, understood through theories which make sense to us, and expressed in worthwhile action in our lives" (Ibid., 149). At its heart, Cooperative Inquiry recognises an approach where people with similar concerns work together to make sense of their world, develop creative ways of considering problems and learn how to bring about change in things that they want to do better. Heron and Reason (ibid.) identify two participatory principles: epistemic participation, "propositional knowledge that is the outcome of the research is grounded by the researchers in their own experiential knowledge"; and political participation, "research subjects have the basic human right to participate fully in designing the research that intends to gather knowledge about them." This approach rejects the division of practitioner and researcher into different roles. Instead, it sees inquiry as social process that is emancipatory in that it tries to remove limiting constraints on those who participate as both researchers and themselves as the subject of the research. In the three projects that form the basis of my thesis, from the outset it was made clear that they were to

follow an action research approach and that anyone who chose to join in did so on an equal footing with the existing project team, co-owning the inquiry being undertaken.

4. "Axiology: practical knowing how to flourish with a balance of autonomy, co-operation and hierarchy in a culture is an end in itself, is intrinsically valuable" (Ibid.). Heron and Reason (1997, 288) express their view of axiology through a spiritual lens. However, for me the significant purpose of inquiry is a very practical one that is to engage in society to support the development of capabilities in those who are less able to take ownership and control of their own circumstances to develop the agency to so do.

1.6.4 Constructing my PhD Claim

In this submission, I attempt to demonstrate the achievements in my practice, and how this contributes to knowledge by generating explanatory theories and models. This is done with the aim of understanding what happened to inform future cycles of my action and as a source of inspiration for others.

In testing that the claims for knowledge stand up to scrutiny, I have extended the questions below, from McNiff and Whitehead (2009), as a robust set of criteria to help me judge the quality, validity and effectiveness of my submission:

1. is the development of my practice clearly explained?
2. am I confident in the interpretations I arrive at?
3. are my explanations grounded in literature and thereby convincing to others? and
4. have I made an original contribution to knowledge and practice?

Winter, Griffiths and Green (2000) suggest criteria, based on an empirical study, on "how to produce and judge practice-based PhDs", motivated by their observation of the development and growth of practice-based doctorates and the challenge this posed for assessment. A minimum set of high level criteria are suggested for a practice based PhD:

1. be a report of work others would want to read;
2. tell a compelling story articulately whilst pre-empting inevitable critiques;

3. carry the reader into complex realms, and inform and educate him/her;

4. be sufficiently speculative or original to command respectful peer attention. (ibid., 36)

In addition, they indicate in a more prosaic additional list developed from their own experience:

1. contains innovative insights into practice;

2. of value to help other practitioners improve their performance;

3. shows clear evidence of professional development and innovation;

4. contains evocative, detailed description of a very high level of professional creativity, sensitivity and responsibility;

5. articulates clearly the relationship between the research role and the practitioner role. (ibid., 32).

I suggest that these and similar criteria would be valuable to readers of this PhD claim when considering its worth.

1.7 Basis of my Claim

Three action research projects are outlined in Table 1 along with a brief description of my role in the projects and the practice that I developed that forms the basis of my PhD claim.

Project title	My role and practice	Project context
Ultraversity 2003-2006	My **role** was as the director of the Ultraversity project leading a multidisciplinary team of 24 [P3; P4]. This included learning facilitators, software and media developers, and administrative support staff.

My **practice** was managing the academic team (thesis Section 3) using an action research approach. This approach helped the team respond effectively to the | The Ultraversity project was established to develop a new model for undergraduate HE to "reach the people that normal residential universities can't" [P1]. To do this, a particular set of pedagogical and organisational arrangements were made: the course was delivered entirely online; day-to-day work is the focus of students learning, rather than a subject or academic disciplines; and the use of the action-inquiry process for teaching and learning. This approach makes it possible to work full-time and also gain academic credit at a full-time rate. The impact of this work came through the BA (Hons.) Learning, Technology and Research degree programme that graduated 140 students in its first full cohort [P16]. This approach later became labelled as Work |

	Ultraversity curriculum design and innovate on working practices, and supporting teaching, learning and assessment.	Focussed Learning [P20], attracting media attention as 'something' different in HE [P7; P14; P15].
IDIBL 2007-2011	My **role** was as an innovator and implementer of the Interdisciplinary, Inquiry-based (IDIBL) framework [P18; P25]. My **practice** was the innovative curriculum design (thesis Section 4) of the IDIBL Framework as an approach to develop Work Focussed Learning courses across the institution.	The Interdisciplinary Inquiry-based Learning project (IDIBL) was developed at the University of Bolton, and funded internally. It was an institution wide change initiative for the development of new programmes that are based on the ideas of Work Focussed Learning developed by the Ultraversity project. A description of the pedagogical approach including module descriptions as part of a framework was developed and validated. The significance of this approach is that it offers a change mechanism that enables the agile development of new programmes in different faculties re-using the validation documentation including module specifications. In addition, it offers a solution to the problem of managing the wide variety in student needs who are studying in the work place [P21 p70; P23 p7; P33 p266-272]. The impact of this work has been felt across the institution as a stimulus to new programmes and ways of thinking about curriculum design.
Coeducate 2008-2012	My **role** was as a project manager. My **practice** was collaborative curriculum change (thesis Section 5) activities and the evaluation and analysis of the implementation of the IDIBL Framework.	The Coeducate Project sought to understand the nature of curriculum innovation and change across the university to improve the effectiveness and efficiency in developing provision. The need for such a project was made apparent by the IDIBL project, which encountered numerous barriers including structural, business processes, and culture and ways of working. The work included process redesign and staff capability building with the deployment of supportive technology to help achieve this.

Table 1. My Role, Practice, and Project Context

As I reflected on the different cycles of my practice as a part of the PhD application process, I have identified particular aspects of the work that I have undertaken, that I believe are original contributions to knowledge, and offer significant opportunity for further analysis and reflection for my PhD submission. These are discussed in Sections 3, 4 and 5 of this thesis.

1.7.1 Ten Years of Action Research

Figure 2 gives an action research overview of my inquiry over a ten-year period under the umbrella concept of work forming the basis for learning that can be accredited by higher education. It seeks to make the connections between the questions that drove the cycles of inquiry, indicate the propositional forms of knowledge that were used to support the planning and identifying the different types of learning or knowledge developed from the results and impacts of the actions and methods deployed. It is partial in nature, but is designed to make concrete the scope of the inquiry I have undertaken and point to the challenges and future challenges for the type of curriculum innovation I have developed.

Action Research Overview

Work can form the basis for learning, which can then be accredited by Higher Education

1. Questions

What **local organisational arrangements and work practices** are required to deliver online supported, inquiry-based learning

What strategic mechanism can enable institution wide take-up of online supported, inquiry-based learning

How can the institution be **more responsive to new and innovative curriculum developments** such as the model of Work Focussed Learning

Why has the institution **struggled to successfully mainstream** the model of Work Focussed Learning

2. Theory

Modelling desired student behaviour (Brockbank & McGill, 1998)

Theory of adult learning, **Andragogy** (Knowles, 1980)

Communities of Practice (Wenger, 1999)

Cybernetics and the concept of Organisational Variety (Beer, 1985)

Soft Systems Methodology, a form of action research (Checkland, 2006)

Theory of Disruptive Innovation (Christensen, 1995)

Enterprise Architecture (The Open Group)

Pivotal idea of planning **cyclical interventions** for improvement (Lewin, 1946)

Patchwork Text Assessment (Winter, 2003)

Double Loop Learning reflection on constraints (Argyris and Schön, 1978)

Ultraversity project

IDIBL project

Coeducate project
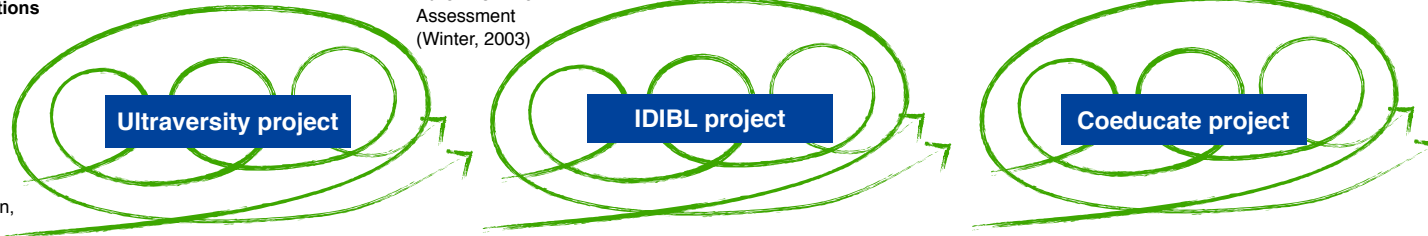
3. Methods & Action

Iterative development of learning activity design

Developing team teaching approaches in the online community of inquiry

Validate the **IDIBL Framework**

Reflective journals

Staff training to **socialise** new pedagogical approaches

Work in committee structures to embed framework in **quality mechanisms**

Course validation and **re-validation** in second year

Data collected and used in **peer reviewed journals**

Work with colleagues to **use the Framework**

Staff interviewed and data used in **peer reviewed publications**

Use of organisational **modelling techniques**

4. Learning

New working practices to support online, inquiry-based learning

Interview process to identify applicant characteristics as the '**right-fit**'

Approach of **Patchwork Media** Assessment

Codification of the model of **Work Focussed Learning**

Analysis of online community of inquiry using concept of **variety management**

Exemplification of Theory of Disruptive Innovation; **structural & organisational arrangements**

Identification of **strategic choices** for curriculum innovation

5. Impact

Model of **Work Focussed Learning** re-used in different institutions

First cohort of **150 students** graduate in 2006

Suite of courses on Regeneration and Sustainable Environments validated and run

Masters programme, **Learning with Technology** run

Framework acted as **wider inspiration** for new curricula

Institutional wide, improvement of validation processes

6. Challenges and Future Questions....

Undergraduate HE is offers a face-to-face experience built around disciplines and subject specialisms & **existing staff and students value and prefer this**

How can **teaching practices in existing HEI be modernised** to capitalise on the opportunities of new technologies

What new forms of institutions are required to effectively operate radically new approaches to HE

Figure 2. Action Research Overview

1.8 Organisation of PhD Sections

The PhD by practice route is in its infancy at the University of Bolton and as such there are few models to emulate. I have, therefore devised my own 'architecture' that meets the requirements of the regulations. I have briefly outlined the different sections below to indicate their purpose.

Prologue. A description of my journey from school teacher to Higher education curriculum developer. This section gives a pen portrait of myself to help the reader understand my motivation and experiences of learning and work.

Abstract. An outline of the thesis including context, methodology and findings.

Section 1 - Introduction. In this section, I give an overview of my thesis and prepare the ground for the reader to understand the following sections that make up the substantive part of my claim.

Section 2 - Conceptual and Theoretical Framework. In this section, I explain the key concepts that I have used to identify and reflect upon my practice and indicate the key theories that contribute to an explanation and understanding of them and how my work practice is tied together.

Section 3 - Organisation of Teaching. In this section, I reflect on the teaching practices and productivity arrangements developed to support the model of Work Focussed Learning in the Ultraversity project from the perspective of the manager of the academic team. To guide the development of an original contribution to knowledge, I have reflected on the question, what are the organisational implications for higher education institutions seeking to develop online, distance, learning? This led to contribution 1, identified on page 9.

Section 4 - Innovative Curriculum Design. In this section, I describe the IDIBL Framework and apply cybernetic thinking to analyse its pedagogical and organisational characteristics and evaluate it as an approach to organsiational wide curriculum development. To guide the development of an original contribution to knowledge, I have reflected on the question, what are the characteristics of the IDIBL Framework that make it a useful tool for bringing about

institutional wide curriculum change? This led to contribution 2 and 3 identified on page 9.

Section 5 - **Collaborative Curriculum Change.** In this section, I identify the challenges faced when seeking to implement radically new curriculum in existing departments through my practice in collaborative curriculum change, supporting colleagues to develop their own programmes using the IDIBL Framework. To guide the development of an original contribution to knowledge, I have reflected on the question, what were the challenges when implementing radical curriculum innovation through the IDIBL Framework? This led to contribution 4, identified on page 9.

Section 6 - **Summary of Conclusions and Reflection.** This section draws together the previous sections and offers some explanations about why some practice was more successful than others and how to set up the conditions for radical and disruptive innovations. To guide the development of an original contribution to knowledge, I have reflected on the question, what are the strategic choices when implementing radical curriculum innovation in higher education? This led to contribution 5, identified on page 9.

2.0 Conceptual and Theoretical Framework

2.1 Section Summary

This section identifies the concepts and theories that have informed my reflections, analysis and evaluation of my work selected for this claim. They were identified through a process of reflection in the writing up of my claim, are introduced here as an overview, and are revisited in subsequent sections where I apply them to my practice.

2.2 Conceptual and Theoretical Framework

Figure 3 is an illustrative diagram showing the concepts (blue) with related key theoretical approaches and authors (yellow) that have been most valuable to me in identifying my original contribution to knowledge and practice innovating on Work Focussed Learning in higher education (HE). Although theoretical approaches are attributed to a particular concept, they are not restricted to a particular cycle of action research. These concepts and theories are introduced in turn.
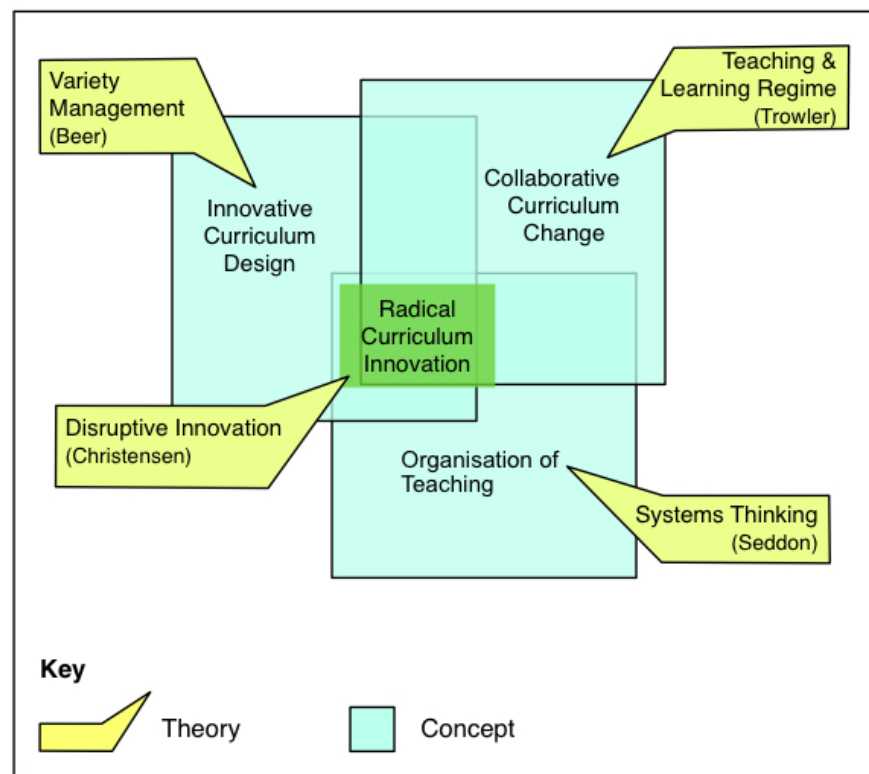
Figure 3. Conceptual and Theoretical Framework

2.2.1 Organisation of Teaching

In my role as the Ultraversity Project Manager (thesis table 1, 21-22), I had the opportunity to establish a new approach to the organisation of the delivery of a degree programme that used the model of Work Focussed Learning [P20 p97; P21 p66]. This is the focus of my first original contribution to knowledge: the conceptual development of new working practices in HE that delivered the model of Work Focussed Learning.

In practical terms, managing the Ultraversity project using an action research (AR) approach meant that choices about the organisation of teaching for the model of Work Focussed Learning was shared with those undertaking the work of teaching and supporting the students.

Although not known to me when I adopted an AR approach, there is a relationship to systems thinking which was introduced to me when I joined the Institute for Educational Cybernetics in 2007. Flood (2007, 117-143) highlights this connection; he makes the point that thinking in terms of whole systems develops the basis on which to undertake action research. This requires an understanding about the inherent complexity of social systems brought about by individual interpretations and the relationships between different parts of a system rather than seeing 'problems' in isolation that can be directly controlled. Modelling of a situation to a useful level of generalisation is a tool of systems thinking that is of great help to action researchers.

Reflecting on my experience managing the Ultraversity project, I have found Seddon's analysis informative, particularly his critique of 'deliverology' (2008, 108-120), as an approach to the improvement of the public services, championed by Sir Michael Barber when head of the Blair governments Delivery Unit. Deliverology is founded on the idea that hierarchical target setting and monitoring, a command and control approach, leads to improvements. It is argued by Seddon, and I agree, that command and control is detached from the reality of the context in which the work is being undertaken resulting in poor decision making, and contributing to ineffective organisations (ibid., 70-71).

These ideas are explored further in Section 3, Organisation of Teaching.

2.2.2 Innovative Curriculum Design

In my role as curriculum innovator and implementer of curriculum design (thesis table 1, 21-22), I led the development of a strategic mechanism in the IDIBL Framework [P23] designed to bring about cross-institutional adoption of the model of Work Focussed Learning. This is the focus of my second and third original contribution to knowledge: a strategic mechanism to bring about cross institutional adoption of the model of Work Focussed Learning; and a cybernetic analysis of the pedagogy of the model of Work Focussed Learning in delivering a personalised curriculum.

The concept of Variety Management is important in Cybernetic analysis and is used as a way of thinking about the complexity of a system. This idea as applied to the regulation of complex systems was developed by Ashby and applied to the management of organisational structures by Stafford Beer (1985) in his Viable System Model (VSM) for control between different parts of a system and its environment, constituting feedback loops.

An analysis of the pedagogy of the model of Work Focussed Learning, using the cybernetic concept of variety, illustrates how the curriculum design addressed the challenge of how to personalise a curriculum for the complexity exhibited by numbers of diverse learners, within limited resource constraints.

I use these ideas in Section 4, IDIBL Project - A Cybernetic Analysis of a University-wide Curriculum Innovation.

2.2.3 Collaborative Curriculum Change

In my role as a project manager, I sought to bring about collaborative curriculum change using the IDIBL Framework (thesis table 1, 21-22). I undertook an analysis of institutional barriers to adoption of the model of Work Focussed Learning through reflecting on this experience, and through gathering empirical evidence from colleagues. This is the focus of my fourth original contribution to knowledge: critical analysis of institutional barriers to adoption of the model of Work Focussed Learning.

The change process that has been at the forefront of my practice has been informed by Communities of Practice (Wenger 1999), which is based on the idea that negotiation of meaning and reification of terminology are the heart of the development of a community with a shared practice, and within a common domain.

More recently, I have better understood this dimension through the idea of Teaching & Learning Regimes (Trowler 2008, 61-114) in HE, where the subject group level is identified as the common enterprise around which individuals and groups coalesce and where change can happen. This is explored in Section 5, Coeducate Project - The Challenge of Radical Curriculum Innovation in Higher Education.

2.2.4 Radical Curriculum Innovation

In Section 6, Summary of Conclusions and Reflections, I apply the theory of Disruptive Innovation (Bower and Christensen 1995) as a lens to consider my work in curriculum development, and undertake an analysis of the challenges that may be faced by a radical curriculum innovation in HE at an organisational level. I invite the reader to view the sections of the PhD through this lens by introducing their theory here. This is the focus of my fifth original contribution to knowledge: critical analysis of the challenges faced by radical curriculum innovation in higher education.

2.2.4.1 Theory of Disruptive Innovation

In their work on business innovation, Bower and Christensen (1995, 45-49) identify the dimensions of time and performance as being key to explaining the take-up of innovations, and these are used as the axis of the chart in Figure 4. In their early work the term technology is used but is replaced by innovation, typically a combination of technology and a new business model that exploits it and its potential for rapid further development, and hence 'disruptive innovation' is the term I shall use.
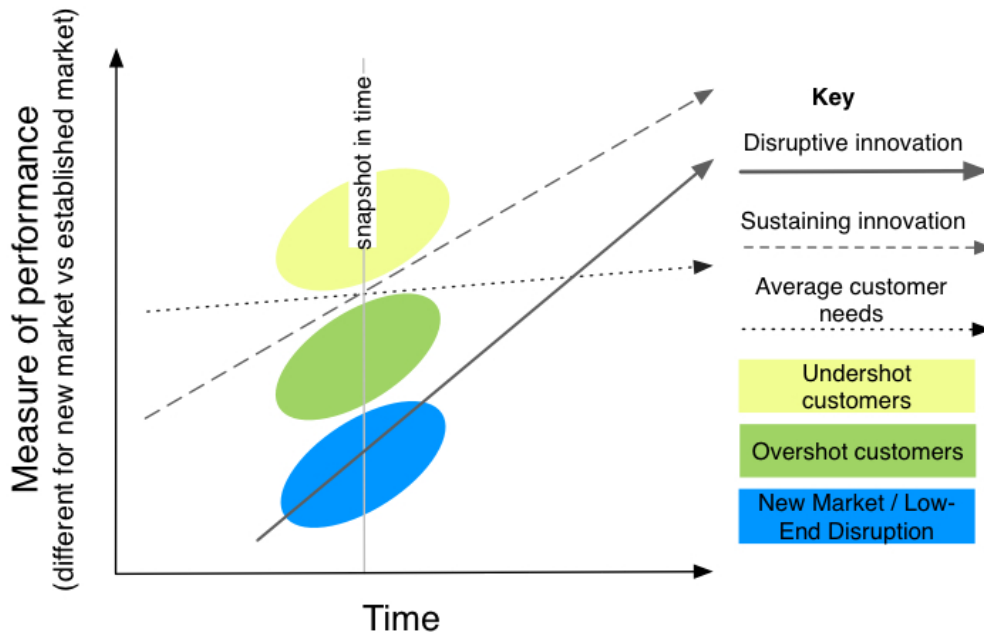
Figure 4. Disruptive Innovation (adapted Christensen and Raynor 2003, 44)

For the purpose of this thesis, Figure 3 is a synthesis and simplification of several charts that are used to explain the theory of disruptive innovation. For a particular context, there will be a complex relationship between customers, the performance characteristics of products and services in particular market segments, and the capabilities of organisations operating or seeking to operate in those markets, and these will change over time. For example, what is one organisations' sustaining innovation may be for a different organisation a disruptive one. As customers' circumstances change, the performance characteristics that attract them to one product or another may also change.

Bower and Christensen make a distinction between 'sustaining' and 'disruptive' innovations, and these are explained below.

2.2.4.2 Sustaining Innovations

Sustaining innovations are typically incremental, but may be radical innovations that enhance an existing product or service along a performance trajectory that meets the demanding requirements of existing, mainstream, and in particular, top end customers who are prepared to pay for better performance.

Christensen and Roth (2004, 9) identify two classes of existing customers for whom sustaining innovations impact, "undershot customers, for whom existing products and services are not good enough, and overshot customers, for whom existing products and services are more than good enough". In Figure 3, the dotted line represents average customer needs, gradually increasing over time, while the dashed line represents the improving performance of the product or service over time, typically at a faster rate than the average needs of the customers, and above or below the dashed line different customers will be overshot or undershot depending upon their particular needs relative to the performance of the product or service. For example, at a particular snapshot in time, the yellow shaded area represents the top end customers who are constantly demanding better performance and, as valued customers, act as force for product performance improvement; these are undershot customers. The sustaining innovation will typically attempt to close the gap between the product's current performance and their demands. On the other hand, some customers, would be paying for performance in a product that is more than they can utilise, and may be happy to compromise on the performance for a more usable or reduced cost product that meets their particular needs; these are overshot customers represented by the green shaded area.

2.2.4.3 Disruptive Innovations

Disruptive innovations by contrast do not attempt to bring better products to established customers. Instead, they combine a new technology that has the potential to evolve rapidly, with an innovative business model. This brings a new value proposition to the market with new performance characteristics that appeal to a different set of consumers or meets the needs of existing customers for established products or services but in a different way. In Figure 3, these currently unserved or nonconsuming customers are represented by the blue shading. However, if over time the new performance characteristics improve sufficiently to meet the needs of existing customers who are overshot by their existing suppliers products, then a disruptive innovation can be identified that attracts customers represented by the green shading.

However, over time, as the performance of these new products and/or services undergoes rapid improvement, they come to offer performances that go beyond meeting the needs of the incumbents' low end customers, and increasingly attract their mainstream and may even, eventually, come to meet those of their top end customers as well (Bower and Christensen 1995, 44).

2.2.4.4 Application of Disruptive Innovation Theory

The motivating question that Christensen's theory addresses is how is it that well run market leading companies (the incumbents) that listen to their customers, innovate accordingly, have good marketing and are financially well managed, can still be overthrown by upstart new companies (the disruptive innovators) - even though they are aware of them and can see what they are doing.

The initial reaction of current market leaders to an emerging disruptive innovation is that the product or service is inferior to their offering and if it attracts any of their customers, they are their least profitable low-end customers and so can be ignored. However, as the disruption continues to improve and begins to attract more of their overshot customer base, the market leaders still fail to react, retreating further into their top-end and most profitable but now shrinking customer base. So the question still remains: why do they not respond before it is too late?

According to the disruptive innovation theory, derived from observation of many cases drawn from different fields, the reason why market leaders can be overthrown by these new upstarts is that they have strong inbuilt filters that weed out any innovation proposals that do not directly enhance the current products or services they offer to their existing markets - they do not fit the elements of the existing business model (Johnson, Christensen, and Kagerman 2008, 3-5):

1. the customer value proposition that meets a customers need to do something;
2. profit formula for the creation of value for the company itself;
3. resources required to deliver the customer value proposition; and
4. established business processes.

The filters are not only the application of economic arguments and analysis of business models, but are also cultural in the broader sense of incumbent employees wanting to further develop rather than abandon their existing knowledge and skills, and processes and practices. Indeed, the arguments used when applying the filters are couched in terms of looking after the interests of established customers based on sound market research, supported by well prepared business cases, and are thus hard to argue against as exemplars of good business practice. In addition, from a financial perspective, disruptive innovations, "look financially unattractive to established companies" (Bower and Christensen 1995, 47) as their potential revenues and profit margins are relatively small. However, the incumbents' existing cost structures, required to support and innovate existing products, are high and enhancing innovations are justified by the premium prices that their most demanding top end customers are prepared to pay. Any disruptive innovations that manage to escape the inbuilt filters are quickly deprived of the resources needed to get to new markets, in favour of more 'important' existing products and markets:

> Innovations that conform to the business model are more readily funded.
> Organizations sometimes reject an innovation that emerges to address
> a new need in the market, but doesn't fit these four elements of the
> business model. But the organization more frequently co-opts such
> innovations by forcing them to conform to the business model in order
> to get funded. When this happens - funding only flows to innovations
> that sustain or fit the business model - the organization loses its ability
> to respond to fundamental changes in the markets that it serves. This is
> what has happened to many universities (Christensen, et al.., 2011, 32).

The conclusion that Bower and Christensen (1995, 52) reach is that in the cases where a company has succeeded in introducing a disruptive innovation, it has been done by setting up an independent organisation.

It is therefore, a difficult task to distinguish a disruptive innovation from a sustaining or potentially sustaining innovation until one has the benefit of hindsight. Often the same technology development can be used to achieve both ends, so a

new technology alone, even with potential, does not provide a sufficient decision criterion. Bower and Christensen suggest two questions:

1. does the innovation meet the needs of a new set of customers? and
2. does it have a lower profit margin than existing products?

A last note of caution offered is that once a disruptive innovation is established the temptation is to merge the innovation back into the parent organisation, but this should be resisted to avoid the resulting clashes about which model gets resources at the expense of the other.

It is arguable that technologies that make online, distance learning possible are a potential enabler for disruptive innovations in the educational field (Christensen, et al., 2011, 3). However, it is not simply a matter of technology but the overall 'package', which is offered to a customer, that creates a sustaining or disruptive innovation.

The model of Work Focussed Learning using Internet technologies combined with a different pedagogical and business model, by creating a new offer to non-consuming customers and potentially to overshot customers also, arguably provides a example of a disruptive innovation in HE.

2.3 Application of Concepts and Theories to Practice

In identifying concepts and theories to apply to the past ten years of my work, there are inevitably choices to be made about what is selected and how it is presented. Through reflecting on my practice, I identified the most significant aspects, which are presented in a table at the beginning of Sections 3, 4 and 5 along with a portfolio reference.

The key concepts and theories discussed above are applied to my practice to bring coherence, explanation and meaningfulness. In each section I will:

1. set out the analysis that initiated my action;
2. describe my practice and the actions I took;
3. apply concepts and theories to support my analysis;
4. evaluate and critically reflect on my practice;

5. set out my original contribution to knowledge; and
6. identify influences on future cycles of action.

3.0 Organisation of Teaching

3.1 Section Summary
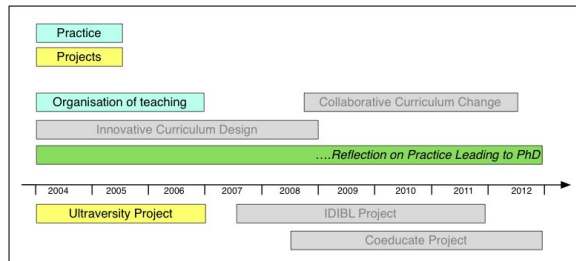
This section presents my conceptual analysis of the organisation of the teaching practices for delivery of the undergraduate degree programme developed through the Ultraversity project, the BA (Hons) Learning, Technology, and Research. I later named the approach developed as the model of Work Focussed Learning.

It was recognised at the outset of the Ultraversity project, and included by myself in the project plan as an aim, that to make the Ultraversity project a success, it would be necessary to, "Research new forms of organisation and work practice for teaching, administration, and support staff to change the practice of undergraduate higher education." [P3 p1]. In my role as the director of the Ultraversity project, I responded to this analysis by establishing an action research (AR) strategy to inquire into the organisation of teaching.

In constructing this section of my claim, I have analysed and reflected upon my working practices around the Ultraversity in terms of the organisational implications for HEIs seeking to develop online, distance, learning. Table 3 highlights the significant aspects of my practice and links this to my portfolio of evidence.

Practice	Significance	Portfolio evidence
Coordinating the validation process for the Ultraversity project degree	Insight gained into the curriculum design that prepared me for leading the Ultraversity project and gave me confidence in making the pedagogical arguments necessary for its approval.	[P2]
Managing the Ultraversity project	Taking leadership role and implementing a flat management structures, using action research as project management approach.	[P3; P4]
Leading professional development	Established key teaching practices: lecturer as facilitator; inquiry-based learning; team teaching; patchwork media, reflective learning; and online community of inquiry.	[P8; P9; P12]
Teaching students	Developed model of desired behaviour of teaching practice. Gained insight into delivery of Work Focussed Learning.	None
Research and evaluation	Theoretical explanation of the model Work Focussed Learning and evaluation of impact on teachers, learners and the workplace.	[P17; P20; P21; P23]

Table 2. Significant Aspects of Practice 1

In this section I will introduce the concept of productivity arrangements for teaching staff and explain why it is particularly significant for the development of Online Distance Learning (ODL). I will then explain the background to the Ultraversity project and the model of Work Focussed Learning. Next I explain the teaching practices developed and then I reflect on the Ultraversity productivity arrangements. In conclusion, I identify my contribution to knowledge and argue that new ways of working and productivity measures are required for supporting ODL if there is to be large-scale development of provision.

3.2 Introduction

Productivity arrangements for teaching staff in higher education (HE) are based largely on a model of delivery that assumes face-to-face campus-based activities, organised autonomously at departmental level. For many higher education institutions (HEI's) there is now pressure to develop new markets; this increasingly includes approaches that require teachers to support students fully, or partially, through ODL.

In 1990 the University and College Union (2011) negotiated a national contract of employment between the higher education teaching unions and HEI's. Barrett and Barrett (2009, 10) argue that in post 1992 UK universities this has over time, "created a legacy of embedded practices" that are now the starting point for management of academic workloads (MAW), which for them are about efficiency, university objectives and equitable workloads (Barrett and Barrett 2009, 3).

Taking a wider viewpoint, I use the term 'productivity arrangement' to mean the package of organisational measures that determine how teaching teams can respond to the pedagogical model they are using to assure course quality and to maintain a financially viable provision. These include contracts of employment, measures of productivity and the management and organisation of teaching teams. I argue that the legacy of embedded practices identified by Barrett and Barrett, has a significant impact on innovation in productivity arrangements.

3.3 Teachers and Online Distance Learning

Developments in ODL that offer students collaborative and social approaches to learning at a time and place convenient for them requires new ways of working for teachers in HE; as identified by White et al., (2010, 46) there is less focus on delivering content and more emphasis on facilitating learning.

There are many explanations put forward for barriers to the development of ODL. One issue is the lack of incentives for, and capability of, academics to develop online approaches that are often perceived as involving extra workload while delivering little personal advantage (Becker and Jokivirta 2007, 12; White, et al., 2010, 4). Hanson (2009) observes that teachers may well have strongly held

beliefs about the value of face-to-face interactions with their students and that these are a central component of their sense of academic identity. From this perspective the preservation of the status quo can be seen as an "entirely rational act" (ibid., 562).

The above explanations offer credible contributions to explaining the slow take-up of ODL in the UK. My own experience indicates that ODL requires markedly different ways of working to those required by standard delivery methods, particularly when adopting pedagogical approaches that depend upon facilitative approaches. I would argue that, if ODL is to grow significantly in HEI, there are challenges that need addressing around the role of HE teachers.

An argument I would put forward in support of ODL and that that challenge the status quo with regards to teaching, is for whose benefit the system is intended to serve? For learners who, for whatever reason, are unable to take advantage of traditional face-to-face provision, there is a strong moral case for extending the opportunity to access HE. There is also strong economic rationale at an individual, institutional and national level for making it possible for more people to be able to develop higher level skills for the "economic and social health of the UK" (Leitch 2006, 1). However, from the perspective of an individual academic, the perceived risks of engaging with ODL approaches need to be resolved if they are to actively engage in the development of new practices.

Thus, this section of my PhD argues that we need to re-examine current productivity arrangements with a view to making changes that support new, flexible ways of working.

3.4 Ultraversity Project Background

The Ultraversity project, begun in 2003, was designed to offer degree level study to prospective students who felt that the current offering from universities did not fit their lives. Although students studied in the workplace, the appeal to study was made to individual students and the approach was designed for the student to negotiate the relationship between their studies and their employer [P13; P22, p17]. The project developed an undergraduate degree programme with its own recruitment and enrolment processes, significantly reduced fee structure [P7 p2;

P15 p2], and dedicated staff focused on supporting students online [P6]. This way of operating was possible because it was run through an independent unit, Ultralab, at Anglia Ruskin University.

It is my experience organising the delivery of the validated undergraduate degree programme, specifically the teaching and work-practices developed that underpins my critique of productivity arrangements.

3.4.1 The Model of Work Focussed Learning

The model of Work Focussed Learning was designed to offer an undergraduate HE to students in full-time work, paid or voluntary. The target group of students were committed to the work they were doing, wanted to gain an undergraduate degree in three years, but were unable to stop working and devote the time needed to obtain a degree via conventional routes.

The model of Work Focussed Learning developed allows institutions to address, in Bower and Christensen's terms, an unserved market segment (thesis Section 2.2.4) by operating in a particular way [P17; P20; P21]:

1. the learning process is based on action-inquiry;
2. is founded on the ideas of reflective practice;
3. is focussed on the work students do;
4. is supported fully online;
5. is inter-disciplinary;
6. utilises patchwork media assessment;
7. replaces the traditional dissertation with exhibition [P21, p70];
8. allows students to earn full-time while they learn full-time;
9. allows accreditation of prior learning;
10. attracts disenfranchised learners for whom university does not fit; and
11. is innovative in its expectations of teaching staff.

Student support was wholly online and was based around a Community of Practice (Wenger 1999) where students help each other and academic staff facilitate discussion and provide guidance, thus allowing learners to study at a time and place convenient to them. Students are required to undertake projects that improve their work practices and benefit their workplace using an action research

approach. They structure their inquiries to enable them to gain academic credit from the scholarly practices used to inform and evaluate their activities [P23 p7]. As a design, the curriculum can be seen as a spiral curriculum (Brunner 1960, 11) in that the action research process is revisited for learners to develop increasing proficiency with the techniques and approach "'A curriculum as it develops should revisit this basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them" (*ibid.,* 13).

Through feedback from recruited students, we found that they were looking for a more convenient, and less expensive route and were unable to take advantage of face-to-face on campus provision. These students wished to complete a degree in three years through making their work the focus of their study [P2 p2-4; P22 p18].

3.5 Teaching Practice

Teaching practice in HE is diverse with differences found between subjects, modes of delivery and institutions (QAA 2011, 6). Nevertheless, it is common to timetable contact sessions in classrooms, studios, laboratories, or workshops where teaching will take place. Although there may be a trend towards a greater role for online teaching, often as a part of blended learning strategy, the timetable is the primary determinant of the 'when and where' teaching takes place. As discussed later, this practice is closely associated with commonly found measures of productivity, management and organisation, and the contract of employment for teaching staff based on contact time.

3.5.1 Ultraversity Teaching Practice

The following description of the Ultraversity model of teaching and work-practices is synthesised from a detailed pattern language description [P20] and developed to support the model of Work Focussed Learning. I have identified three themes of practice: activity design; facilitating the online community of inquiry; and distribution of teaching effort. Taken together, these require a new combination of skills and working practices where timetabled contact is no longer the backbone for organisation. The roles of tutors, lecturers and course designers are combined into that of 'learning facilitator' and this has implications for the contract of employment, to which I shall return.

As the project director, I made a significant effort in developing a team that had little experience of teaching in HE, although well qualified academically and experienced schoolteachers. Throughout the project, regular face-to-face professional development sessions were run where the distributed team could come together develop the Work-focussed Model [P8; P9; P12].

3.5.1.1 Activity Design

In the work-focused approach, the learner is required to be self-directed, with the curriculum concern of learning facilitators being to help students solve authentic problems in their workplace and become effective agents for change whilst producing a scholarly portfolio of work for assessment. There is no fixed syllabus and this means that activity design and the resources produced are to support the learning process, not to deliver subject or discipline content.

As with many approaches to ODL, a significant effort is required for activity design prior to the start of a course and the development of learning resources; this is one of the roles of the learning facilitator. In the case of Ultraversity, the resources are digitally created and maintained by learning facilitators, so ongoing refinements and clarifications are made at minimal cost. This is in contrast to models whereby production teams are responsible for working with academics to develop content and publish it online. Reflecting on the differences, the latter approach offers the prospect of better production quality but with a greater resource requirements and a slower time to publication.

Assessment is an integral part of the activity design and during the development stage of the Ultraversity project, following the validation, I attended a SEDA conference at New Hall, Cambridge that introduced the Patchwork Text approach (Winter, 2003). A synthesis of the approach outlined by Winter and the ideas contained in the validation documents resulted in the Patch-work Media approach (figure 5), which sets out a template activity and assessment design common to all Work Focussed Learning modules.

The key ideas behind Patchwork Text are that it aims to unlock students' skills and creativity by encouraging them to use a range of genre in their writing, not limiting their forms of expression to that of academic literacies, which may, for some, be

off-putting and difficult to master, perhaps due to experiences of failure early on in their academic career. The approach also requires learners to author pieces of work (patches) based on real work experiences and to offer them for a process of peer feedback in learning sets, through regular face-to face meetings, and adopting a critically reflective approach. At the end of the module, a relatively modest 'stitching' piece provides an account of the learning journey undertaken and is the main focus of the summative assessment.

The approach developed by Ultraversity brings to this mixture the use of different forms of media and takes place entirely online, and is action oriented rather than critically reflective on a work place experience. In addition, each learning outcome has a patch associated with it to give a simple repeated structure.
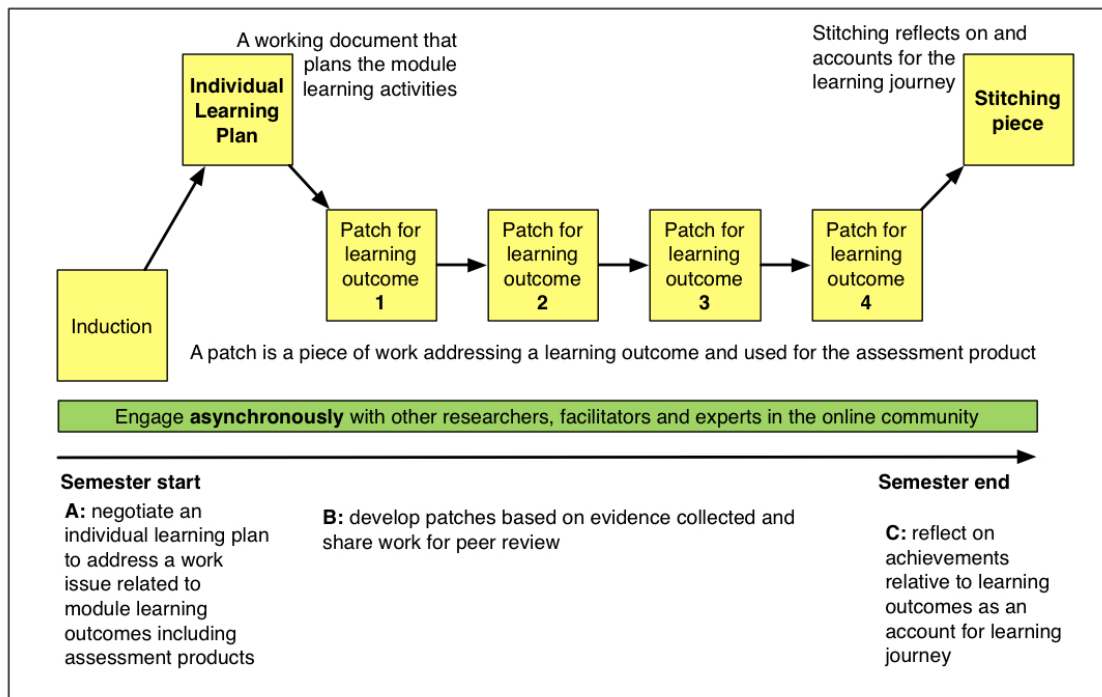
Figure 5. Patchwork-media Approach

Working through Figure 4, the process starts with learners negotiating and agreeing an individual learning plan with their facilitator, which details the work they will undertake to tie in with their work-focussed action in the workplace and relate to the learning outcomes and assessment criteria. This agreement provides confidence for both the learning facilitator and the student that they will be able to produce a piece of work or patch for each learning outcome. As part of the negotiation, learners choose the genre and media they wish to use to develop their

assessment products. The student is encouraged, where possible, to use their communications to work colleagues or stakeholders, thus making workplace reports and meetings a focus for the patch and combining work and learning. These address each module learning outcome with a reflective retrospective commentary or 'stitching piece' at the end of the module to explain for their learning journey.

Feedback from learning facilitators includes a summative 'assessment of learning' and formative 'assessment for learning' (Black and William 1998; Assessment Reform Group, 1999) to articulate both what has been achieved and what should be further developed. Students are expected to engage with each other asynchronously online throughout the course and this approach can be broadly characterised as social constructivist (Burr 2003, 1-3). The activity design draws heavily on notions of Online Community of Practice (Wenger 1999), where consideration needs to be given to the design of the online environment; the resources and tools required; technical support; and the roles of community participants - learning facilitators, students, and invited expert guests. The skill in the activity design is to ensure a balance between two requirements of:

1. an individually negotiated work-focussed inquiry undertaken in the workplace; and
2. purposeful online interaction.

This approach seeks to provide individually negotiated study that within the constraints of a viable business model.

3.5.1.2 Facilitating the Online Community of Inquiry

The working environment for staff engaged in ODL is clearly different from that of face-to-face teachers and requires additional skills (Salmon 2000, 51-70). Garrison (2007, 69) emphasises the need for clarity of purpose, roles and responsibility in the Online Community of Inquiry, in particular as they relate to the academic requirements that need to be met to gain a qualification.

Drawing on the Community of Practice learning theory (Wenger 1999), the Ultraversity project developed an Online Community of Inquiry that:

Placed less emphasis on the directional aspects of the instructional role and instead focuses on the importance of modelling desired behaviours such as critically reflecting on their own experiences [P21 p68].

In the Work-focussed Model, instead of a classroom to manage, there is the requirement to develop and coordinate online environments where students, learning facilitators and expert guests can interact, predominantly through asynchronous means. This is part of the role of the learning facilitator.

The activity design was mediated through a Virtual Learning Environment, but also includes a range of other technologies that I sought to encourage the use and development of [P21 p71]. This required facilitators to possess some degree of technical skills to ensure resources are made available and learning activities set-up. In addition, facilitation skills are needed to provide stimuli; steer interventions in the asynchronous online conversations; model desired behaviour of critically reflective inquirers (Brockbank and McGill 1998, 53) and monitor participation.

This complexity is in part managed by the educational approach of creating learning sets for small groups of students in which they conduct peer reviews of each other's work by offering critical feedback to each other [P17 p5; P20 p68]. A high level of informal social interaction and interpersonal support took place through the wider Community of Inquiry as well as focused discussions in the learning sets. In addition, submission of assignments, marking, moderation, scrutiny by the external examiner and return of work and feedback to student's portfolios all took place online.

3.5.1.3 Distribution of Teaching Effort

One of the major impacts of the activity design described above is on the distribution of teaching effort including assessment activities. In Figure 6, I offer a schematic representation of teaching resource where the activity design envisages comparatively high levels of input by learning facilitators developing resources to support the activity design, and at the outset of a module when learners first familiarise themselves with the module requirements and raise any uncertainties in the online communities for facilitators to clarify. At this stage explanation and interpretation of the module requirements is a key aspect of the facilitation role. In

parallel with this, learning facilitator and students are also negotiating and agreeing individual learning plans. This can be contrasted with 'traditional' lecture based approaches with their rhythm determined by weekly timetabled sessions and terminal assessments.
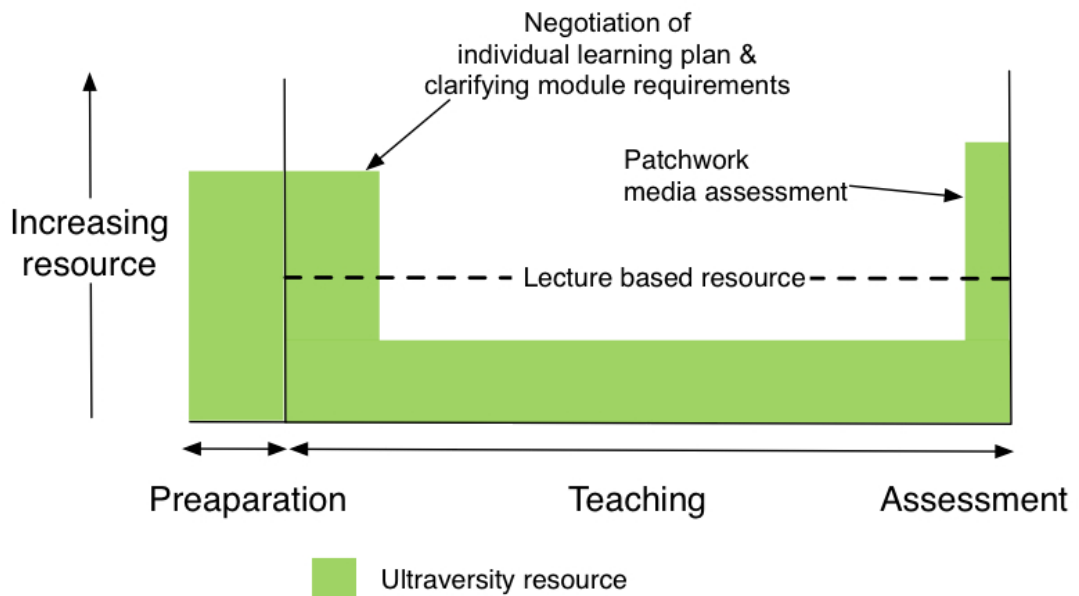
Figure 6. Schematic Representation of Teaching Resource

My experience, as a part of the Ultraversity teaching team, shows that after the first few weeks this work decreases as students work through their plans and increasingly support each other by offering critical feedback as they share their plans and findings. The learning facilitator role shifts to ensuring that the module is progressing at an appropriate pace and this is achieved by interventions that highlight what should be achieved to meet module requirements and the deadlines for assignments and some input into formative assessment.

It is worth noting that the effort required of staff for marking the final assessment is greater than that which is required for many other forms of assessment; assessing individual media-rich contextualised work-focused portfolios for each module is more akin to assessing individual dissertations than marking a set essay or exam.

3.6 Reflection on Productivity Arrangements in Higher Education

In reflecting on productivity arrangements, I consider a prevalent post-1992 university approach in contrast with that developed for the Ultraversity project using three key components:

1. contracts of employment for post-1992 institutions;

2. measures of productivity; and

3. management and organisational organisation of teaching staff.

As background to this section, it is important to note that the predominant delivery paradigm of most undergraduate programmes is based upon three conceptual structures: modularisation, the breakdown of curricula into constituent parts; the use of semesters/trimesters as a framework for delivery and assessment patterns; and levels that indicate bands of expected intellectual achievement. Modularisation was introduced in order to increase flexibility and choice for students at a time when ODL did not need to be taken into consideration, because it was still in its infancy. The structures and practices developed to support modularisation can now act as a barrier to change because they constrain choices about the ways in which courses can be delivered and managed.

3.6.1 Contracts of Employment

As outlined in Section 3.2, for post-1992 institutions, new developments in ODL are being played out against the backdrop of the current national contract of employment for academic staff. Of particular relevance, is the key agreement of 'formal scheduled teaching' up to a maximum of 18 hours per week within a total maximum of 550 hours per year over 36 weeks. Other factors taken into account, that may reduce this number, include development needs, student numbers, class sizes, subject specific requirements, development of new provision, and management responsibilities. The HEFCE report on, "The Higher Education Workforce Framework 2010", highlights the ongoing debate in HE about the impact of the 1992 contractual arrangements. Two positions are identified. On the one hand that such arrangements can be implemented flexibly, and as such have a neutral effect on innovative practice, and the other, that the "customs and practices that have built up over the years are now so ingrained within institutional culture that they form the most challenging barrier to increased workforce

flexibility.", particularly when different modes of working are required to meet institutional developments in teaching provision (HEFCE 2010, 12,14, 50). The Online Learning Task Force (2011, 16), supports this idea, "academic contracts in many post-92 institutions may constrain development because of hourly quotas assigned to teaching time".

The contract of employment described above was set aside for personnel during the lifetime of the Ultraversity project. Instead, staff made decisions about how they divided their total annual 1647 working hours to meet their teaching, administrative, research and scholarly practice responsibilities. If they had other roles beyond the project, this was accounted for through reduced Ultraversity workload decided in consultation with the Ultralab management team.

I choose to emphasise the point about contracts of employment because I believe that it was the ability to work outside the common interpretations of the post-1992 contract of employment that, in part, made it possible to develop team teaching approaches for the Ultraversity project. In turn this required staff to have a high degree of trust in the professional integrity of colleagues as they depended on each other for the teaching activity of facilitating the online communities on modules they shared and for the timely provision of learning materials that other people had developed. Although common in school settings, in my experience this is not typical for HE where the academic teacher most commonly operates alone in preparing materials and teaching students.

The management and organisation of this team teaching approach is discussed further in Section 3.6.3 in the context of my practice as the director of the Ultraversity project.

3.6.2 Measures of Productivity

The measures of productivity used for teaching staff in HE are generally very crude. Commonly, a 30 credit module might be timetabled in a room for 36 hours face-to-face teaching spread over a semester in various combinations of 1 hour blocks. In my experience, middle managers use timetabling data as the de facto measure of productivity based on an individuals teaching workload. They then engage in a process of 'horse trading' to develop a solution that feels fair in the

context of the annual 550 hours of 'formal scheduled teaching' that contracts of employment stipulate. This is a rudimentary approach in the sense that workload, particularly marking, may vary according to class size. However, it is the case that MAW approaches, outlined in section 3.2, are gaining increasing traction in the sector, seeking to better quantify work-loads.

Issues of the balance between pricing and costing are a significant challenge for HE and the Ultraversity project was required to develop a financially viable model. For the UK sector as a whole the ratio of teaching staff to student varies from 1:12 to 1:30 (guardian.co.uk, 2010). As a starting point, the Ultraversity project used a ratio of 1:25 for teaching teams of 3 staff, giving approximately 75 students in total per team; an approach based on the number of students per member of staff, rather than number of contact hours.

This is made possible because the role of learning facilitator is not one of subject expert for a particular module, but rather to support the learner through a process driven curriculum.

The focus on online asynchronous communications meant that learning facilitators were able to have flexible work patterns that were not determined by timetabled contact sessions. This includes home working, and 'team teaching' but working within agreed parameters such as tutor response expectations. This places different demands on staff, but also makes possible a shift, focusing productivity measures on the outcomes for students, rather than on input as measured by timetabled face-to-face contact.

3.6.3 Management and Organisation

3.6.3.1 New Managerialism

The discourse around new managerialism in HE (Deem, Hillyard and Reed 2007; Deem and Brehony 2005) can be helpful in trying to understand challenges for development of new working practices and the power relationships between the managers and the managed in HE. The managerialism analysis outlined below is one interpretation of the context in which any innovative management approaches, such as those developed for Ultraversity, and working practices will have to operate if they are to be in the HE mainstream.

It is the middle managers, heads of departments, who are largely responsible for the coordination of teaching activities. Where online developments are based in existing organisational structures, it is they who are faced with the challenge of sustaining smooth running of the 'traditional' face-to-face delivery based on modularity and semesterisation, and at the same time as ensuring resources are available for new ODL courses that have different requirements. Usually this is achieved by working within externally imposed staffing and budgetary constraints and increasing external accountability through league tables of performance and audits of operations (Deem and Brehony 2005, 225; Deem, Hillyard and Reed 2007, 53-55).

All of this is undertaken in the direction outlined by institutional strategy documents, but in a culture of academic freedom, of which there is a strong and actively guarded tradition in UK HEI (Karran, 2009). Thus the job of allocating staff time for given activities is riddled with conflicting demands.

The complex and evolving nature of the role of the middle manager in HE identified by Clegg and McAuley (2005) is helpful in appreciating the caricature of middle managers in HE as being overly controlling, bureaucratic and meddling in the affairs of academics with nostalgic views of collegiate approaches to management being seen as more worthy:

> Trowler (1998) summarised the key features of managerialism in higher education as involving: management's right to manage; a top-down approach, involving a "technology" of management and a "policy science" approach; an orientation towards the market and customers; individualism and acceptance of the status quo; and in education "an atomistic and mechanistic understanding of knowledge and learning (Ibid., 10).

Time allocation approaches vary: from informal, where the head of a department arranges work based on negotiations with staff; partial, where contact hours form the basis of negotiations possibly as part of contractual agreements; and comprehensive, approaches where algorithms are used that take account of teaching, research and administration duties (Barrett & Barrett 2007, 55-17).

The trend to actively manage the workload of academic staff is highlighted by Barrett & Barrett (2009, 3) in their report focusing on the management of academic workloads and working practices. This is based upon the collection of data and development of models and to allow for 'workload balancing' calculations and to arrive at a fair outcome for the individual. These approaches are justified by the claims that they will lead to a fairer and more transparent workload allocation and enable institutions to more efficiently manage their resources to meet the institutional goals. For some, this micro-management of academic workloads is an example of universities "preoccupied with 'modernising' management practices" (Malcolm and Zukas 2009, 496). This encourages a false division between the roles of an academic; teaching, research, scholarly practice and administration - the "official and academic versions of academic work" (ibid., 503) or what Argyris and Schön (1974, 6-7) might characterise as, 'espoused theory' versus 'theory-in-use'.

Whatever position is taken, there is considerable evidence that the management and organisation of teaching including the management of academics workloads is in practice a complex component of the overall productivity arrangements for HEIs and thus ripe for innovation.

3.6.3.2 Ultraversity Management and Organisation

The approach developed by the Ultraversity project overcame the organisational and managerial constraints discussed above and in particular the organisation arrangements detailed in the section 'Online Community of Inquiry'. I argue that the approach enabled middle managers to play, "a creative and innovative role in education" (Clegg and McAuley 2005, 31).

The Ultraversity teaching teams were given responsibility for self organising arrangements that took into account the work to develop modules, time to teach the students, marking assessments and quality assurance requirements of the university. In addition to cohort specific activities, all staff had responsibility for development of the whole pathway including undertaking action research activities and the development of the pedagogical model, content and technological infrastructures associated with the online learning environment.

An online Community of Practice (CoP) for a Distributed Team [P11] was used to organise activities across the project's learning facilitators who were a distributed set of workers - using a similar methodology to that applied to students. Activities included the daily collaboration between staff delivering modules, assessment process, developing resources, periodic pathway meetings for quality assurance processes, ongoing course development, and ongoing monitoring and overall coordination of the project team. This approach required the whole team to work collaboratively to plan, implement and evaluate the development and delivery of courses.

This is a systems based approach that sees a manager's role as one of creating the conditions whereby staff can absorb the variety of requirements placed upon them by taking responsibility for, and planning their own actions rather than a command and control approach distanced from the reality of the work (Seddon 2008, 70-71). The risk identified by Seddon is that the identification of poor measures or targets creates a 'de facto' purpose other than the true purpose of the system. This then constrains the methods that are developed to meet the targets set (Ibid., 82). In this case, the purpose of the system is not for teachers to be in a classroom for a set amount of hours, but about meeting the needs of learners.

The approach which was developed shifted the focus of productivity arrangements to a learner centred model rather than timetable measures of input or micro-management of staff time. This design raises the question, when trying to develop new approaches to ODL is there a need to reinterpret the productivity arrangements and perhaps revisit the contract of employment bargain at a national level?

This productivity arrangement expected the teaching staff to self-organise in teams. When combined with alternative productivity measures, management, and organisation practices this provided a working environment to nurture creative and imaginative solutions to organisational problems as described in this section of my PhD claim.

It is also a challenging approach for those managers who may seek to have a high degree of control over staff's activities. This was addressed to some degree, in my Ultraversity work, by forming an online community of practice for the staff in which

activity was transparent, usefully complementing that in the student's online community of inquiry.

3.7 Conclusions

In the conclusion to this section, I have reflected on the question, "what are the organisational implications for HEIs seeking to develop online, distance, learning?

Will Hutton (2009) made the compelling observation that as uncertainty increases in the global economy, businesses will need increasing flexibility and this will require increasing 'contractual flexibility' from workers. In my experience, a key practical question that arises is the way in which institutions reconcile their current productivity arrangements with new ways of working that are not built around the traditional face-to-face campus paradigm. This requires organisations to think fundamentally about their business models, that is their value proposition, profit formula, resource requirements, and business processes (Christensen, et al., 2011, 32). A failure to provide an effective answer to this question has the potential to be a significant barrier to the transformation of teaching and learning in ODL.

Reinforcing my own experience, Keppell, O'Dwyer and Lyon (2010, 166) argue that, "the sole use of hierarchical models of leadership is inappropriate in HE to foster strategic change" and that 'distributive leadership' models are more effective in bringing about change in teaching and learning. They use an approach of 'development research' that is closely aligned with action research, but with the specific curriculum development intention (ibid., 2010, 172), they cite Reeves in this respect:

> "focused on the dual objectives of developing creative approaches
> to solving human teaching, learning, and performance problems
> while at the same time constructing a body of design principles that
> can guide future development efforts".

In my own work described above, the adoption of different management and organisational approaches have proved to be the catalyst for the changes in teaching and learning required to support Work Focussed Learning.

The emphasis on self management of the individuals' workload and the use of student- teacher ratio as a measure of productivity, were intended to unlock the creative energies of teaching staff to identify a set of teaching practices and methods that met the needs of the specific set of students and in this particular context it proved to be effective. There were, however, found to be challenges in this way of working for teaching staff [P20 p96]: the different and new competencies required; challenges to established identities as experts rather than as facilitators of learning; developing team teaching and working; developing skills and understanding of new technologies; taking responsibility for developing new working practices; and for some having to reconcile the differences between being a performer in a face-to-face context with reliance on text.

This section has identified three themes: Contract of Employment, Measure of Productivity and Management & Organisation. I believe that the alternative proposals drawn from my practice, and identified in this section, are significant in seeking a step-change in the development of online distance learning.

The implementation of such approaches within the constraints imposed by existing organisations work practices and governing regulations is probably beyond what could be considered a reasonable proposition. However, the use of some of the ideas explained in this section has the potential to enable HE institutions to think again about how they organise their online provision and to better understand the tensions between existing ways of working developed for face-to-face campus based provision and the changes that might be required to enable new practices to be developed for a different set of circumstances. This will be different from institution to institution, and dependent on the particular context and mechanisms that they wish to develop or change.

3.7.1 Original Contribution to Knowledge

In the introduction, section 1.3, I have claimed an original contribution as the conceptual development of working practices that delivered the model of Work Focussed Learning. In writing this Section 3, I have identified four key contributions elements that lead me to this claim:

1. an explanation of why current productivity arrangements are inappropriate for the delivery of online distance learning;
2. an articulation of the working practices and role of a teachers of the model of Work Focussed Learning;
3. establishing a model of shared leadership across the team using an action research approach to the development of the model of Work Focussed Learning; and
4. development of the Patchwork Media approach to assessment.

3.7.2 Influences on Future Cycles of Action

The model of Work Focussed Learning formed the basis of my employment in a different HEI as a Reader in Inquiry-based Learning. In that new role, I took the ideas developed by the Ultraversity project as the basis for the IDIBL project, which had the aim of developing new work-focussed courses across the institution. This is the focus of the next section of my PhD claim

4.0 Innovative Curriculum Design

4.1 Section Summary
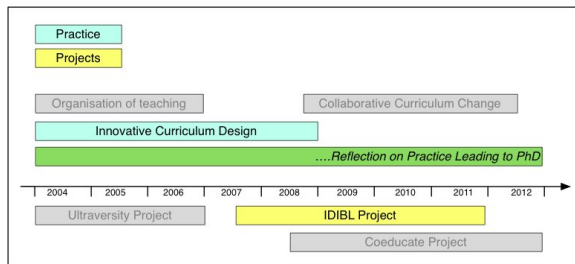
This section presents my development of the Interdisciplinary, Inquiry-based Learning (IDIBL) Framework as strategic mechanism to bring about cross-institutional adoption of the model of Work Focussed Learning. It also makes a cybernetic analysis of the pedagogy of the model of Work Focussed Learning in delivering a personalised curriculum.

In collaboration with colleagues and with support from the senior managers, I established the Interdisciplinary Inquiry-based Learning (IDIBL) project as a strategic, cross-university intervention based on the learning and experience of the Ultraversity project. From the university perspective, the project was established in response to the analysis that learning in the workplace would increasingly provide an important market of students and online supported, inquiry-based learning would enable this. Personally, my motivation was to continue the work of the Ultraversity project; to widen participation for groups of learners who cannot take advantage of current university taught provision. For the purpose of this claim, my role in this project was as a developer and implementer of the IDIBL Framework, which was one of the main actions of the IDIBL project.

In constructing this section of my claim, I have analysed and reflected upon my working practices around the IDIBL project in terms of the characteristics of the IDIBL Framework that make it an innovative curriculum design. Table 4 highlights the significant aspects of my practice and links this to my portfolio of evidence.

Practice	Significance	Portfolio evidence
Conceptualisation of the IDIBL Framework	Development of an instrument to bring about cross-institutional curriculum change in the university.	[P18 p3]
Leading the validation of the IDIBL Framework	A test of the IDIBL Framework approach and the model of Work Focussed Learning against the university quality assurance regulations.	[P25]
Undertaking empirical research with university staff who adopted the IDIBL Framework	Identification of the strengths and weaknesses of the IDIBL Framework in practice.	[P33 p264-266]

Table 3. Significant Aspects of Practice 2

In this section, I will introduce the IDIBL project including its aims and objectives, and then describe the IDIBL Framework. I explain the pedagogical approach followed by an evaluation of the effectiveness of the framework based on interviews with staff involved in its development and use. I offer a cybernetic viewpoint and us it to analyse the framework's pedagogical and organisational characteristics. In conclusion, I identify my contribution to knowledge and argue that the characteristics of the IDIBL Framework make it a useful tool for bringing about institution-wide curriculum change.

4.2 Introduction

The IDIBL project at the University of Bolton (UoB) used an action research approach, the aim of which was to, "stimulate development across Bolton University of successful models of e-learning and inquiry-based learning where appropriate." [P18 p6]. A key mechanism for achieving this was the development of the IDIBL Framework, "for awarding qualifications at the University of Bolton which permits negotiation of learning and negotiation of award within a quality framework" [P18 p6]. Included in the project plan were the assumptions that the work was part of the development plan for the university, because of this senior management and key departments such as marketing and admissions would be

supportive, and that the existing quality assurance and validation mechanisms were ready to take part in this innovation [P18 p2].

The IDIBL Framework was designed to work within the current systems and processes, but also to encourage systemic change across academic and service departments working practices. As such, the IDIBL project invited participants from all academic departments of the university to implement courses of their own. To achieve this, it was my belief that the framework should be designed in such a way that it could be, "readily adapted by departments to their own subject disciplines and professional contexts of potential students." [P18 p3], as the work required for the validation of new courses can be a significant barrier to innovation.

The framework is based on the model of Work Focussed Learning, explained in Section 3.3, and describes a personalised experience for learners supported through an online community of inquiry, using inquiry as a learning strategy and patchwork media for assessment.

Reflecting on this now, and with the insight generated through the concept of variety, it is apparent that the model of Work Focussed Learning and the development of the reusable framework are attempts to address problems of managing complexity (variety) found in higher education systems, and this is explained in Section 4.6.

4.3 The IDIBL Framework

The IDIBL Framework consists of a curriculum described by overarching learning outcomes, more detailed modules and a pedagogic approach to learning and teaching that are closely linked in their design. The curriculum was defined by set of linked module definitions at HE levels 4-7 and a pedagogic approach describing teaching practices, learning and assessment. Designed to be highly personalised, the framework allows students in different work contexts to structure action-inquiries that they identify as a part of their daily work.

I argue that the 'creative idea' behind the framework, that is, "an original idea that has value" (Robinson 2010), was that it was intended for re-use and re-purposing to make the work of validating new courses less onerous. The needs of a wider

set of new students could be catered for in a highly personalised way, but without the overhead of developing, maintaining and running an increasing number of new courses to cater for the specific needs of students in different work contexts. The resources that describe this curriculum framework are published under a creative commons licence on the project website (http://idibl.bolton.ac.uk/). The aim of the framework, from a learner's perspective, is to provide the model of Work Focussed Learning explained in Section 3. This provides choice for students in terms of when, where, and what they study, meeting the needs of a particular group of learners, like the ones the Ultraversity project catered for, who require flexibility for a variety of reasons:

1. they need to continue in full-time paid employment whilst they study;
2. they wish to make their study directly relevant to their work;
3. family commitments prevent their on-campus attendance;
4. geographical location or poor transport links makes campus attendance difficult;
5. they seek to develop further their communicative creativity and technological understanding as a complete professional;
6. traditional examinations and academic essay writing are either intimidating or uninviting;
7. they seek the company, support and intellectual challenge of fellow students rather than studying alone; and
8. they seek the advantage offered by technology to enjoy the possibility of work on joint ventures and studying collaboratively." [P25 p3].

4.3.1 Philosophical Position

Bosanquet and Fraser (2006) explore the understanding of the meaning behind the term curriculum in higher education and identify a series of very different understandings and definitions having different foci and requiring different student / teacher responsibilities. Using their categorisation, the IDIBL Framework, based on the model of Work Focussed Learning developed, can be identified as emanating from an "emancipatory interest" (ibid., 14):

From this perspective, students are active creators of knowledge. Learning is a social act, which consists of a dialogical relationship

between the teacher and student. The educational experience is
negotiated, and the curriculum 'emerges from the systematic reflection
of those engaged in the pedagogical act' (ibid., 281).

The importance of identifying this stance is not only in stating the values and
beliefs that are behind such a curriculum, but also in recognising that for many, it
is a view of curriculum that will be unfamiliar and challenging. In terms of the
focus of the curriculum and the roles and responsibilities of teachers and students,
there was always likely to be an uphill struggle to persuade fellow teachers of the
framework's value if their interest in curriculum is different.

4.3.1 Curriculum

The module components of the IDIBL Framework, see Figure 7, offer a coherent
set of modules through levels 4 to 7. A key feature is that there are no choices or
options, the course is designed to offer progression between modules and levels
and students can find choice through their individual learning plan, negotiated as
an inquiry proposal for each module.

Figure 7. IDIBL Modules [P23 p8]

A coherent set of behavioural and knowledge objectives are written for each level of the framework, Table 4, Framework Learning Objectives. This is designed to give a coherent experience to the student and ensure progression through the overall model of Work Focussed Learning and to focus on the key behaviours that the model of Work Focussed Learning is trying to achieve. At the same time, the objectives require students to demonstrate recognisable attributes expected of discipline or subject-focussed graduates.

Objective	Learning Outcomes at Levels 4 and 5 - the Graduate with Foundation Degree / Diploma / Certificate will be able to:	Learning Outcomes at Level 6 - the Graduate with Bachelors Degree will be able to:	Learning Outcomes at Level 7 - the Postgraduate with Masters Degree will be able to:
1. Action for improvement to create curious, evaluative and effective 'improvers' in society	With guidance, identify opportunities to improve their own practice, take small-scale actions and evaluate the outcomes	With support, develop and implement a plan of action for improving their own practice and critically evaluate the outcomes	Independently identify opportunities to take actions for improvement at an organisational level, systematically implement innovative solutions and critically evaluate the outcomes
2. Scholarly research to assure the quality of improvement is based on best evidence, analysis and insight	With guidance, construct a research plan and collect data to help answer a simple research question	Develop and implement effective research plans, which isolate and focus on the significant features of a problem	Undertake a significant piece of research that fully and critically explores key issues demonstrating rigor in the research process
3. Communication for effective dissemination of improved practice	Communicate orally, in writing, and in appropriate media, in work and course contexts making informed and balanced arguments	Effectively communicate orally, in writing, and in appropriate media, in academic and professional contexts making well-informed, coherent arguments	Synthesize sources and communicate orally, in writing, and in appropriate media, in academic and professional contexts making well informed, coherent and persuasive arguments
4. Application of subject and professional knowledge for depth of understanding of practice	Demonstrate a sound understanding of the principle issues in their field and take part in an argument around topics of debate or controversy drawing on personal experience	Evaluate complex issues in their field and take part in reasoned argument around topics of debate or controversy drawing on knowledge from experience, work and course contexts	Critically analyse and evaluate complex issues and led reasoned argument around topics of debate or controversy drawing on knowledge at the forefront of their field including a historical perspective

5. Learning and working with others to sustain lifelong learning and community of practice	Evidence personal practice of lifelong learning, using technology, and working in organisational contexts	Articulate philosophies of lifelong learning, the applications of technology, and the way organisations work	Take a leadership role to articulate philosophies of lifelong learning, the applications of technology, and the way organisations work
6. Organisation and policy to act on wider contexts of organisation and society	Exercise personal responsibility in tacking actions based on work context and local policies	Use organisational theories to inform analysis of complex work circumstances and exercise personal responsibility in taking action in the light of local and national policies	Use organisational theories to inform analysis and evaluation of their work context at a strategic level, critiquing local and national policies and develop recommendations for change
7. Ethics to maintain integrity and respect for individuals and society	Understand the ethical expectations in their work context and act accordingly	Understand the implications of ethical dilemmas including social implications of activities and interpret these to inform their action-inquiry	Analyse and manage the implications of ethical dilemmas including social implications of activities and work pro-actively with others to formulate solutions
8. Technology to enhance creativity, confidence and competence with technology as a modern practitioner	Develop an understanding of the potential use of relevant technologies for communication, co-ordination and analysis	Confidently and competently use relevant technologies for communication, co-ordination and analysis of work-place activities	Evaluate technology for its contribution to communication, co-ordination and an organisation's enterprise activities

Table 4. Framework Learning Objectives [P25 p4-5]

Table 5 is an extract from a module definition that illustrates the general syntax of the learning outcome (LO) and assessment criteria (AC) used across all of the modules. In the era of mass-produced higher education, the LO has become adopted as the basic, assessable building block for the description of the curriculum (QAA 2007, 13) in that it describes the intention of what a learner will know and be able to do on successful completion of a programme of learning.

	Learning Outcomes - when you have successfully completed this module you will:	Assessment Criteria - to demonstrate that you have achieved the learning outcome you will:
1	Locate your chosen field of practice relative to professional domains, specialisms, subject disciplines	Show the inter-professional and inter-disciplinary connections of your work and identify bodies of knowledge that extend these and contribute to your professional development

2	Analyse key issues of professional argument, debate or controversy of broad interest within your chosen field of practice in debate with peers with historical perspective and foresight	Produce a critical account of consensual and competing ideas in your professional context using illustrative examples to support your interpretation, drawing from your contributions to debate with other student researchers
3	Critically evaluate professional requirements for your chosen field of practice in relation to your skills set and experience and your organisation's priorities for development	Synthesise different sources of information and carry out a gap analysis to identify in systematic way foci for your professional development
4	Identify and critically evaluate opportunities for professional development within your work-context / chosen field of practice	Produce a personal development plan that integrates work-based opportunities for learning with future module requirements providing justification from an analysis of the professional context

Table 5. Learning Outcomes and Assessment Criteria

When writing LO and AC, great care was taken to construct them in such a way as to be non prescriptive about a person's work context but instead describe future academic and professional capabilities they should develop as a result of undertaking the module. There was also an attempt to adhere to established practice of writing LO (Moon 2002). The associated AC describe how the behavioural requirement of the LO will be evidenced and both elements are designed to reinforce the inquiry-oriented pedagogic approach rather than specific reference to disciplinary knowledge or skills. The curriculum design requires a student to undertake an inquiry in their workplace, related to a professional context or discipline.

The use of learning outcomes is an appealing approach for management and quality as it standardises the way in which curriculum are described offering the prospect of a common student experience and a way of standardising evaluative judgements about achievement. However, from the teaching practitioners' standpoint the approach can be quite problematic. It over-simplifies what are complex attributes of a higher education that is difficult to describe and in doing so, falsely claims to objectify the process of assessment (Hussey and Smith 2002). For the model of Work Focussed Learning the outcomes based approach allowing for a high degree of interpretation by learners and assessors is an appropriate means by which to personalise the curriculum to the specific work context.

4.3.2 Adaptation of the IDIBL Framework

At the IDIBL Framework validation event, three sets of documents were submitted:

1. an academic proposal document [P25];
2. module specifications; and
3. a generic student handbook.

In the academic proposal and student handbook, places where identified where programme specific additions and amendments would be required when seeking specific course approval. It was anticipated that use of the IDIBL Framework to validate future courses would be based on the minor modification regulations. This would offer a less onerous route to validate a course, as there are fewer requirements. With this approach, a standing panel of a board of studies approves the amendments, without the need for establishing a full panel that includes external examiners and representatives from other parts of the university. Full validations are identified by staff developing courses as a barrier to course development because of the amount of work required [P22 p29-30].

4.3.3 Use of the IDIBL Framework

Over 5 years, staff have used the IDIBL Framework to develop their own programmes and have recruited and taught students successfully, including the 'Masters in Learning with Technology' [P29] which I led. This Masters was validated as a proof of the concept of both the IDIBL curriculum design and the agile validation of new courses based on this approach. It was envisaged that subsequent users of the framework would be able to use this experience to give the university confidence in allowing new programmes to require minor modifications of the framework. Another instance of the Frameworks use was for a suite of programmes around Regeneration and Sustainable Communities were developed at undergraduate and postgraduate levels [P34 p4]. In addition, through the evaluation activities of the IDIBL project, I found that the ideas and approaches introduced by the framework have been adopted and adapted by colleagues for their own purposes that I had not anticipated.

4.4 Pedagogic Approach

The key pedagogical elements of the framework are the mechanisms for student support, personalisation of the curriculum, and the approach to assessment. These are briefly described below.

4.4.1 Student Support

It was anticipated that students who were geographically separated from each other and from staff, and who could not commit to regular synchronous communications would need new arrangements for supporting their study. The approach proposed that this should take place through an online community of inquiry, including learning sets for smaller group work. Online asynchronous dialogue would focus on their "practitioner-based enquiry or research" [P11 205]. This is a tried and tested approach with different roles clearly identified including:

1. staff as learning facilitators, 'team-teaching';
2. expert guests to provide process, subject, professional or disciplinary knowledge in response to students' contextual inquiries; and
3. students taking responsibility to develop their own peer-to-peer support networks.

One of the key strengths that students report through this approach is the support and encouragement they can offer each other to continue with their studies [P21 p74-76].

The ideas above are central to the framework developed. In operationalising the approach there are challenges in ensuring that it is viable in terms of the resources required to offer a good learner experience, but not seen as inefficient and expensive from the institutional perspective. The experience of the Ultraversity Project indicates that as student numbers increased, a new balance was found between the staff activities of content delivery, facilitation and marking, such that the approach was economically viable for the institution.

4.4.2 Personalisation

A significant challenge for higher education is how to personalise the experience in such a way that it meets the needs of the learners and at the same time, is

economically viable for institutions to deliver. The solution provided by the model of Work Focussed Learning and built into the IDIBL Framework is to have a fixed set of modules, but allow for personalisation to be achieved through negotiation of a set of learning activities and assessment products for each module based on an inquiry based learning approach. This is in contrast to other approaches to personalisation, such as:

1. module choice that allows students to chose across subjects and disciplines to construct their own pathway;
2. negotiated awards where prior and experiential learning might be a key component; and
3. shell modules where negotiation about the learning outcomes is undertaken on a one-to-one basis and where the learning outcomes themselves can be negotiated.

The Work-focussed Model used in the framework aims to achieve is personalisation and choice for the students about their inquiry, but at the same time ensuring that they follow the curriculum and pedagogy designed with the intention of them taking actions for improvement in the workplace.

4.4.3 Assessment

IDIBL takes its approach to assessment from the model of Work Focussed Learning, and uses assessment through patchwork media, a development of Patchwork Text (Winter 2003), which is an approach to assessment born out of frustration with perceived limitations of the essay in higher education. This is described in 3.5.1.1 Activity Design. The intention is to provide a means for assessment that utilises the authentic workplace knowledge and workplace activities students bring, rather than seeking to slavishly follow the rules of 'academic literacy' (ibid., 118-120), and thereby 'warping' the learning experience. It cannot be overemphasised how important these principles are to the model of Work Focussed Learning.

4.5 Evaluation of the IDIBL Framework

4.5.1 Methodology

The IDIBL Framework was evaluated using a constructivist grounded approach. Data was gathered from eight in-depth, semi-structured interviews of key stakeholders who were selected for their participation in the project. In all cases interviews were recorded and transcribed, and then coded to identify key issues: the qualities of the IDIBL Framework itself; and the nature of the intervention made in the university.

This was supplemented with project documents produced for the validation process, and an evaluation of activities by the project team (Millwood et al., 2010) working with academic and administrative staff and employers using email and other evidence from personal communications.

Through the evaluation, I was seeking to understand how the IDIBL Framework worked, "The idea is not just to discover whether a programme works, but to explain how it works" (Clarke 1999, 4). With this approach, there is explicit aim to generate findings that are of value beyond the programme or project being evaluated; the evaluation's purpose is not just to help the decision makers of the programme or project under study. Further, my aim was to identify the underlying mechanisms that are at work, in an inquiry informed by Realistic Evaluation, "it is not actual programmes which work but the reasoning and opportunities of the people experiencing the programmes which make them work" (Tilley and Clarke 2006, 522). This meant extracting stakeholder views, theories, distinctions and experiences of the IDIBL Framework. This approach was intended to help identify an original contribution of the framework to curriculum design.

The original theoretical proposition put forward by the IDIBL project was that, "The framework describes an approach to teaching, learning, and assessment including generic modules will enable staff across the university to readily develop new courses along particular themes without the need to undertake a full-validation event or author new modules" (Millwood et al. 2010, 2).

The evaluation activities were designed to elicit stakeholders' judgements about the validity of this statement and the ways in which they themselves see the

university responding to curriculum initiatives. This insight is important in action research as it ensures evidence is gained to inform further cycles of action research.

Lastly, in the context of my work in the Institute for Educational Cybernetics (IEC), I had been heavily influenced by systems thinking and in particular Cybernetics and the Viable Systems Model (VSM) as an analytical tool, which I decided to apply to help explain the IDIBL Framework approach.

4.5.2 Staff and the Framework

As stated earlier, it was envisaged that a characteristic of the IDIBL Framework was that it would be readily re-used to develop new courses without the requirement for a full validation process. This is a challenge to existing validation practice and regulations and met only with partial success. Although the framework was validated and approved, two subsequent course validations, based on the framework, were required to go through the full validation process, which defeated one of the project's aims. With hindsight and a greater experience of quality mechanisms, processes and working practices in the university, I think it likely that this was because, although validated as a framework, the idea of reusing such an approach was not fully enculturated in the university nor explicitly promoted by the Quality Assurance and Enhancement Unit.

Practitioners found that the framework was useful, although in ways that were not always as initially intended. For example, it was used to support thinking beyond the current confines of HE practice, the development of pedagogical ideas and persuasion of colleagues. All this in the face of deeply embedded practices and beliefs about higher education that, in practical terms, make the model's adoption and use a challenge. Illustrative quotes from the eight interviews are given below:

> "I am not sure I would change it. Because I used it as a starting point and modified it from there. It is a useful tool and people could use it when practices accommodate it better." (course developer)

> "I think it is valuable particularly as a thinking tool, even if practically you do not adopt it. It gives you an opportunity to re-think." (course developer)

"Yes. I myself feel more comfortable with the less specific but other people were not. They were not quite sure what we were asking for, nor how it would be measured even though we had tried to create very detailed briefs that would make people feel better about it, but there was something people really didn't like. And also the managers didn't like because they couldn't pin people down to things. There was a notion that it would all turn into some terrible liberal nastiness." (course developer)

"Some people were apprehensive about it and it's because it's different and not sufficiently tied down, as far as they are concerned." (quality unit)

Individuals found the IDIBL Framework attractive when the educational philosophy offered by the model mapped onto the individual's beliefs about higher education and the work they were trying to achieve:

"It wasn't so much the IDIBL Framework but the work that you were doing... So this idea that we could have a flexible system that could relate to the changing notions of and demands of the industry. That's where I came from I think. But I also thought it was exciting, there was something exciting about it, it saw education in a more flexible way. Putting the onus on the student and less upon this is what we are going to deliver to them. The idea that a student could move around easily and decide the focus of their study that was also attractive." (course developer)

4.5.3 Marketing the Framework to Employers and Students

Marketing particular programmes fell into two parts. Firstly, an invitation to employers (including professional associations and development agencies) to take part in creating a bespoke course using the framework and secondly to recruit students to the Masters degree in Learning with Technology and Undergraduate and Masters in Regeneration and Sustainable Communities.

Face-to-face meetings with employers' representatives produced enthusiasm and encouragement; one project leader in school innovation reported that:

> "the course features in our bid documentation for (a Local Education Authority) as an example of how we might develop Continuing Professional Development capacity." (educational service provider).

Other members of staff met with less enthusiasm and understanding:

> "the industry couldn't understand it, even though it was a way to make it easier to do what the industry wanted to do because they had all been educated in a hugely hierarchical scenario they couldn't understand it. They couldn't grasp it and so they were against anything that you couldn't pin down, it was against their experience." (course developer)

Others were concerned that the framework should include direct content delivery - fully negotiated learning was a step too far, and the action research progression was not fully understood. Where a trusted relationship with an employer already existed, proper engagement did take place, although not on the scale hoped for. Whether the enthusiasm or trust existed or not, little significant development came from these contacts.

For recruitment, the marketing department of the university was similarly enthused by the framework, but whilst offering good advice and support for developing leaflets, the courses and approach did not figure strongly in the marketing activity of the university. The project team felt that the push needed would have taken a more significant involvement from the marketing department which was already heavily committed selling the existing university offer. Most of those who enrolled were by word of mouth and personal contact.

From first hand experience of this and the Ultraversity work, I know that materials created for marketing don't effectively communicate the approach to many people. Challenges include the apparent lack of content, the strangeness of its central concept and the absence of a clear statement of what would be learnt.

This is a fundamental challenge faced when trying to introduce a new product that is very different from the well-recognised models of higher education.   I am certain that there is no simple solution, but know from experience that if enough effort is put into marketing and promotion then there are significant groups of learners who

can relate their own circumstances to the offer being made and will chose to purchase it. This point is returned to in the concluding chapter from the perspective of disruptive innovations.

4.6 The Cybernetic Viewpoint

As indicated in Section 2.1, the use of Cybernetic concepts to explain my practice was introduced to me when I joined the Institute for Educational Cybernetics, and in particular the Viable Systems Model (VSM) developed by Stafford Beer, expanded on below. In particular, the connection between Cybernetics and Action Research made particularly evident by Soft Systems Methodology (Checkland and Poulter 2006), arguably a form of action research, enabled me to make a clear connection with my previous work.

The use of Cybernetics theory to explain the workings of HE institutions is not widely exploited although Birnbaum (1991, 177-200) does provide a holistic analysis and practical explanation of the organisation of the university from a Cybernetic viewpoint. In addition, Britain, et al., (2007) offers an explanation of the application of the VSM to e-learning in HE that usefully covers the main features of the VSM (Beer 1985). This provided the starting point for analysis, conducted in retrospect in order to reflect on and analyse the IDIBL Framework.

Cybernetic explanations are based on a systems analytical approach and can be applied at the micro and macro levels, to mechanical, biological and social systems. They are concerned with feedback loops between a system and its environment rather than being concerned with identifying the purpose of every constituent part. This avoids the necessity to understand every detailed causal relationship, which might lead to an over elaborate model which was ineffective as a predictor of real world activity. In turn, this means accepting that we may remain ignorant of the features of the processes within a sub-system and see these as a 'black box' (Jackson 2003, 86-87).

A key concept in Cybernetic theory is that of 'The Law of Requisite Variety', developed by Ross Ashby and interpreted for use in understanding the management of organisations by Beer in his VSM as "only variety can absorb variety" (Beer 1985, 26), where 'variety' is defined as "the number of states of

which a system is capable of attaining." (Britain, et al., 2007, 11). The term variety is used to describe the complexity that management needs to deal with and is used for comparative purposes rather than being something that is precisely measured (Beer, 1985, 22). It is the case that the management variety will always be less than the variety of the operations it manages. Maintaining an effective balance between the different variety exhibited by management and operations is a central theme of the VSM and is achieved through amplifiers and attenuators as mechanisms for control, constituting a feedback loop. An amplifier increases the variety of responses by management on the operations of an organisation and the environment it is operating in, whilst an attenuator reduces variety of responses experienced by the operations from the environment and the manager from the operations.

In Figure 8, the IDIBL Framework is subjected to a partial VSM analysis, as shown by the classic cybernetic diagram, with the 'system in focus' being the teaching context where interactions are between staff and students.
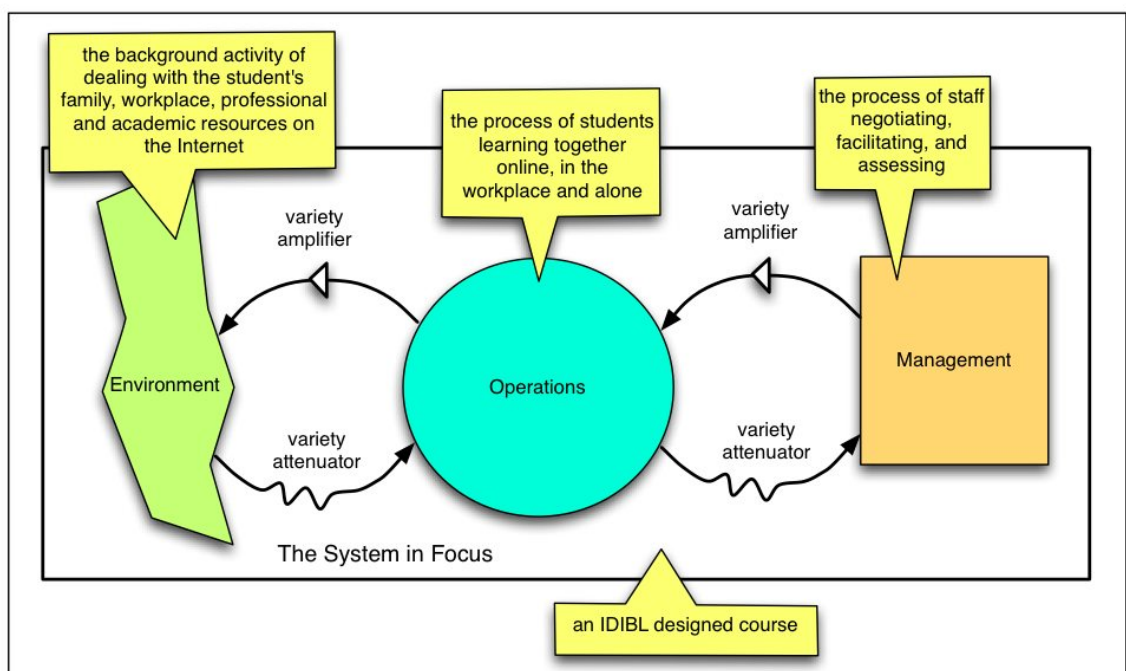
Figure 8. System in Focus – IDIBL Designed Course (After Beer 1985, 27)

My practice was in the role of management, operations was the work of staff to deliver courses and the environment included the students and their needs. This law has proved invaluable in my reflection and analysis of not just the IDIBL

Framework and online learning, but actually all of my teaching work over the past 20 years.

A key principle identified by Beer was that the steps taken to absorb variety in an institutional system should be, "designed to do so with minimal damage to people and to cost" (Beer 1985, 35). Choices made will have intended and unintended consequences that will determine the success or otherwise of the organisation, impacting on factors such as human happiness, creativity, efficiency, productivity, innovation, the capability and the capacity of an organisation to adapt to changing environments, etc. (Britain, et al., 2007, 11; Jackson 2003, 100).

In addition, a VSM analysis anticipates that there needs to be opportunities for adaptation and self-organisation within sub-systems of the whole, "parts must be granted autonomy so that they can absorb some of the massive environmental variety that would otherwise overwhelm the higher management levels" (Jackson 2003, 107).

Getting an appropriate balance between the different feedback and control mechanisms is a key challenge of the designer of a system. In the case of IDIBL, the challenge is one of learners and their organisational context and university teachers mediated through technology.

4.6.1 Cybernetic Analysis Applied to IDIBL

Environmental variety can be found in the range of states seen in students' employment context and creative skills to communicate ideas. In the context of assessment this presents a variety problem for staff organising and marking work. This kind of problem is often managed in higher education by attenuating the variety. For example, assessment through written exams on fixed questions enables the institution to treat all students as if they were identical, hiding the variety of their individual personalities, and capabilities. This imposition may be costly in the context of widening participation and retention since some students will be put off by these conditions or not perform to their potential. An alternative solution, adopted by the IDIBL Framework, was to make available to students more options in the ways that they can produce assessment products. This necessitates amplification in the variety offered by the staff body in terms of

protocols and effort to enrich their response, in marking and giving feedback to students. This approach reduces the potentially inhibiting 'costs' to students by not forcing them to study a prescriptive curriculum:

1. becoming expert at sitting examinations;
2. studying seemingly irrelevant examples rather than their own work context; and
3. time spent producing assessment products separate from authentic work tasks.

However, this approach increases the costs to the staff body:

1. a more difficult and time consuming marking tasks because of the wide variety of assessment products when contrasted to marking examination scripts; and
2. challenging moderating issues of comparability.

In turn, this diverts staff effort away from other teaching tasks.

Another example is the personalisation of the curriculum in IDIBL. The challenge is to amplify variety in 'management' to match 'operations', as seen by students in the states presented by staff. One solution is to offer a wide selection of modules, each with a particular narrow curriculum focus that students can select from. The IDIBL Framework chooses a different solution - a fixed number of compulsory modules but with learning outcomes written in such a way that they can be used in a wide variety of work contexts. I argue that this amplification matches these particular students' needs better. This is a simplification for the quality arrangements in the university, although it is problematic in that it challenges established norms and ways of doing things.

In both established HE approaches and IDIBL, of these cases the choices made have costs for each part of the system, and this raises a question; which choice overall produces the 'best' results, does the 'least' damage and maintains a viable solution?

Table 6, Analysis of Requisite Variety uses a cybernetic viewpoint to explain how the implementation of the model components can meet the variety challenges of the feedback loop between operations (students) and management (staff). In

particular, addressing the needs outlined above; time and place, the affordance offered by technology to vary the parameters under which we organise learning to that we can offer personalisation and choice - that is what, when and how students study. We also identify organisation of teaching, not explicitly addressed by the model, as worthy of significant attention.

As well as identifying attenuators and amplifiers in the system, I also identify where self-organisation, that is students coordinating themselves in support of each other, is an important aspect of the design. This self-organisation could be analysed as a sub system - a 'recursion' of the analysis (Beer 1985, 2-6) - but the system focus for this section is at the level of the course as a whole.

The discussion about the struggle to innovate, persuade and sustain the IDIBL approach in traditional UK higher education is beyond this cybernetic analysis. This is addressed in Section 5, Collaborative Curriculum Change.

Aspects of organisation addressed by the IDIBL Framework course design:	Students' needs (as identified in 4.3)	Variety challenge: the problems presented by mismatch in states of management (staff) and operations (students)	Amplifier: increase in the number of states of the management (staff) presented to the operations (students)	Attenuator: decrease in the number of states of the operations (students) presented to the management (staff)	Self organisation: variety absorbed within the sub-system of operations (students)
Assessment	5. They seek to develop further their communicative creativity and technological understanding as a complete professional; 6. Traditional examinations and academic essay writing are either intimidating or uninviting;	How to assess a wide range of products derived from authentic work activity and offer choice in creative student expression	More options in the ways that students can produce assessment products (following the Patchwork Media approach) and a greater range of responses to students when marking and giving feedback	There is no specific additional attenuation beyond assessment criteria, in this case - we match variety in the operations through amplification and suffer the cost in increased labour	Students are encouraged to share and critique drafts - each is unique so plagiarism is unlikely
Student support	7. They seek the company, support and intellectual challenge of fellow students rather than studying alone; 8. They seek the advantage offered by technology to enjoy the possibility of work on joint ventures and studying collaboratively.	How to offer moral and academic support from without face-to-face contact	Team teaching enables different staff to offer support to groups of students	Hotseat protocols of topic focused, time limited conversations Staff monitor selected forums and conversation threads, making considered interventions rather than responding to everything	Different online forums provide opportunity for self organisation of between students Students discuss hotseat responses between themselves and accept answers from questions 'near enough' to their concern

Personalised curriculum	2. They wish to make their study directly relevant to their work	How to offer a personalised curriculum effectively and efficiently to students in an 'infinite' variety or states, that is each having their own interests, work contexts, career aspirations	Individual learning plans negotiated between tutor and students at the level of the module specifying learning activities and assessment products	Peer support through learning sets where critical feedback is offered on plans and work produced soaking up potential workload of responding to every individual concern Limited number of modules with learning outcomes written to be applicable to a wide range of work contexts	Students act autonomously in their work-place to undertake their inquiries accessing professional support from work colleagues
Access	1. Need to continue in full-time paid employment whilst studying 3. Family commitments prevent their on-campus attendance; 4. Geographical location or poor transport links makes campus attendance difficult.	How to be flexible in terms of time and location for students who have family and work commitments	Asynchronous forum communications mean staff are able to take advantage of the affordance of many-to-many communications		Asynchronous communications allow for students to determine when and from where to interact

Table 6. Analysis of Requisite Variety

4.7 Conclusions

The findings from interviews confirm that peers attach value to the development of the IDIBL Framework with staff finding it a source of inspiration and as a useful tool for critique of their current practices. However, for some staff, established practice and preconceptions render the approach described by the framework irrelevant, as there was a significant dissonance between it and their own beliefs about what a university degree is, and how it should be delivered and studied for. This raises questions about what might be required when seeking to develop step-changes in types of provision and whether such innovations can be embedded university-wide.

In this cycle of my action research, raising the level of critical debate around curriculum design amongst colleagues was more successful than recruitment of students to new courses - the original main intent. It was also apparent that in proposing the IDIBL Framework, a particular aspect that required further attention was to understand how to market novel curriculum approaches to potential students, employers and other stakeholder groups. Encouragingly, the action research undertaken shows that the university has the capability to develop atypical curriculum designs and that quality assurance mechanisms are flexible enough to respond positively to the demands placed upon them.

Although the IDIBL Framework proved useful to curriculum designers, this was not always in the way anticipated when it was created. Some staff found the model valuable as a thinking tool to systematically critique current practices, exposing rigidity and assumptions behind curriculum design in the university's existing practice.

The model had a particular view of how new courses could be created which worked best when staff had already identified the problem of relevance to the students' employment and were in ill-defined subjects that were newly emerging or fast changing. For these staff the model was a valuable source of inspiration and of practical help in validating their own courses.

However, the approach does not fit well with the practice of academics developing new courses in a piecemeal way, either around an area of specific interest to them

or by re-working existing modules and courses. For colleagues who have a very different view of what a curriculum is and what it is to study at higher education, the IDIBL Framework lacks relevance.

Although validated as a model by the university, this did not accord it with the status of a regulation or even guideline. If the model is to be established in the 'fabric' of the institution and to be more than an experiment to develop inquiry-based forms of learning, then more effort would be required to ensure the model was 'officially' adopted in its regulations. This highlights a gap between the university's strategy and implementation.

The model omitted to explicitly address some of the organisational changes required. For example, the notions of team teaching, online community of inquiry for teaching staff and new productivity and management arrangements, which were present in the earlier example of the approach developed by the Ultraversity project, were not addressed. The Cybernetic analysis is useful too, for course designers, in particular the notion of 'absorption' of variety, when considering the impact of choices they make on students and teachers. This involves seeking to minimise the negative impact on both groups and making better use of internal, self-organising, mechanisms for absorbing variety as well as attenuators and amplifiers. This suggests the following cybernetic analysis in Table 7, proposal to match variety issues related to teaching.

Aspects of organisational approach not addressed by the IDIBL Framework course design	Variety challenge: problems presented by mismatch in states of management (staff) and operations (students)	Amplifier: increase in the number of states of the management (staff) presented to the operations (students)	Attenuator: decrease in the number of states of the operations (students) presented to the management (staff)	Self organisation: variety absorbed within the sub-system of management (staff)
Teaching	How to avoid the inefficiency of asynchronous and geographically separate activity by following the expectations of the 'standard' productivity arrangement in UK HE	Opportunity to access advice from all members of the staff team. Questions from individual students answered publicly Clarity about the expectations of responsiveness from staff.	Creation of frequently asked questions. Code of conduct for online behaviour reduced personal response, emphasis on self-organisation through online community of inquiry.	Self-organisation & team teaching allows for new, flexible working practices such as sharing the responsibility to respond to students & modelling desired behaviours through discourse between staff.

Table 7. Proposal to Match Variety Issues Related to Teaching

For cross-institutional initiatives that seek to promote a particular pedagogical approach, it is vital that at an institutional level that there is clarity about what is trying to be achieved. If the purpose is to better understand an organisation and stimulate new ideas and thoughts widely, the model approach is worth replicating. If however, the immediate imperative is to recruit significant numbers of students, then such activities probably need to be located in a dedicated unit. This is because, in cybernetic thinking, the issue of purpose is critical to the effective running of an organisation. With no agreement about this, the managers and workforce will be in conflict with parts likely to fail. Hoverstadt (2008, p 256) points out that the easiest way to respond to this challenge is to have a plurality of purposes although this is often not made clear and in itself results in conflicts between different purposes, "The key to transparency is structural, with different sets of activities or organizational units tasked with handling the different agendas". This simpler environment insulates the innovation from the conservative effect of the existing university organisational design. This point will be returned to in the conclusion including the application of the theory of Disruptive Innovation.

Finally, I have not explored fully the problems of explaining the approach to potential students and employers, whose preconceptions of what it is to study in higher education were found not to match the IDIBL Framework as we communicated it, despite the learner-centred motivation in its design. This is a challenging problem that the success or failure of the approach ultimately rests upon and will be explored further in section 5 of my thesis.

4.7.1 Original Contribution to Knowledge

In the introduction I have claimed my original contribution as a strategic mechanism to bring about cross-institutional adoption of the model of Work Focussed Learning and a cybernetic analysis of the pedagogy of the model of Work Focussed Learning in delivering a personalised curriculum. In particular, my key contributions are:

1. the creative idea to develop and validate the IDIBL Framework against UoB quality procedures with the intention that it could be used and reused to efficiently develop new degree courses;
2. proposing an approach to the challenge of offering students from an unlimited variety of work contexts a relevant, personalised curriculum;
3. articulating a curriculum design principle using the concept of 'variety' that can be re-used elsewhere;
4. developing an innovative approach for pedagogic change across a university; and
5. identifying some of the key challenges of pedagogic innovation in a university.

4.7.2 Influences on Future Cycles of Action

The challenge of introducing and socialising the IDIBL Framework led to the development of the Coeducate project with the direct aim to understand curriculum development, identify barriers and propose & develop solutions to make the development of new and innovative programmes easier.

5.0 Collaborative Curriculum Change

5.1 Section Summary
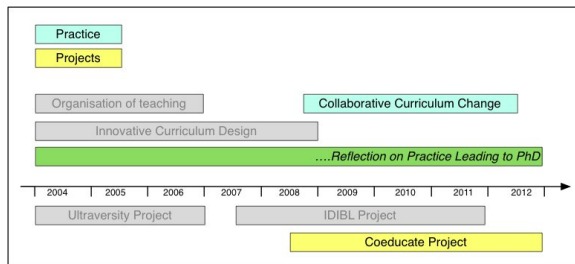
This section presents my analysis of the challenges raised by radical curriculum innovation in higher education, informed by my experience of implementing the IDIBL Framework (described and analysed in Section 4) through the work of the Coeducate project. The project was developed to enhance the universities capability to develop new curriculum where, "the starting point for curriculum development and design is the needs of the learner and their organisation, negotiated and delivered in partnership with full recognition of in-work and experiential learning." [P28 p1]. This was in response to the analysis by senior managers that too much of the curriculum on offer for work-based learners was developed around the interests of the university and academics rather than the needs of the learners [P30 p18]. For the purpose of this claim, my role in this project was as an action researcher seeking to collaborate in the take-up and development of courses using the IDIBL Framework.

In constructing this section of my claim, I used my first hand experience to identify and assess the issues and barriers experienced implementing the IDIBL Framework. Table 8 highlights the significant aspects of my practice and links this to my portfolio of evidence.

Practice	Significance	Portfolio evidence
Collaborating on the validation of courses using the IDIBL Framework in Regeneration and Sustainable Communities	First hand experience of the issues implementing the IDIBL Framework	[P19; P24 p4; P28 p3; P33 p265; P34 p4]
Leading a Masters level course using the IDIBL Framework	First hand experience of issues delivering the model of Work Focussed Learning in a different context	[P28 p3P29; P33 p262]
Undertaking empirical	Theoretical explanation of	[P33 p264-267]

research with university staff who adopted the IDIBL Framework	institutional barriers to innovative curriculum design	
Theorising the University of Bolton employer directed provision using the Viable Systems Model	Theoretical perspective as to the issues with current curriculum development approaches.	[P27; P32]

Table 8. Significant Aspects of Practice 3

In this section I will introduce the context in which curriculum development activities take place at the university. I will then briefly discuss cultures and curriculum change in higher education followed by the methodology I used for the analysis of the implementation of the IDIBL Framework. Findings are then presented and I then go on to apply a curriculum change theory to the experience of implementing the IDIBL Framework. I propose institutional strategic choices for curriculum development. In conclusion, I identify my contribution to knowledge and argue that institutions need to make significant strategic choices that may be beyond existing capabilities if they are to implement radical curriculum change.

5.2 Introduction

The Coeducate project was funded as a part of the JISC funded Curriculum Design Programme, and ran between August 2007 and July 2012, with the aim of supporting Higher Education Institutions (HEI) to transform their approaches to curriculum design through the innovative use of technologies.

Getting widespread take-up of the IDIBL Framework in the university was always going to be challenging. The Coeducate project was devised as an institutional vehicle to take actions to tackle the problems that were preventing radical curriculum innovation. To understand the problems, as a part of my work-practice, I interviewed key informants and analysed the data using a grounded theory approach to discover issues arising and concerns expressed by my collaborators in curriculum change. The outcomes of their experience can be characterised as a set of issues and concerns that colleagues face when they are trying to use the IDIBL Framework to develop courses. The motivation in this section is, therefore, to uncover some possible underlying causes that might account for the

experiences of colleagues and to propose changes that would make radical curriculum innovation more possible.

As stated earlier, the IDIBL Framework was developed to operate within the university's systems rather than work independently, in order to encourage systemic change across academic and service departments. As such, the project invited participants from all departments of the university to implement courses of their own using the framework.

Colleagues who contributed to this evaluation, used the IDIBL Framework in several ways:

1. establish and recruit to a postgraduate Masters in Learning with Technology;
2. establish and recruit to an undergraduate course in Regeneration and Sustainable Development;
3. validate a Foundation Degree in Management and Administration; and
4. aid the development and validation of other courses that drew inspiration from the IDIBL Framework.

5.3 Curriculum Development Activities Context

As a part of the Coeducate project I undertook an extensive 'baseline' activity to investigate through interviews, focus groups and analysis of university documentation the views and experience of top managers, senior managers and teaching staff in relation to curriculum development activities for an internal report [P30].

The following summary of findings is presented as background information about the context in which I sought to support the take-up and development of the IDIBL Framework:

1. the university strategic plan was generally well understood across the university, but that there was a significant discrepancy between the senior management's sense of urgency and university staff attitudes with respect to the need to develop new curricula that directly addressed the workplace;

2. most courses were heavily reliant on a content delivery model and associated teaching practices were designed to support this, with strong sense of ownership of the subject curriculum by the teaching staff [P31];

3. quality assurance processes and systems were oriented towards supporting a stable content-oriented curriculum model;

4. cross-departmental development was inhibited by staff's anticipation of difficulty in delivery arising from the operation of costs centres and rivalry between schools over control of boundary subject areas;

5. the challenge in developing a credible business case for new courses was significant, and staff interviewed believed this to be made even more difficult because of the lack of support and market intelligence provided from the centre;

6. assessment practice was perceived as needing to change to increase formative and reduce the overall amount of summative assessment and to use different approaches to evaluating what students knew and could do without the use of examinations; and

7. many staff had been at the university for a significant period of time and the job they were now being asked to do was significantly different to that when first employed, and for many this doesn't align with their capabilities and predispositions [P30 p28-31].

In summary, there were some valuable qualities identified in the university that meant it was a receptive place for new ideas and approaches to courses and their design. However, any proposal that contained radically new ways of delivering higher education that were unfamiliar to the majority of university staff would be challenging to operate and this proved to be the case for the IDIBL Framework. The findings of this study triangulate well with the findings based on the interviews of colleagues who used the IDIBL Framework and are discussed later.

5.4 Cultures and Change in Higher Education

Reviewing the IDIBL project plan, and using it to reflect back on our intentions at the start of the project, two aims can be identified, that of the individual lecturer seeking to develop courses, and that of the institution pursuing its strategic objectives [P18 p4-6].

If the aforementioned aims were to be successful, an organisational response was required. In organisational change, there are both structural and cultural issues to consider and in terms of the latter there is quite an extensive set of specific literature with relation to Higher Education (Blackmore and Kandiko 2012, 112-114), and much of this focuses on the historically high degree of autonomy of academics being eroded by increased levels of management that I discussed in section 3.1.1 of my thesis.

McNay's (1995, 105-106) four cultural types is a widely recognised model based on the extent to which policy definition and its control and implementation in an institution are tight or loose. The simplicity of this approach is attractive, offering four categories of university: collegial; enterprise; corporate; and bureaucratic (the labels are eloquent), albeit recognising that a given university may have features of one or all of these. However, my experience leads me to favour an analysis that adapts to the complexity that we find in HEI's. The multiple cultural configuration approach put forward by Alveson and used by Trowler (2008, p12), explains organisations as places with many different cultures co-existing in a dynamic state of flux. If a clear and strong culture could be identified throughout an organisation, then a single approach might prove successful. However, if many different cultural sub-sets can be identified in an organisation, then each one of those may require a bespoke approach for an institution wide change to be effected.

In a sense, the cultural and structural issues are a backdrop as any real difference must come about by changes in the practices of teachers and learners which pose a significant set of issues. There are an extensive set of rules, regulations, processes, practices, technical systems and organisational filters that make up the workings of a university that can have a significant impact on change and I will address this directly in the conclusion to my thesis.

For now, the concept of 'Teaching and Learning Regime' discussed below offers a way of operationalising a key layer in the cultural analysis outlined above.

5.4.1 The Teaching and Learning Regime

Trowler, Fanghanel and Wareham (2005, 428-441) use three levels of analysis when considering the enhancement of teaching and learning in HEI's which describe viewpoints:

1. 'micro', concerned with the individual lecturer and largely dominated with the idea of the reflective practitioner and the professional development activities to support that;
2. 'meso', concerned with the subject department its 'teaching and learning regime'; and
3. 'macro' concerned with the institution and its regulatory control of processes and systems driven by agencies and initiatives external to the institution.

Thinking at these three levels has proved useful as an analytical tool for better understanding the implementation of the IDIBL Framework and what might be required to take action to support a change initiative by those who identified with a particular viewpoint.

In Section 3, the IDIBL Framework, it could be argued that it was primarily an intervention at the macro level seeking to impact on the university validation process, but also to appeal to the individual lecturer as a reflective and critical practitioner, but the project did not target Trowler's meso level, which he considers so significant:

> Social processes at the departmental or sub-departmental, workgroup, level are particularly significant because it is here that students and lecturers engage together in teaching and learning practices (2008).

In the particular context of teaching, learning, and assessment, in higher education, the notion of teaching and learning regimes (TLRs) as, "workgroups which engage together on common projects over an extended period of time to develop a set of contextually specific characteristics" (Trowler 2008, 51), is developed to help understand how enhancements might be made more likely to succeed.

For Trowler, the identification of a TLR is a subjective act with the intention of making a useful boundary distinction around a particular workgroup for the

purpose of enhancing teaching learning and assessment, recognising that in doing so there are other 'regimes' that may be equally important and that the focus at any particular level of analysis necessarily omits important mechanisms that come into focus at different levels of analysis. The term TLR is used to encompass a broad set of ideas including the underlying rules and regulations that are in operation as well as the values, beliefs and practices of a workgroup with its inherent power relationships and struggles for authority. It also includes developing consensus around issues and ideas, all of these within the specific institutional context within which a workgroup operates: institutional priorities and initiatives; student characteristics; and institutional mission. As such, the TLR boundary can be thought of as fluid and unstable.

Trowler contrasts the TLR with Wenger's (1999, 149) Community of Practice (CoP), with its emphasis on participation and the development of individual and community identity with shared meanings and reification of complex ideas around domains of knowledge into single words or phrases that are shared by the community, and the development of shared practices that are central planks of CoP theory. The TLR is a useful analytical tool, whilst the CoP is something that is occurring in a lived experience and in that sense it is 'real'.

In unpacking the idea of TLR, nine cultural dimensions, which have a significant impact on teaching, learning, and assessment, are identified (Trowler, Fanghanel and Wareham 2005, 436-438), that are summarised by Trowler (2008, 55) as eight dimensions:

1. sets of practices that are habitual and taken for granted;
2. sets of tacit assumptions about what constitutes 'normal' behaviour
3. implicit theories about students, teaching, and learning
4. ways of expressing oneself and interpreting the words of others;
5. conventions about appropriate and inappropriate practices in teaching and learning contexts;
6. the flow of power relationships;
7. the creation of self in relation to others; and
8. attributions of meaning and affect to ideas, practices and institutions.

Placing the concepts, values and attitudes and processes in the eight dimensions above into four categories, delivery, pedagogical philosophy, motivations, and relationships, Table 9 identifies, analyses and explains challenges met in the implementation of IDIBL Framework.

	IDIBL Framework challenges (section 4 and 4 of thesis)	Dimensions
Delivery	a. no lectures b. no prescribed content c. no examination d. no face-to-face engagement	1. sets of practices that are habitual and taken for granted 2. sets of tacit assumptions about what constitutes 'normal' behaviour 5. conventions about appropriate and inappropriate practices in teaching and learning contexts
Pedagogical Philosophy	e. increased responsibility by student for learning f. patchwork media to encourage creativity and match workplace g. content derived from work context rather than university	3. implicit theories about students, teaching, and learning
Motivations	h. inclusive and accessible academic literacy i. values associated with 'learners for whom university do not fit' j. desire for learning to lead to innovation and improvement in the workplace	4. ways of expressing oneself and interpreting the words of others 8. attributions of meaning and affect to ideas, practices and institutions
Relationships	k. team teaching l. online teaching m. recognition of students as workplace experts n. student as researcher o. teacher as facilitator	6. the flow of power relationships 7. the creation of self in relation to others

Table 9. Analyses of the Implementation of IDIBL Framework using Trowler

It follows from the above analysis, that for change or enhancement activities to be successful it is necessary to consider the nature of the initiative in relation to a particular TLR described by the eight characteristics and consider ways to tackle such challenges. Other key questions identified by Trowler include what is the

change theory that underpins an initiative, how well is it resourced and to what extent the group history and experience impacts on enthusiasm and willingness for change (Trowler 2008, 135-7).

A significant point that emerges from Trowler's analysis, is that there is a very strong normalising effect of TLR on individuals: through power relationships; reification of words and actions with tacit meanings and assumptions; entrenched practices and associated rules; development of group and concomitant individual identities; and the development and application of implicit theories. It is perhaps unrealistic to expect an individual to make significant changes from within a TLR without an intervention to create a fertile environment for innovation amongst the stakeholders in the TLR.

Trowler's approach sees the TLR as being a construct for analytical purposes. It is a practical approach and as such it is useful when analysing and focussing change at this particular level or system. It is of value to me in seeking to understand the experience of implementing the IDIBL Framework.

Although finding the notion of TLR informative, I would argue that the CoP as a unit of analysis is also valuable and that in some respects, the TLR is an aggregation of communities of CoP where boundaries intersect over domain and practice. This is the mental model that I held when thinking about how to develop a 'movement' within Bolton to take up institutional wide curriculum change activities.

In my original theory of change, too much emphasis was placed upon the agency of the individual to bring about change and not enough consideration given to the characteristics identified by Trowler and recognition that different sub-groups within the university have distinct and particular cultural characteristics. This is an important understanding to have when seeking to bring about improvements. In radical curriculum innovations, such as IDIBL, more radical approaches may be needed and these are discussed in my conclusions using the theory of disruptive innovation.

5.4.1 A Fourth Level of Analysis

In considering the work-focussed curriculum discussed in Section 4, it is possible to argue that an extension of the three levels of analysis with an additional and significant change processes for enhancement of teaching and learning, that of the 'learner' in negotiation with the academic emerges as a key mechanism. At this level, the curriculum is formed through the negotiation of learning activities in each module and the experience of the learner is formed through the interactions in the online community of inquiry and the implementation of their action research in their work context. As in the other three levels identified by Trowler, there is much overlap but this does seem to be a different mechanism by which a curriculum is formulated and change brought about.

It is these four levels: learner, lecturer, subject group and institution that I use as the theoretical framework for evaluating the IDIBL Framework change initiative in section 5.7.

5.5 Methodology for Analysis of the Implementation of the IDIBL Framework

Within the broader action research strategy, I identified the need to better understand the processes at work in the university that were impacting on colleagues experience of implementing the IDIBL Framework. A grounded theory approach offered a practical way forward to finding out about this, based on collecting data from eight in-depth interviews with colleagues who were selected for their participation in the project. This included colleagues who used the IDIBL Framework to develop courses and others who were responsible for innovation and quality assurance. In all cases interviews were recorded and transcribed and then coded to identify key issues relating to two issues: the qualities of the IDIBL Framework itself, and the nature of the intervention made in the university. The former provided data for evaluating the IDIBL Framework in Section 4 of this submission the latter provided the principal basis for this section.

The theoretical framework described in the next section relies on an inductive process of theory building (Charmaz 2005, 507), but as well as the constructivist

stance taken the use of ideas proposed by Trowler (2008), and were identified after the research and analysis was undertaken.

5.6 Findings and Analysis - Staff Interviews Issues Identified

From the eight members of staff interviewed ten categories emerged from the grounded analysis that were relevant to the implementation of the IDIBL Framework. Where a category had more than three quotes, it was considered significant and in discussion with colleagues meanings of these categories were developed: structure and organisation; marketing and communication; and characteristics of staff. These significant categories were grouped into three sections and are summarised in Table 10 and the relationship to the students, micro, meso, and macro is indicated. The evaluation indicates how staff received the IDIBL Framework and how they perceived its relative strengths, deficiencies, and value to them as curriculum developers. This analysis is reported in detail in relation to actual responses.

Category	Count	Meaning
		Structure & Organisation relevant to subject teaching group (meso), institution (macro)
Adaptation	22	Creation of new curriculum by adapting the IDIBL Framework
Change-strategy	17	Ideas, decisions, actions and resources planned together to make an intentional change in the university's approach to teaching & learning and curriculum development
Organisation	25	The structures, decision making, work-flows, processes, quality assurance required to operate courses
Quality-assurance	14	The departments, systems and leadership in place in the university to assure the quality of courses
Workload	5	The measurement of teaching effort within the context of 550 hours contractual maximum
		Marketing & Communication **relevant to subject teaching group (meso), and institution (macro)**
Comprehension	14	The degree to which lecturers demonstrated understanding of the strategic and tactical design of the IDIBL Framework and its implications for teaching and learning
Marketing	28	The strategic and tactical effort to understand who might be the universities customers, the approach to them, some categorisation of them, the development of resources and 'channels' to reach them, the establishment of pricing regimes and 'product' alternatives, the development of material to characterise the 'products' on offer, the promotion of the university as a whole as an authoritative & high quality, yet supportive & flexible source of education
		Characteristics of staff **relevant to lecturers (micro)**
Novelty	5	Inspirational effect of something new and different in stimulating change
Personality	17	The characteristics of staff, in particular the experiential, affective and values, that may incline or disincline them towards IDIBL Framework approaches
Staff-development	8	Planned activities to raise the capability of staff to do new things in curriculum development and teaching activities and the overall capacity across the institution

Table 10. Summary of Categories of Response

5.6.1 Structure and Organisation

Respondents reported **adaptation** of the IDIBL Framework by curriculum developers to meet student needs for new, specific professional sectors - picking some of it's modules, adding content modules, complementing it's modules, extending its scope, changing its terminology to fit employers/students understanding in specific professional contexts or simply using it as a starting point. In this sense the original intent of the IDIBL Framework was not realised i.e. to permit lecturers from different subject groups to join together on a thematic basis combining diverse professional interests rather than within the confines of a professional sector:

> "I used it as a starting point and modified it from there." (course developer)

> "People always wanted to be inspired by it and write their own thing." (course developer)

The institutional organisational and academic infrastructure was seen as a focus for **change strategies** to increase the universities responsiveness to new curriculum developments and embed the IDIBL Framework in its quality assurance regulations.

Another approach identified was to focus on changing the mindset of staff. It was proposed to sell ideas through the pragmatic step of alignment with staff's current aspirations as opposed to creating a movement of 'troops' on the ground prepared for a radical future:

The promoting of innovations that clash head on with a university's established ways of working and the views of a significant majority of staff, content with a status quo, was considered to be too large a barrier for successful adoption for institutional innovators:

> "I would want to start first of all by making sure that we had the right infrastructure and systems in place to support it" (course developer)

"It is to do with the fact that we aren't strategic in the way that we went out and   told people about this. We didn't look to find the grain in the institution before we decided what we wanted to do with it. We didn't really get a feel for where people where." (course developer)

The IDIBL Framework was designed for learners' interdisciplinary work-roles and by its very nature staff were pushed into developing links across university academic departments. In doing this they found themselves frequently asking questions of the institutions organisation and academic infrastructure as they came into conflict with them when trying to develop new programmes with different approaches:

"I think its actually getting engaged with the (IDIBL Framework) that in a way forces those changes because you can't engage with the (IDIBL Framework) without asking questions." (course developer)

"Well yes, maybe from an organisational perspective, I've probably seen the organisational barriers as a huge wall to climb over, before we even get to the student." (course developer)

Flexibility makes some people nervous from a **quality assurance** perspective. In some cases the model helped smooth validation processes, but in others, the new approaches it contained that were different to traditional expectations leading to a conservative set of decisions around what is a heavy set of validation requirements:

"People feel the need to ensure that quality is done in a very particular way and can be checked. Something that is flexible makes people nervous on that score and it will be an issue." (course developer)

"Proved valuable in getting validation through very quickly, so that's a very practical thing." (course developer)

Making sense of practice within the IDIBL Framework approach in comparison with the existing **workload** allocation and productivity arrangements within schools was found difficult, as the work-role and practice of a facilitator is different from the

traditional lecturer. Some middle managers found this challenging as they value a simplistic measure of teaching effort:

> "That has also been raised as an issue by colleagues that I've tried explaining to, that not only do they have to get their heads around how to work with the (IDIBL Framework) but what does that then mean in terms of their commitments to facilitating a module." (course developer)

5.6.2 Marketing and Communications

The novelty of the IDIBL Framework presents a **comprehension** challenge when explaining it to lecturers, employers and potential students. The breadth of new teaching, learning and assessment ideas presented sometimes was found to elicit a negative response to adoption of the IDIBL Framework. However, taking a high level view some saw the model as a simplification of the curriculum and were attracted to it for that reason.

> "I think although that's its main advantage for curriculum development, that is one of the main disadvantages as well because it is very, very difficult to get that across to other people who want something that's prescribed, its a little bit too abstract for a lot of people and it takes a lot of effort to actually break it down and explain it to people." (course developer)

> "understanding of the strategic and tactical design of the IDIBL Framework and its implications for teaching and learning." (course developer)

Many respondents agreed that there was a market which appealed to new groups of students, new students' purposes and employers' needs. Employers were seen as liking the IDIBL Framework, but others characterised employers as uncomprehending and tradition bound. Some respondents adapted the language of the IDIBL Framework to make it more comprehensible in **marketing** terms

> "We had enquiries from outside, people on the council wanting to do it. Employers I liaised with loved the course, they really liked it." (course developer)

"But once again because, and this is more related to the industry, the industry couldn't understand it, even though it was a way to make it easier to do what the industry wanted to do because they had all been educated in a hugely hierarchical scenario they couldn't understand it." (course developer)

The university market intelligence effort came in for considerable criticism ranging from the scope & comprehensiveness of its endeavour to research, strategy, campaigning:

"We need something in place to help us do the market research to identify is there actually a market." (course developer)

"And not only do we need a department of some sort, we also need a marketing strategy that allows everything to be linked together in some way so that's another kind of way in which people are now thinking 'Oh right'." (course developer)

5.6.3 Characteristics of Staff

The **novelty** of the IDIBL Framework had an inspirational effect on some staff who were excited by innovation or simply by something different:

"I think IDIBL won over people who have had similar ideas themselves. Developer A was one of those people Developer B was another." (course developer)

"I've always tried exploring things and pushing boundaries, so maybe the personality's part of it as well. I want to explore things, I don't want to accept that you can't do something." (course developer)

The personality of some respondents was sympathetic and aligned to both the IDIBL Framework and the project's innovation, in some cases these were people who actively sought the challenge of change; in others, people who had learning-experiences which matched aspects of the approach.

"I've always tried exploring things and pushing boundaries, so maybe the personality's part of it as well. I want to explore things, I don't want to accept that you can't do something." (course developer)

The IDIBL Framework provided a guide for understanding new ways of teaching and learning and a trigger to developing skills through **staff development** that respondents self-identified from the IDIBL Framework as mentoring, coaching and on-line presentation.

The IDIBL Framework encouraged respondents to question their teaching, students' learning, assessment and organisation in the university and the degree to which the IDIBL Framework or innovation process challenged staff to question their assumptions, experience and practice.

"The (IDIBL Framework), yes it was a way of trying to leverage new types of teaching and learning practice amongst the staff and there is no question that is the case." (course developer)

"What the (IDIBL Framework) actually gives you as a curriculum developer is more or less guidelines for you to find your way in working with people who want to negotiate their learning." (course developer)

In the following section I take the analysis above and locate it in the cultures and change theory discussed in Section 5.4

5.7 Applying a Curriculum Change Theory to the IDIBL Framework

The following discussion seeks to locate the experience of staff and students using the IDIBL Framework in relation to the four levels explained in section 5.4.1 to 5.4.2, as a development of Trowler's analysis of lecturer, subject group, and institution with my addition of learner.

5.7.1. The Learner Seeking a Higher Education That Fits

How learners respond to innovative new courses is inherently difficult to predict as prospective learners may have no experience of the new approach on which to base their opinions. However, the concerns and influences of students studying on a pathway from which the IDIBL Framework was developed is reported and summarised [P21 p74-80]. The extent to which these concerns of students can be accommodated will in part be determined by the curriculum design and should, therefore, be influential in the design of the curriculum. For work-focussed learners, the emphasis is on the motivational affordance of self-direction [P21, p65; P22 p5] - allowing the learning activities and assessment products to focus on the work they are doing in alignment with the Knowles and Shepherd (1980) andragogical model of learning for adults.

Increasingly learners have a direct influence over curriculum development as they become better informed about courses and the student experience through initiatives like the National Student Survey, participation on course committees, and, arguably, even more so, as they pay the substantial proportion of their courses costs (DBIS 2011, 28-32). In the Ultraversity project and IDIBL Framework, the vast majority of the curriculum is deliberately left to be negotiated in order that learners can identify the focus of their action for learning, as is common on PhD courses.

5.7.2 Lecturer Acting as Curriculum Innovator

The experience of the IDIBL project is that it is often left to a lecturer to propose innovative course developments and success comes down to their ability to exert agency. Trowler (2005, 434) identifies this as 'methodological individualism' (micro level) where the lecturer is seen, on balance, as more important for change than the organisational and cultural structures in which they operate which will be shaped by the lecturer's actions. Where the approach described by the IDIBL Framework aligned with the values and beliefs that a lecturer held about what a 'higher education' experience should be and where it addressed a problem that they had already identified, that of access for new groups of learners, then they were prepared to make significant effort to try and establish the approach. However, of great concern to them was their ability to convince colleagues of the

value of their work and get colleagues to join in the process of developing and delivering new programmes. Another set of concerns for the lecturer was around structural barriers - the processes, systems and entrenched ways of working that they perceived made innovation difficult although this did not extend to university strategy which was usually aligned with what they were trying to achieve.

5.7.3 Subject Teaching Group Developing Courses

Trowler (2008, 51), emphasises the importance of recognising the Teaching and Learning Regimes (meso level) as focus for curriculum change, although observing that they are not closed systems but are part of larger interconnected regimes and as such ideas and practices will be transferred between the different regimes where lecturers participate across boundaries (Wenger 1999, 103-121) within and outwith their institutions. This proved to be a difficult viewpoint to influence by the IDIBL project, as efforts to engage with different groups, although received with a degree of interest, failed to result in action. As Trowler and Bamber observe (2005, 83), "Local departmental and workgroup cultures are powerful, operate against innovation".

5.7.4 Institution Promoting Innovation

The university had set strategic goals for innovation, but from the institutional viewpoint a wider set of communities of practice need to be taken into account, where their practices have direct impact on new curriculum developments, Trowler's Macro level (2008, 1-6). The IDIBL project found that this was understood, but very difficult to achieve, as a culture of working within silos was reinforced by cost centre accounting practices making it hard for different teaching and learning regimes to work together on delivery of courses. In addition, support functions (recruitment, admissions, finance, marketing, information systems) were observed to have little boundary interaction with each other or with those developing and delivering courses that they should enable.

From this viewpoint, it is also possible to identify international influences through agencies impacting on national governments such as the United Nations, World Bank and the Organisation for Economic Development who influence through reports and in some cases direct actions. Increasingly for HEIs it is the external

context that is driving change. Shattock (2006) identifies that from the 1980's onwards a distinction between "inside-out, outside-in" drivers for change, with the latter being in the ascendancy.

5.8.5 Strategic Mechanisms for Curriculum Development

There is a wealth of literature on both change management and learning organisations that seeks to provide an analysis of change in organisations and practical guidance on how to go about it. Although the IDIBL project drew on some of this thinking for planning and execution, our findings indicate that there are particular challenges for HEIs with their culture of academic freedom and high levels of autonomy at subject teaching group level.

Explained in the theoretical framework, I identify four viewpoints that I believe are important when undertaking particular, innovative curriculum developments. Clarity about the influence from these viewpoints is critical as they can act as enablers or inhibitors of initiatives. For example, the IDIBL project's acceptance of the rhetoric of employer-led learning put forward from a government viewpoint shaped its actions. Similarly, the interests of individual lecturers or subject teaching groups could subvert the IDIBL project's goals and values that primarily concerned the learners' viewpoint.

In devising strategy for curriculum development there are difficult choices to be made and questions to be addressed by stakeholders. I have summarised these in Table 11 using the three sections identified in 5.6.

Structure & organisation
Are radical new innovations created apart from the existing culture or made to be adapted within the existing culture?
Are staff inspired to change their attitudes, values and behaviours or hire new staff selected to match the needs of innovation?
Are the university's power and costing structures re-organised to promote innovation or build a matrix of collaborative networks within the existing organisation?
Is the validation processes overhauled to achieve agility and mandate the responsible department with innovation to avoid the dead hand of quality assurance?
Are productivity agreements re-negotiated or simply devise translation from existing practice?
Marketing and Communications
How to explain and communicate new visions of teaching, learning and assessment which challenge current norms?
How to market innovation without losing credibility?
Is it worth switching resource into business planning and market intelligence activities hoping it will give you a competitive edge?
Characteristics of staff
How to encourage champion innovators and if so, how do you ensure they influence the mainstream by being respected for their creativity and energy?
How to support inspiration and interest in innovation in teaching and learning?
How to complement staff development programmes intended to address specific issues with a 'learning organisation' approach which values theoretical and conceptual critique alongside a craft and practitioner focus?

Table 11. Strategic Choices for Innovative Curriculum Development

5.8 Conclusions

Whether or not truly radical curriculum designs can be implemented successfully in an existing university is still an open question. However, my experience and research shows that it is at the least very difficult to work within an organisation that is geared up to support well developed and established ways of delivering higher education courses. If radical curriculum innovations are to happen at the

meso level, then a better understanding of how to support and enable this at an institutional level is required.

If incremental curriculum innovation were desired, then promoting innovative teaching and learning approaches so that staff are inspired and supported to adapt to fit their needs is a useful approach. This would be likely to have a wider impact across the institution in areas such as assessment, distance learning and inquiry-based learning.

On the other hand if radical curriculum innovation to meet the needs of new markets is desired, then it may be necessary to establish a new business unit with staff recruited for the purpose and systems designed to support it.

However, there remains the challenge of explaining curriculum innovation to potential students and employers whose preconceptions of what it is to study in higher education do not sit easily with the radical approach offered by the IDIBL Framework.

5.8.1 Contribution

In the introduction I have claimed my original contribution as an analysis of institutional barriers to adoption of the model of Work Focussed Learning. In particular, my key contributions are:

1. evaluation of the challenges faced implementing IDIBL against theories of culture and change in higher education; and
2. development of a set of Institutional strategic choices for undertaking radical curriculum innovation.

5.8.2 Influences on Future Cycles of Action

This work led me to reflect on why the same radical curriculum innovation can have two different outcomes and I used the theory of disruptive innovation to develop an explanation that is of use in future work. This is explored in the Summary of Conclusions and Reflection in the subsequent section.

6.0. Summary of Reflections and Conclusions

6.1 Section Summary
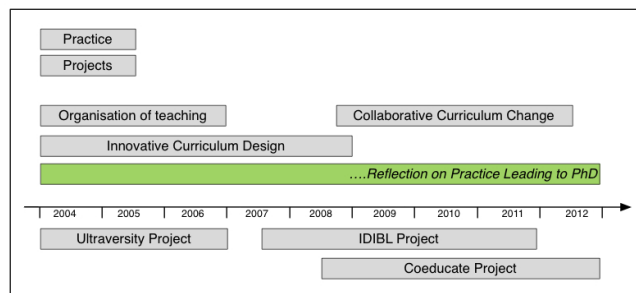
I now reflect upon and synthesise the previous sections based on the past ten years of seeking to innovate curriculum developments within higher education (HE). This is used to establish my claim for a PhD on, "Innovating the development of Work Focussed Learning in higher education". In particular, this work has had as its core the idea that *work can form the basis for learning which can then be accredited by Higher Education* and this idea also applies to the creation of this PhD submission as it is based upon my own professional practice of radical curriculum innovation in HE. I have sought to articulate the significance of my work drawing upon a range of theories and concepts outlined in section 2.2. In this concluding section, in particular, undertaking an analysis of my experience through the lens of Disruptive Innovation (Bower and Christensen 1995), explained in section 2.2.4. This concept has been useful in helping me to understand how the similar pedagogical approaches of the Ultraversity and IDIBL Projects have met with different outcomes in their different contexts and why organisations can find it difficult to foster radical innovation.

6.2 Introduction

Over the decade covered by this claim, the nature of the research issues I have considered has changed significantly. Initially, my interest was around the pedagogy of online learning and then the development of Work Focussed Learning. Although this remains my primary motivation, I am forced to address the question, systemic change in complex systems – why is it so hard? This is because of the conundrum I face when seeking to understand my practice is why the curriculum model, used successfully in the Ultraversity project at Anglia Ruskin University, proved difficult to implement when reincarnated as the IDIBL and Coeducate projects. These are two quite different contexts, and as such it might be expected that the outcomes would not be exactly the same, however there is I believe much to be learned from the different experiences.

My analysis and reflection, using the theory of disruptive innovation, leads me to conclude that there are systemic issues that prevent radical innovation in HE that must be tackled for radical curriculum innovations to be successful, and I illustrate what these might be.

To recap, my contributions to knowledge include:

1. Chapter 3, a conceptual development of working practices that delivered the model of Work Focussed Learning;
2. Chapter 4, a strategic mechanism to bring about cross institutional adoption of the model of Work Focussed Learning;
3. Chapter 4, a cybernetic analysis of the pedagogy of the model of Work Focussed Learning in delivering a personalised curriculum;
4. Chapter 5, analysis of institutional barriers to adoption of the model of Work Focussed Learning; and
5. in this concluding Chapter 6, analysis of the challenges faced by radical curriculum innovation in higher education.

6.2.1 UK Contemporary Higher Education Context

Blackmore and Kandiko (2012, 4-6) argue that the higher education system is globalising at a rapid rate with increasing competition nationally and internationally for students, although the exact impact of this will be institution specific. In addition, they identify the desire by politicians to marketise HE through approaches like the development of league tables and requiring institutions to make available data for Key Information Sets for each undergraduate programme to give the consumers information about features such as contact hours and employability statistics. Further competition is also being promoted through allowing new entrants to the HE system that offer different models of public and private universities (Willets 2011). These factors are contributing to a new context for HEIs in which potentially disruptive innovations are likely to arise, posing a threat to existing models and demanding an appropriate response.

6.3 Application of Theory of Disruptive Innovation

Reflecting on my experience over the three projects that form the basis of my PhD claim, the insight that I identify is that the Ultraversity project operated outside of the constraints of the rest of the university working as a semi-autonomous sub group. The IDIBL Framework was by contrast, specifically designed to work within the existing university mechanisms. The contrast between Ultraversity and IDIBL illustrates just how different the model of Work Focussed Learning is from normal university teaching.

Reflecting on this further, Table 1 identifies the key functions developed and operated, grouped by business model elements (thesis section 2.2.4.4) and how they differed in the case of Ultraversity and the IDIBL/Coeducate experience. The ones highlighted are further explained.

Function	Business Model Element	Ultraversity Project (2003-7)	IDIBL / Coeducate projects (2007-12)
Marketing	Value Proposition	Carried out by project team, targeted to appeal to individual students in specific employment contexts; teaching assistants in schools mailed nationally; and health workers	Consultation with university marketing department, advice offered by marketing department to the project on development of marketing materials, direct mailing to a few employers by project team, significant engagement with professional bodies, but no clear university message
Student support	Value proposition	Notable peer support in large online community supplemented by project team	Limited peer and project team support with smaller numbers involved
Pedagogical approach	Value proposition	Work Focussed Learning	Work Focussed Learning.
(1) Pricing	Profit formula	Proposed and accepted lower than normal - defended by the project in terms of detailed accountancy to achieve project sustainability	Proposal to lower fees not accepted, despite lower costs and need to reach unserved students –university norms maintained
(2)	Processes	Newly designed on a	Struggling to meet

Productivity model for teaching staff	and profit formula	student-centred basis to fit open and distance learning conditions, derived from sustainable business model	departmental norms for staff, normally timetable-centred and also to fit open & distance learning conditions
Virtual learning environment and assessment e-Portfolio system	Process	Designed for purpose, drawing on a range of online tools, fluid and agile to respond to developing needs including assessment feedback, tracking & reflection on progress, and contact information	Mainstream university VLE, limited scope for development, design decreed for all university online offerings, developments ongoing
Quality assurance procedures	Processes	Normal validation, course committee, assessment and progression boards with external examiners. Adaptation of quality processes to reflect online nature of course; committees held virtually via Skype or conference call	Normal validation, course committee, assessment and progression boards with external examiners
Model of teaching practice	Processes	Team teaching aligned with student numbers based productivity model	Team teaching and personal tutors aligned with University contact time based productivity model
Management & Organisation	Processes	Shared leadership, mainly flat structure, fluid teams, participative decision-making	University hierarchy within departmental silos
(3) Teaching staff	Resource and process	Dedicated team with little experience of working in Higher Education, but extensive experience as school teachers and working online	Staff of current HE teachers and Graduate Teaching Associates, but with experience of action research

Table 12. Business Model Analysis of Key Functions of Taught Programmes

In both the Ultraversity and IDIBL/Coeducate projects the aim was to develop the model of Work Focussed Learning for new groups of learners who don't currently access higher education for the reasons given in Section 4.4.

As indicated by the table above, there are significant differences between the ways in which the different projects addressed key functions and organisation of

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taught programmes. The approaches developed for IDIBL/Coeducate can be seen as a compromise to the original Ultraversity model developed, but even so, when taken as a whole, are significantly different when compared to the typical organisation and working practices that support taught provision. Thinking in terms of Disruptive Innovations, many of the functions can be identified could act as filter points that result in a rejection of the innovation of IDIBL and Coeducate but in the case of Ultraversity the project was hosted by an autonomous unit in operational terms similar to an "independent organisation" (Bower and Christensen 1995, 52). To amplify this point, three key filters applied by a university on radical innovations include:

1. **the pricing** of IDIBL courses that fail to take account of the reduced resource requirements (cost) of wholly online delivery unlike the Ultraversity experience, Section 3.3 (p3);
2. **productivity model** for staff that is based on simplistic measures such as timetabled sessions doesn't fit with online, asynchronous teaching approaches; and
3. **teaching staff's** conservatism in beliefs and values around pedagogical issues. The belief that exams are more reliable and that quality for undergraduate courses is best assured through delivery of good subject content is challenged by the Work-focussed Model's requirement for learning facilitators assuring quality through a rigorous process.

Taken together, these arguments suggest that there is a strong case for this being an example of a disruptive innovation.   The same basic approach having success in one context, but making limited progress in another. This being dependent on existing members of staff already 'in tune' with its way of working and willing to accept the challenge, Section 5.8.3. In terms of the Disruptive Innovation theory explained in Section 2, these are very similar new market disruptions both using the same learning model, attractive to new, unserved customers. This is shown in Figure 9, offering lower performance that may be attractive to some customers.
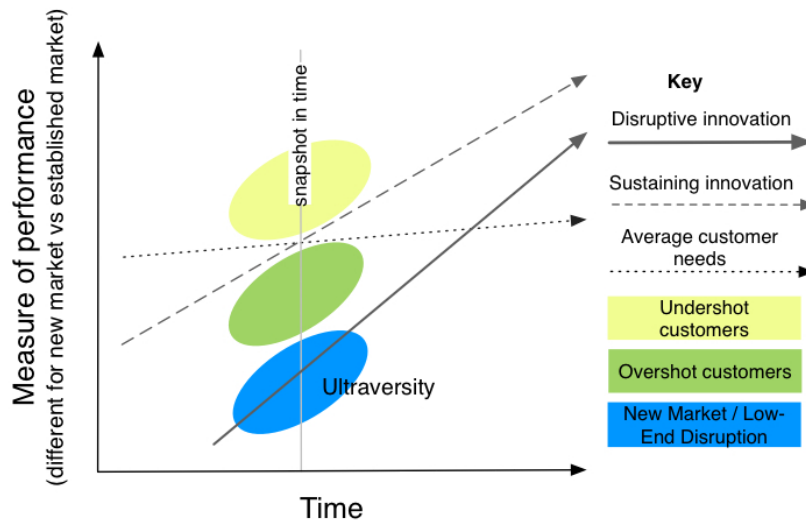
Figure 9. Ultraversity as a Disruptive Innovation

Applying concepts of the Viable Systems Model [P27; P32] lends further weight to argument about a separate business unit being responsible for innovations that create a new purpose within an organisation and in doing so add complexity to the characteristics or identity of that organisation. Hoverstadt (2008, 247-262) explains the difficulty that many organisation face when they no longer have a clear relationship between their purpose and identity. In adding a new purpose, it is likely that people within the organisation will develop relationships with a different set of stakeholders in trying to meet their needs. A two way process or 'structural coupling' exists whereby the external environment and the individuals within an organisation are continually reforming and re-forming their identity, changing and shaping each other over time. In itself this is important, if structural couplings break down then an organisation will fail to respond and adapt to its environment and customer needs. It is possible that in seeking to meet the needs of different stakeholders or customers, conflict within an organisation will develop as different identities establish themselves and compete for resources and seek to influence organisational decision making:

> The easiest way for an organisation to respond to multiple purposes is through heterogeneity. Different parts of the organization are used to address different needs for different groups (ibid., 256).

When considering the US Higher Education System, Christensen et al., (2011) are sceptical that existing publicly funded universities will be able to take on board

disruptive innovations, as they are used to only delivering sustaining innovations to their existing business model. For them, the action needs to be taken at a higher level:

> Policymakers must first address higher-education budget constraints by helping low-cost disruptive universities—public and private—gain market share by eliminating barriers and partnering with them to grow enrolments and capability. These partnerships should foster new models of higher education in autonomous business units separate from the existing institutions (ibid., 42).

In the UK context, we are starting to see this kind of action being taken with the changes to funding of teaching in higher education from September 2012, as the government seeks to ease the entry for new private providers and generally introduce more competition into the market (DBIS 2011, 46-53).

6.4 Conclusions

The validity of the hypothesis 'work can form the basis for learning, which can then be accredited by Higher Education' has been demonstrated by the work I have undertaken. This is important to me because I believe that can empower individuals in their work, provide them with academic qualifications and also support the improvement of their work place.

During the lifetime of the Ultraversity project, I worked with two other institutions to adopt the model of Work Focussed Learning for their purposes and in different contexts. The Centre For Media Practice at Bournemouth University used the model for the creation of a Masters programme in Creative Media Practice [P10] and, with a colleague, I carried out consultancy work with them to develop their approach and validation documents. The second institution was in Hamilton, New Zealand with Te Wānanga o Aotearoa or 'Māori University'. There the online aspects of the model were translated to develop a Bachelor's degree in Early Childhood as the basic proposition of learning through conversation in online communities fitted well with the Maori approach philosophy of learning [P5]. In both cases, the attraction was to reach learners who would find it difficult to take advantage of current face-to-face offerings, and it gives me confidence that the

model of Work Focussed Learning can be generalised beyond the specific instance of Ultraversity. This was also the case to a limited extent with the IDIBL Framework in that it was of interest to different audiences as an approach to curriculum development [P26].

However, the challenges in making these ideas work are significant as the approaches required confront head-on the deeply entrenched workings of HEIs.

The disruptive innovation analysis has been a valuable one in helping me to make sense of my own experience of curriculum innovation in Higher Education.

In my original theory of change around the IDIBL Framework I had given far too much weight to institutional designs to develop employer funded degrees and what were, for me, rational arguments about the value of the IDIBL Framework to the institution, lecturers and potential students. However, individuals make their own decisions about the value or not of a particular course of action based on a life-time of experience, and there was no guarantee that Ultraversity pattern would be repeated. In the case of Ultraversity, colleagues had little experience of working in HEI and consequently, when presented with a course of action, tended to behave as directed until they developed the confidence and experience to increasingly take responsibility.

Perhaps better results for IDIBL could have been achieved through seeking to understand the previous history of the teaching and learning regimes and the individuals within them to develop experiences that have a positive reinforcing experience on a greater numbers of colleagues for the changes that I desired. As it was, those who chose to notice the IDIBL Framework were relatively few in number and their achievements, although significant, were blunted.

6.5 Future Directions

Arguably, in the UK context, the current economic climate and resultant impact on higher education funding will make it increasingly difficult for many individuals to access a traditional university education. I believe that it follows that there is a strong moral and business case for the development of new pedagogical approaches that make it possible for a wider section of the population to

participate in, and benefit from a higher education. This belief follows from the philosophical position I outlined in my prologue.

For this to happen on a large scale, I believe that new forms of institutions need to be created that are designed from the outset with effective organisational structures, business processes and working practices. The concepts explained by Stafford Beer in the Viable Systems Model, amongst others, in his book *Diagnosing the System* (1985), offer practitioners, who wish to build such institutions, a way forward. Beer sees effective organisational design as a starting point; this is the foundation upon which other managerial aspects can be built.

I arrive at this conclusion because my experience indicates that it is possible to develop and successfully run courses based on new pedagogical models. However, when trying to modify existing institutions the established working practices, assessment and quality assurance mechanisms, attitudes and values, and existing business processes mitigate against innovative developments: the significant challenge is to not let these get in the way of effective learning.

It is possible to envisage an institution, taking some of the lessons and ideas identified in my thesis, that is designed in such a way as to maintain rigorous quality assurance mechanisms, but at the same time is agile enough to support new curriculum approaches and supporting business models. Much of this will be made possible by the effective deployment of technology and the design of adaptive systems and processes.

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Appendix 1: Portfolio of items supporting PhD claim

Where possible, I have indicated my percentage contribution to the portfolio item and most of these were agreed with collaborators and letters submitted as a part of application process. Where this wasn't possible, I have estimated a percentage contribution following discussions with my supervisors.

As mention in the introduction, the issue of contributions to development of practice is a vexed question as by the nature of activity, it is possible that many people have made contributions and recognising them all is not possible.

In some cases, portfolio items are commentaries on the work I have been involved in and are used as evidence of impact and, therefore, percentage contributions are not applicable.

No.	Description	My collaboration & contribution [%]
P1	Letter of support for Ultraversity project from RT Hon. Chris Smith MP to Professor Stephen Heppell (April 2002)	Not applicable
P2	Validation documents, 'The Negotiated Award Pathway' (Ultralab & UCANA) (April 2003)	Pete Bradshaw, Carol Chapman, Stephen Heppell, Richard Millwood & Ian Terrell [20%]
P3	Ultraversity Project Plan (September 2003)	Ultraversity team [60%]
P4	Anglia Polytechnic University, employment contract for Ultraversity Project Leader (March 2004)	Not applicable
P5	Report to Te Wananga o Aotearoa. Development of Online Delivery for Te Korowai Kohungahunga: Bachelor of Teaching Early Childhood (July 2004)	Project lead by Dr Rita Walker. My specific contribution was around developing online provision and pedagogical approach based on Ultraversity.
P6	Ultralab South Breakfast Presentation – Ultraversity (August 2004)	[100]
P7	The Guardian newspaper article, 'Work in progress' (August 2004)	Not applicable
P8	Ultraversity face-to-face CPD event (September 2004)	Team contributions [30]
P9	Ultraversity face-to-face CPD event (January 2005)	Team contributions [30]
P10	Bournemouth University The Centre for Excellence in Media Practice (CEMP-CETL), startup meeting for consultancy work to support development of a Masters programme (March, 2005)	Lesley McGuire [30]
P11	Bradshaw, P., Powell, S., Terrell, I., 2005. Developing Engagement in Online Community of Inquiry: lessons for higher education. Innovations in Education and Teaching International, 42 (3), pp.205-215.	Pete Bradshaw and Ian Terrell [33]
P12	Ultraversity face-to-face CPD event (October 2005)	Team contributions

		[30]
P13	Ultraversity recruitment flyer (2006)	Not applicable
P14	The Guardian newspaper article, 'Universities adapt to a shrinking world' (March 2006)	Not applicable
P15	The Guardian newspaper article, 'The university where everyone's a stranger' (March 2006)	Not applicable
P16	Jisc, 2007. Effective Practice with e-Assessment Guide. 'The e-portfolio route to accreditation'	Not applicable
P17	Millwood, R., Powell, S., Tindal, I. (2007) Undergraduate Student Researchers – the Ultraversity Model for Work-Based Learning. Proceedings of the 2nd TENCompetence Open Workshop - Service Oriented Approaches and Lifelong Competence Development Infrastructures, pp. 157-166. UoB: Bolton.	Richard Millwood & Ian Tindal [60]
P18	Interdisciplinary, Inquiry-based Learning (IDIBL) project plan (September 2007)	Oleg Liber, Richard Millwood, Mark Johnson [50]
P19	Meeting with Faculty of Built Environment to discuss IDIBL framework for programmes in Regeneration	Not applicable
P20	Millwood, R., Powell, S., Tindal, I. 2008. Developing technology-enhanced, work- focussed learning – a Pattern Language approach. Proceedings for TSSOL 2008, Technology Support for Self-Organised Learners. Salzburg, Austria 26 May 2008. Open University of the Netherlands: Heerlen.	Richard Millwood & Ian Tindal [70]
P21	Millwood, R., Powell, S., Tindal, I. (2008) Personalised Learning and the Ultraversity Experience. Interactive Learning Environments, Volume 16, Issue 1, pp. 63 - 81. Routledge.	Richard Millwood & Ian Tindal [70]
P22	Millwood, R., Powell, S., Tindal, I. (2008) Learning Through Enquiry Alliance Conference, Conference Presentation. 'The student as researcher -action for improvement in the workplace.' University of Sheffield: Sheffield.	Richard Millwood & Ian Tindal [70]
P23	Powell, S., Tindal, I., 2009. The Undergraduate Student as Action Researcher. University Vocational Awards Council Annual Conference, Higher Education – Skills in the Workplace: delivering employer-led higher level wok-based learning. York, England 13-14 November, 2008. University Vocational Awards Council: Bolton.	Richard Millwood & Ian Tindal [70]
P24	Coeducate project weblog (December 2008 – April 2012)	[100]
P25	IDIBL framework validation documents (June 2008)	Richard Millwood [50]
P26	NUCCAT Workshop Series 'Inter-disciplinary Inquiry-Based Learning (IDIBL)' (January 2008).	Richard Millwood [60]
P27	Powell, S., 2009. CO-EDUCATE - Curriculum design for the 21st Century. CAL' 09 Learning in Digital Worlds. Bournemouth, UK 23-25 Mar. CAL: Bournemouth.	[100]
P28	Coeducate Project Plan (May 2009)	Oleg Liber [70]

P29	Masters in Learning with Technology external examinator's report (October 2009)	Not applicable
P30	Coeducate Baseline Report (July 2009)	Oleg Liber [70]
P31	Coeducate 'issue video' for Jisc programme meeting (Nov 2009)	[100]
P32	Coeducate poster presentation for Jisc programme meeting, 'Viable Systems Model' (Nov 2009)	Oleg Liber [50]
P33	Powell, Stephen, and Richard Millwood. 2011. "A Cybernetic Analysis of a University-wide Curriculum Innovation." Campus Wide Information Systems 28 (4): 258–274.	Richard Millwood [70]
P34	Coeducate Institutional Story, Final Report (July 2012)	Bill Olivier [70]

RT HON CHRIS SMITH MP

Labour Member of Parliament for Islington South
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Professor Stephen Heppell
Ultralab
Anglia Polytechnic University
Victoria Road South
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8 April 2002

Dear Stephen,

Ultraversity

It was a pleasure (as always) to see you again recently, and to hear about your rather exciting plans. I've since had a chance to read through the draft document you kindly left me with, and to think further about the ideas you are putting together.

It seems to me that you have included three brilliant ideas in the document. First, the entire focus of the proposal on a teaching/learning vehicle that deliberately sets out to "reach the people that normal residential universities can't". Second, the "exhibition", peer-reviewed, as the final test for students. And third, the use of mentors, many of them part-time or voluntary or with a lifetime of experience to share, as teachers. These are new, and winning, ideas.

It also seems to me that there are some parts of the vision set out in the document that still lack clarity. How does the actual learning happen?: will it be by internet discussion, by dialogue/debate between numbers of people, by the presentation of papers, by individual tuition, by testing of some kind during the whole of a course – or by a mixture of methods? It would be good to have some of this spelt out. How can the teaching or learning be guaranteed to be of a sufficiently high standard? Where are the measurements of excellence to come from? It must, after all, be more than just one number of people talking – by however sophisticated their technological means – to another number of people. And how is the whole thing to be financed?

These are some initial reactions, meant to be helpful. I'd be interested to talk further as your plans crystallise. The more I think about it, the more essential a very positive attitude from DfES becomes.

With best wishes,

Yours ever Chris

Rt Hon Chris Smith MP

reply

The Negotiated Award Pathway (Ultralab & UCANA)

Special Approval for a Cohort Path

for

BA Hons Learning, Technology and Research

Web Delivery at Chelmsford Campus

Including

Validation of New modules to be Delivered Online

Contents   Page number

1. Basic Details

This award is at Undergraduate level. It offers a BA in Learning, Technology, and Research:

In the first instance, students will seek approval for a Certificate of Higher Education and then a Diploma in Higher Education as award outcomes on the route to a BA Hons.

The first cohort of students will begin study before the 31st July 2003. The number of students in the first cohort will be 500 - 550.

It is anticipated that there will be further cohorts the second of which will start to study in January 2004. Students targeted are those who are unable to attend university face-to-face and who might benefit from an alternative approach to learning and a particular emphasis on assessment.

Students will be full time but will be studying in their work place. After the first cohort there will be flexibility for students to join the programme at different points in the year through negotiation with a learning facilitator.

2. Introduction and Rationale

The principle aim of the BA Learning, Technology and Research is to provide access to higher education to people who are committed to their work. As part of a deliberate attempt to foster collaborative working within the programme students will subject their practice to self-examination, as well as the examination of peers. Students will learn the skills to improve their effectiveness in their particular work context and will develop the ability, and confidence to influence and improve practice within their work setting.

The programme will focus on 'understanding why and knowing how to ' and will develop individuals to become articulate, critically reflective problem solvers within their work context, in line with the APU aspirations.

In line with Ultralab's philosophy of making learning delightful, each student will be a member of a lively online learning community, where collaborative learning will be generated through participation using a range of learning processes and protocols including reflective dialogue with peers, and an integrated student-mentoring-student model.

Learning facilitators will take on the roles of tutor, co-learners, experts, coaches and/or mentors. They will provide the active facilitation of the online spaces as well as the individualised support of learners. The online learning community will play a significant role in providing affective / social support for all members by fostering social interaction.

Each student will individualise his/her course to suit their personal needs and aspirations within his/her work setting. The programme will augment the students' work so that work time contributes to the module requirements and studies enhance working practice. Students will negotiate their aims and objectives with their learning facilitator as a part of developing their Personal Development Plan (PDP).

The model of learning that underpins this programme is one of an autonomous, self-directed, critical, and reflective individual who seeks to learn collaboratively. This model emphasises the analysis of the values, and moral and ethical dilemmas surrounding work-place practice.

3. The partnership

The cohort will study a framework-negotiated programme in a partnership between Ultralab and UCANA. The pathway will be delivered fully online, making use of Ultralab's permanent, reliable, broadband link to the Internet.

Ultralab will use its expertise, in developing online programmes, that has been gained through 15 years in developing online communities for learning professionals of all ages. Since 2000 Ultralab, in partnership with the National College of School Leadership (NCSL), has enabled over 25,000 learning professionals to support their continual professional development. In 2001 Ultralab developed, designed and facilitated the

mandatory programme for future school leaders, the National Professional Qualification for Headship. Since this date over 12,000 candidates have taken part in this programme. Other recent programmes, which have online learning communities at their heart and in which Ultralab works in partnership with the NCSL include Leading from the Middle for middle managers in schools and the Bursar Development Programme. The success of the online project Notschool.net has enabled Ultralab to develop skills and expertise working with pupils aged 13 to 18 whom school does not fit. Ultralab will use many tried and tested ideas from this context to support students in Ultraversity.

Additionally Ultralab has a long track record of delivering programmes of MA modules both face-to-face and using online communities since 1994.

UCANA bring to this pathway their significant expertise in the area of negotiated awards and the development of Personal Development Plans for students.

4. Relationship with work organizations

It is anticipated that students will have the support of their work organization in undertaking this degree. Students will be encouraged to identify their personal workplace mentor with whom they feel comfortable and who can offer them the support and encouragement with their studies. Identification of a mentor is not a requirement for students.

General resources will be provided to support mentors in their role and a member of the learning facilitation team will take specific responsibility for updating the resources provided.

Learning facilitators will support students through the process of identifying a mentor, and may, in exceptional circumstances, mediate between organizations and the student to help resolve issues or difficulties.

5. Relevance to students' needs

Students may be in full or part time employment or in non-paid work, such as charity volunteers etc. The initial cohort will be where learning is an important focus and the modules are designed to have a generic relevance to the employment needs of both students and their organisations. Students will negotiate learning outcomes in the context of their work at the start of each module. The flexibility of this pathway is designed to meet the demands of a dynamic changing age of supercomplexity. This should ensure that the outcomes are relevant to students' needs and the needs of their organisations. The ASSET model of Core Assessment criteria (Winter1996) will inform the philosophy behind ensuring progression and relevance to students needs.

a. Negotiation

Throughout the programme, from induction and at regular intervals, students will negotiate learning contracts and individualised pathways with their learning facilitators. This will involve

- Negotiation of the learning contract, identifying how a student is to meet the requirements of modules and activities being undertaken (ongoing discussion with learning facilitator and peers in learning sets)
- Negotiation of contextualisation of a module – how a student's work setting is reflected in the module's content (at the start of each module)
- Negotiation of pathway – identifying modules that can be taken from the APU module catalogue to meet an individual student's needs (at least twice a year, with learning facilitator and, where relevant, with UCANA)

b. Exhibition

A fundamental part of the degree is the exhibition in year 3. This will take place in the students work context to enable them to share their learning with their colleagues and other interested groups. This 'celebration' of students work moves away from the 'traditional' dissertation that is read only be the student and their tutor to students making an impact on

their work context whatever this may be. The skills required to execute the exhibition will enable students to fully demonstrate the Level 3 graduate skills such as:

- Self-reliance
- People and Interpersonal skills
- Oral Skills
- Customer Orientation
- Problem solving
- Self-application
- Managing information in a range of media

6. Pathway aims for the learner - progression

As students progress through the award, they negotiate activities, review new areas of their professional context, and identify their pathway for development. This progression may relate to employment-based competency models or build on work done for earlier modules and will be reflected in the generic criteria for levels.

Aims:
- To develop a personal philosophy of learning, the use of technology and research which relates to their own work setting
- To acquire the ability to analyse and synthesise knowledge of practice so as to solve practical problems and situations
- To maintain a flexible approach to change as a participant, and awareness of their own power to influence change
- To appreciate the enriching nature of working collaboratively in communities of enquiry that share insights and perspectives
- To develop a continuing concern for their own professional development and the appropriate strategies to achieve this

- To provide an appropriate foundation in professional and technical understanding, and knowledge and skills on which they can build through continuous professional development
- To develop the skills of action enquiry as an enduring capacity for lifelong learning and improvement in the workplace
- Develop the capacity to communicate to a wider audience

7. Intended Learning Outcomes

By the end of the programme successful students will have acquired the experience, knowledge and confidence to:

- undertake effective self-managed study up to undergraduate level 3;
- effectively use appropriate technologies including the Internet and associated web technologies;
- plan and implement workplace action enquiry;
- analyse and evaluate their own learning;
- work collaboratively with their peers in a supportive environment;
- develop their own mentoring skills to enable them to mentor others;
- develop action plans;
- develop evidence based practice;
- become a reflective practitioner;
- communicate effectively with stakeholders in their work settings;
- develop, plan and implement projects;
- gain knowledge and skills in their chosen discipline.

QAA benchmark statements will apply, initially these will be Education Studies benchmarks modified to reflect the work context of the student as they progress through the pathway.

8. Structure and content of the programme

Year 1 is a generic pathway, with students negotiating an area of study with their learning facilitator to be agreed by Awards and Approval Committee.   In year 2, students will have the benefit of already researching their work context and this will inform the negotiations of their pathway reflecting QAA benchmark statements and their work context.

If students change or lose their work context, they will be supported in negotiating a pathway relevant to their new situation possibly but not necessarily within this pathway.

Year 1 (120 credits) - This year contains 6 modules:
1. Module C1: Induction/online community (20 credits) week 1 - 45
2. Module W1: Investigating the work setting (20 credits) week 1 - 15
3. Module X1: Introduction to online communication and technology (20 credits) week 1 - 15
4. Module W2: Reflection in the work setting 1 (20 credits) week 16 - 30
5. Module X2: Understanding action enquiry (20 credits) week 16 - 30
6. Module W3: Learning in the work setting 1 (20 credits) week 31 - 45

All modules carry equal weight (20 credits). Module C1 will last throughout the 45 weeks of the programme allowing the student review points, plan for year 2 themes, and negotiate.

Year 2 (120 credits) This year contains 4 core modules and two optional modules:
1. Module C2: Community based support and planning (20 credits) week 1 - 45
2. Module W4: Learning in the work setting 2 (20 credits) week 1 - 15
3. Module W5: Action enquiry (20 credits) week 16 - 30
4. Module W6: Reflection in the work setting 2 (20 credits) week 31 - 45

Negotiated options - choice of two:
1. Module Z1: Designing technology for learning (20 credits)

2. Module Z2: Making technology based resources (20 credits)
3. Module Z3: Independent Learning Module 1 (ILM) (20 credits)
4. Module Z4: Independent Learning Module 2 (ILM) (20 credits)
5. or other negotiated module (20 credits)

All modules carry equal weight (20 credits) Module C2 will last throughout the 45 weeks of the programme allowing the student to review progress and to plan for year 3 themes.

Year 3 (120 credits) - This year contains 3 modules:
1. Module X3: Towards an exhibition (40 credits) week 1 - 15
2. Module W7: Exhibition (40 credits) week 16 - 30
3. Module X4: Validation and Defence (30 credits) week 31 – 45
4. Module UNH1 995: Graduate skills for personal development and employment (10 credits) week 31 - 45

Table 1 Degree Structure

Semesters	**Year 1 - Certificate of Higher Education**		
	C 1 Induction / Online Community [20]		Online community based student support programme from which:
S 1	W1 Investigating the Work Setting [20]	X 1 Introduction to Online Communication & Technology [20]	- journal is drawn - APL/APEL - Careers
	Review- Profile / Proposal / Planning		- Profile - award negotiation
S 2	W2 Reflection in the Work Setting 1 [20]	X 2 Understanding Action Enquiry [20]	
S 3	W3 Learning in the Work Setting 1 [20]		
	Review- Profile / Proposal / Planning		

Semesters	**Year 2 - Diploma in Higher Education**		
	C 2 Community Based Support and Planning [20]		
S 1	W4 Learning in the Work Setting 2 [20]	Negotiated option [20]	For example:ILM/Designing Technology for Learning/Making Technology Based Resources
	Review- Profile / Proposal / Planning/Mentoring		
S 2	W5 Action Enquiry [20]	Negotiated option [20]	For example: ILM/Designing Technology for Learning/Making Technology Based Resources
S 3	W6 Reflection in the Work Setting 2 [20]		
	Review- Profile / Proposal / Planning/Mentoring		

Semesters	**Year 3 - Degree**		
S 1	X3 Towards Exhibition [40]		Community based student support programme/col laborative working
	Review - Profile / Proposal / Planning		
S 2	W7 Exhibition Preparation and Presentation [40]		
S 3	X4 Exhibition validation & defence [30]	UNH1 995 Grad. skills for pers. dev. & employment [10]	
	Review - Profile / Proposal / Planning		

9. Assessment

The philosophy of assessment is that each student, at each module end, will produce a report, in any suitable/appropriate format, that both demonstrates achievement of the learning outcomes and adds value to the student's organisation. Suitable/appropriate formats may include, but not be limited to, traditional text based reports, a short piece of video reporting, audio reporting or any combination thereof or use of other media and technology as appropriate.

The full suite of assessment criteria (see following tables pp 11-13) will not be assessed in each module, although in any given trimester intended learning outcomes would enable the full range of criteria to be met. Marking of student work will take account of student progression throughout to ensure that they levels are appropriately and fairly applied.

Details of the assessment of each module are given on the module definition forms.

Marking of work that counts towards the assessment of the modules will be fine graded within the following bands of achievement:

Excellent (70% - 100%)

Very good (60% - 69%)

Good (50% - 59%)

Pass (40% - 49%)

Fail (39% - 0%)

Table 2 Level 1 assessment criteria

Criteria	Excellent	Very good	Good	Pass	Fail
Understand the task and meet the learning objectives.	Negotiates tasks set, identifies and meets own learning objectives.	Completes the tasks set and meets all of the learning objectives.	Understands most of tasks set and meets most of the learning objectives.	With support, addresses most of the tasks set. Meets the learning outcomes in a limited way.	Barely or fails to address the tasks or meet the learning outcomes.
Ability to express ideas and provide a coherent and structured discussion.	Demonstrates understanding of a variety of emerging ideas. Synthesises ideas to provide clear and logical explanation in discussions.	Presents ideas in a clear and concise manner and shows some evidence of synthesis and explanation of ideas in discussions.	Presents ideas clearly, but without synthesis. Discusses ideas but does not develop them.	Presents ideas in a partial and fragmentary way. Discusses ideas in a limited way.	Does not distinguish between facts and opinions/ideas. Shows little coherence in discussions.
Understand the theoretical background of chosen area of study.	Synthesizes a range of literature. Describes how use of theory could improve practice.	Begins to connect theory and practice.	Shows good understanding of individual theories/ideas/ models from the literature.	Accesses the literature but shows limited understanding of theory.	Has difficulty accessing the literature. Shows little or no understanding of theory.
Demonstrate the development of analytical skills.	Demonstrates thorough analysis of issues independently.	Demonstrates analytical skills independently.	Demonstrates some analytical skills in less structured activities with reduced questioning from learning facilitators.	Demonstrates some analytical skills in highly structured activities and with questioning from learning facilitator. Able to classify.	Little evidence of analytical skills demonstrated. Little demonstration of ability to classify
Assess their individual strengths and weaknesses	Identifies their own strengths and weaknesses independently.	Identifies their own strengths and weaknesses with limited support.	Demonstrates some understanding of own strengths and weaknesses, with learning facilitator support.	Has an awareness of own strengths and weaknesses.	Shows limited awareness that individuals possess both strengths and weaknesses.
Demonstrates understanding of use of technology and a range of media.	Identifies appropriate use of technology/media appropriate for the message and audience.	Begins to demonstrate appropriate choice of technology/media for a specific message and audience	Independently uses appropriate technology and other resources. Uses a range of media	Identifies use of appropriate technologies with support from learning facilitator. Uses two media	Is not selective in use of technology and other resources. Uses one media
Communication with others.	Communicates effectively giving relevant information in a clear and concise manner. Independently offers support to others engaging in extended conversations.	Offers support to others and begins to engage in conversation around issues.	Gives information clearly and appropriately. Provides some support for others when specifically requested.	Gives information given indiscriminately Supports others infrequently.	Communicates in an unclear way takes support from, but rarely offers support to, others.

Table 3 Level 2 assessment criteria

Criteria	Excellent	Very good	Good	Pass	Fail
Select and negotiate appropriate tasks. Meet learning objectives.	Negotiates tasks, devises own tasks, identifies and meets own learning objectives.	Develops aspects of the tasks set following negotiation meets all of the learning objectives.	Understands all of the tasks set and meets most of the learning outcomes. Limited negotiation.	With support, addresses most of the tasks set. Meets the learning outcomes in a limited way.	Barely or fails to address the tasks or meet the learning outcomes.
Ability to take responsibility for their own learning.	Takes full responsibility for their own learning following negotiation.	Takes responsibility for their own learning, with some direction.	Takes limited responsibility for own learning if supported by learning facilitator.	Infrequently takes responsibility for own learning. depends on others for support and direction.	Learning is directed by others.
Ability to relate theory to practice.	Demonstrates the ability to relate theory and practice and show the relationship between the two. Increasingly demonstrates a critical approach to literature.	Understands there is a relationship between theory and practice. Demonstrate relationship in a limited way.	Connects theory and practice in a limited way. Uncritical acceptance of literature unless supported by learning facilitator.	Connects theory and practice with support from learning facilitator. Uncritical acceptance of the literature.	Does not connect theory and practice. Sees literature as descriptive.
Evidence of developing analytical skills.	Analyses a range of information independently; compares and contrasts ideas.	Analyses a range of information with minimum guidance begins to compare and contrast ideas independently	develops analytical framework with limited learning facilitator support. Can compare and contrast ideas if framework is provided	Develops analytical framework in a limited way and only with learning facilitator support. Does not compare and contrast ideas	no analytical skills yet evident
Reflect on individual strengths and weaknesses	Reflects critically on own strengths and weaknesses and understands how these impact on others.	Understands own strengths and weaknesses and how these might relate to working with others.	With learning facilitator support, develops techniques to overcome weaknesses and build on strengths.	Begins to develop strategies to develop/overcome these, with learning facilitator support.	Shows limited awareness of how to develop individual strengths and build on weaknesses.
Using appropriate techniques to communicate.	Communicates effectively using language appropriate to context. Regularly offers considered support to others.	Uses appropriate language to communicate with peers and learning facilitators. Occasionally offers support.	Generally uses appropriate formats in communication with peers and learning facilitators. Rarely offers support.	Communicates with peers with and learning facilitators with limited use of appropriate techniques. Requests rather than offers support	Shows limited effective communication with peers and learning facilitators.

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Table 4 Level 3 assessment criteria

Criteria	Excellent	Very good	Good	Pass	Fail
Meeting the learning objectives.	Develops own learning objectives and meets them, offering substantial supporting evidence which is relevant and focused.	Meets all of the learning objectives offering relevant and convincing supporting evidence.	Understands the learning outcomes and offers good supportive evidence offering the potential for further development.	Meets the learning outcomes with supportive evidence of a satisfactory nature.	Barely or fails to meet the learning objectives.
Evidence of problem solving skills.	Demonstrates and evidences a full range of problem solving skills. High order thinking skills are evident.	Demonstrates and evidences some problem solving skills. Demonstrates sound thinking skills.	Demonstrates some problem solving skills. Thinking skills are often more descriptive than analytical.	Demonstrates limited problem solving skills	Does not evidence problem solving skills. Full understanding is not demonstrated.
Understanding of appropriate theory and its relationship to practice.	Demonstrates excellent critical awareness in relating theoretical and practical components of their work context Demonstrates wide knowledge the of literature	Demonstrates good critical awareness in relating theoretical and practical components of their work context. Demonstrates good knowledge of the literature.	Demonstrates some critical awareness in relating theoretical and practical components of their work context Demonstrates some knowledge of the literature.	Demonstrates limited critical awareness and does not always relate theoretical and practical components of their work context. Demonstrates limited knowledge of the literature.	Demonstrates no critical awareness and finds it hard to relate theoretical and practical components of their work context Demonstrates little knowledge of the literature
Analyses and evaluates working in a critically constructive and reflective manner.	Demonstrates critical construction, and profound reflection.	Frequently challenges positions and usually shows deep reflective skills.	Sometimes challenges positions, and sometimes shows deep reflective skills.	Understands that there are a range of positions and demonstrates shallow reflective skills.	Rarely modifies position and shows limited and poor reflection.
Evidence of innovation within tasks.	Presents new ideas within tasks and offers them for criticism and reflection. Demonstrates new understanding.	Presents some new ideas with clear explanation linked to tasks.	Understands all tasks set. Offers few new ideas or insights	Understands most tasks set. Presents ideas are presented in a systematic way with little new insight offered.	Fails to engage in tasks or offer new insights or understandings.
Consideration of audiences needs and can deliver in an articulate and effective manner with peers and stakeholders using appropriate media.	Engages in and leads discussions. Offers ideas for discussion and critical debate. Uses a wide range of media in an effective way to communicate to a variety of audiences.	Develops ideas through discussion and offers ideas for debate. Uses a range of media to clearly communicate with a range of audiences.	Engages in discussion but offers few ideas. Uses different media to communicate with a limited audience.	Engages in discussion to a limited extent and communication is information seeking or giving. Uses predominantly one media to communicate with a restricted audience.	Fails to engage in discussion. Does not use a variety of, or appropriate media and fails to communicate with a variety of audiences.
Autonomous and self managed learning.	Demonstrates independent thinking and works in a self-managed way.	Develops independent thinking and sometimes works in a self-managed way.	Shows limited autonomy and works within defined guidelines. Rarely works in a self managed way.	Manages their own work and builds on the ideas of others, with some initial support.	Needs strong support and relies heavily on the ideas of others.

10. Entry requirements and admissions procedures

The students for this pathway will be in a full or part time, paid or unpaid work setting. The pathway is intended for students who wish to progress in their work setting and/or gain greater understanding of their work setting. In particular:

- students are admitted to the pathway on the basis of a judgement that they are able to benefit from the study involved;
- students are admitted to the pathway on the basis of a judgement that they are capable of succeeding in obtaining as a minimum the Certificate of Higher Education;
- various forms of evidence are used in making these judgements, including current and previous experience;
- active steps are taken to ensure equality of opportunity for all applicants.

In considering applications evidence is sought of personal, professional and educational experiences, as appropriate, to provide indications of an applicant's ability to:
- meet the demands of the programme;
- benefit from the programme.

An admission requirement for students enrolling on this programme is a direct link to the Internet with the facility to download, store, and upload files. Students studying in this programme will need to have basic proficiency in ICT or willingness to learn basic ICT skills. This will be tested by the requirement of students to complete an online registration form and receive, and respond to, an email sent to an email address specified as a requirement on the registration form.

a. Induction

The first trimester's modules provide for the student, with the learning facilitator, to have space and time to become familiar with the pedagogical approach. This is done through

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guided activities, based around the personal development plan and through the use of the online communities used as the medium for the pathway.

b. APL and APEL

Students may be admitted with Credit on the basis of prior certificated learning and/or assessed experiential learning.

Students making a claim for admission with credit will be advised by learning facilitators to contact the relevant Field Leader (or nominee) who will guide them through the UCANA's procedures for admission with credit. In order to prevent prior learning being added to programmes at a later, claims for admission with credit for prior certificated learning will be identified through the electronic portfolio and be made within five weeks of the start of the student's first registration.

Marks or grades from prior certificated learning are not transferable to this pathway.

Students making a claim for admission with credit in respect of uncertificated / experiential learning will be required to produce an electronic portfolio (or equivalent) for assessment and approval by the Accreditation and Approvals Committee. This process will be undertaken by the student through the completion of an AP(E)L module.

11. Quality enhancement and staff development

a. Learning Facilitator expertise

Learning facilitators need to be widely experienced in both the theory and practice of online community learning. The Ultralab APU staff proposed for this pathway all have considerable expertise in online communication and in designing and delivering programmes for professional development via the web. The domains of expertise include online pedagogy, group social relationships, management and administration, and information architecture. They all have a background in education and many have held

senior leadership positions in schools. A number have been involved in delivering and assessing MA modules at APU as well as NCSL and NPQH programmes.

As well as learning facilitators, 'experts' will work with communities and students bringing with them specific expertise in domains relevant to the students needs.

It is recognised that there will need to be staff development for those involved in this pathway and there will be an online support community for staff. Within this community appropriately qualified mentors will offer help, advice and support for learning facilitators and 'experts' who are working in the communities.

Ultralab have developed a mentoring programme which is currently being undertaken by a cohort of 25 full time senior learning professionals. This mentoring programme will be available to learning facilitators.

b. Learning Facilitator Development

Learning facilitators working with future cohorts will need to possess or develop the skills outlined above. If they do not have prior experience of online community learning they will be required to take a course, for example the OLTAF Online Tutoring and Facilitation module offered by Ultralab as part of the IMICS scheme in the MA in Education. In addition, new Learning Facilitators will be 'coached' by experienced colleagues to ensure that quality standards are maintained.

c. Experts

As well as learning facilitators, 'experts' will work with communities and students bringing with them specific expertise in domains relevant to the students needs. Experts will not be required to possess the skill set of Learning facilitators who will support them in their specific role.

d. Ongoing support

It is recognised that there will need to be staff development for those involved in this pathway and there will be an online support community for staff. Within this community appropriately qualified mentors will offer help, advice and support for learning facilitators and 'experts' who are working in the communities.

Ultralab have developed a mentoring programme which is currently being undertaken by a cohort of 25 full time senior learning professionals. This mentoring programme will be available to learning facilitators.

12. Costing

The costing for this programme has included for technical support, development of online materials, a continuing iterative process of software development as the programme progresses, hardware for learning facilitators, support, and equipment serving web based content.

13. Student Experience

a. Community support

The programme will be delivered via an online asynchronous community. Students will develop their online learning skills via an induction process, support from the help line, and support in online learning communities. There is a core module, Introduction to Online Communication & Technology, focussing on learning technology to equip students with the skills they will need to learn online. The diagram (over page) indicates the structure of the learning communities and shows where support will be available.

Table 5 Community structure
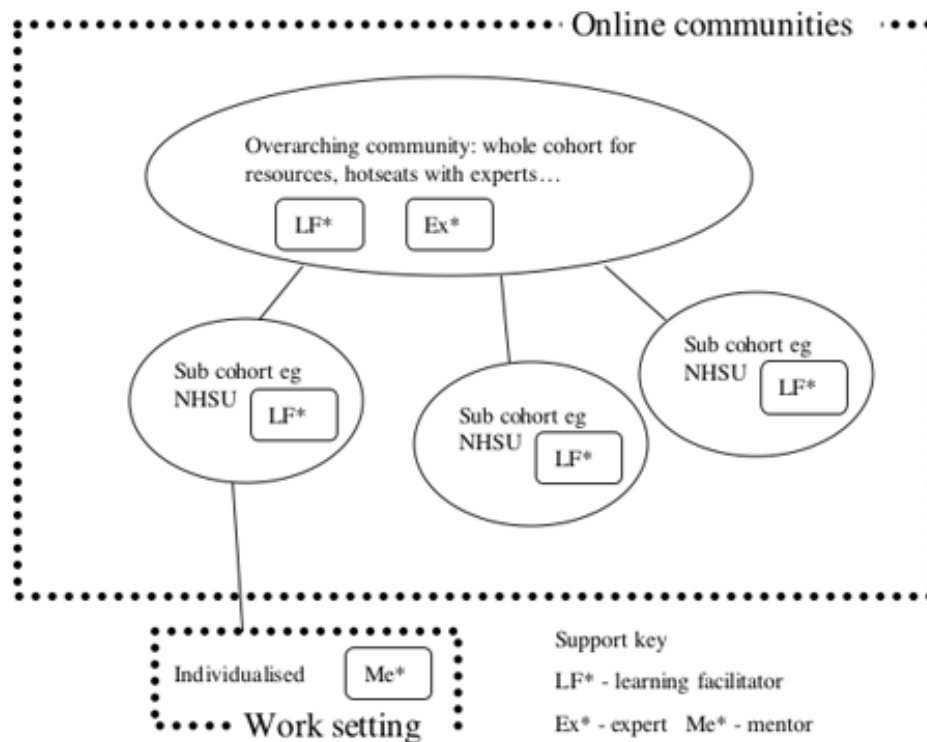
b. Student support

Guidance and academic support for students will be provided via:

- initial profiling of the students to identify their strengths and weaknesses;
- named personal learning facilitator;
- peer support in the online community including mentoring;
- access to experts through the use of asynchronous software within an online community;
- thrice yearly individual review process with their learning facilitator;
- technical support via telephone.

Learning facilitators will provide support to students in realising their full potential and hold individual (three times a year) reviews for proposal and planning. At the start of year one Learning Facilitators will provide highly structured learning experiences, moving gradually to become less structured and placing increasing emphasis on self-direction. The particular nature of support required will be informed by the initial profiling and may

identify particular needs that will require strategies to help students back into the 'learning habit'. Resources will be produced to support these needs, and to develop study skills required to follow the pathway while students remain in their work context. The learners will continue to be guided throughout years two and three.

Contact time will be measured through scheduled tutorials, and participation in the online community, telephone and Short Messaging Service (SMS). Participation in and contribution to the online communities will be transparent and open for all to see.

Students will have ongoing contact with other students via the online community that is at the heart of conversations, discussions and dialogue between students. The online community will provide shared and individual feedback. There will be both structured and open conversations to allow for both formal and non-formal learning to take place.

Students will be assessed via assessment portfolios for modules of work throughout the three years of study. The portfolio will contain work unique to the context for every student. The indicative outline of each student's negotiated award will reside online and will be a 'living document', which students will adapt as the theme and detail of their study is honed. Access to students' work will be protected, since access to the online components, including the community, will require individual user ID and passwords. Recorded milestones of students work will ensure a progression through the levels can be tracked.

This pathway intends to present the students' marks for moderation at the end of each trimester using a SAP (set assessment panel). The outcome of the SAPs will form a basis for the learning facilitator to review with the student their credit achievements as part of module 1, which provides an induction, review and planning process which last throughout the 45 weeks of year 1.

The QA process will be assured by the learning facilitators' review process, which has a minimum of thrice yearly review meetings. Additionally there is likely to be daily contact

between the learning facilitators in the online community. After each SAP an anonymised summary report covering key issues arising from the SAP will be posted to the appropriate on-line community conference area. This summary will specifically address issues of continuing pathway development and similar matters in an accessible and constructive way for students.

There will be a commitment to make learning delightful, seductive and fun! The programme will exploit all appropriate technologies and implement new technologies as they are developed. Experienced learning facilitators will translate successful face-to-face strategies for online application where appropriate.

There will be ongoing community feedback mechanism provided for students and an optional employers questionnaire.

14. Illustrative Case Studies of Typical Potential Students

a. Student A

Student A is an ICT technician who is currently employed at a secondary school She hears about the degree from her head teacher who encourages her to fill in an online expression of interest form for Ultraversity. In doing so Student A is expected to write a profile of her current employment. Student A states that she wishes to gain more understanding of the relationship between technology infrastructure and learning.   This is her second position in ICT, both have been in schools. Student A is 26 years old and has some formal qualifications from school, but as an ICT expert chose to stay on a work at her schools as ICT technician rather than apply for university entrance. She receives a response email to her email address. This process checks the email. The online form checks this student has the ability to fill in forms via an internet connection.

Following her online expression of interest Student A fills in an online registration form which confirms her ability to download and upload documents. Her registration is accepted and she begins the admission process.

Student A receives details of her individual ID and password which enables her to log into her cohort community space, where she finds a welcome from her learning facilitator requesting her to respond to the message. Student A responds to this contact and accesses the community space the following evening, when she logs in to find a proposed time and date for a telephone profile interview. This telephone interview takes place and uses the profile filled in on registration as a starting point. The learning facilitator uses the online profile notes during the session to add details discussed. Both Student A and the learning facilitator can see the profile on the web browser and both can annotate it. The learning facilitator introduces Student A to the online area for the cohort work group containing the module resources, previous cohorts' discussions, activities and tasks, the student's own web space, the concept and purpose of mile stoning their work in the electronic portfolio. Student A agrees to continue working in the web space and begins to consider her online journal.

Two days later at work Student A logs into the community space, finds her cohort workgroup and finds tasks on online communication. She looks at a number of recommended web based resources, watches a piece of video on online communities and reads some questions asked by other students of an expert in online communications. Student A has a question which she wishes to be answered so she posts this question in the online community. The next day when Student A logs into the online community she finds her question answered by the expert and that another student in a similar work context has added her comments. Student A sends a message to this student to establish a communication. In the same session Student A navigates to her online space and adds thoughts in her online journal and comments on some resources she has found useful. She also finds some information in the cohort space on using the online library and access to other UK libraries, which she reads. She notes that on the next evening there is to be a synchronous chat for her cohort students on access to library resources. Student A cannot

make this session due to a family commitment, but is relieved to find that the transcript of the session will be available for all students and can be annotated retrospectively.

Through establishing a pattern of logging in twice a week from work and on Sunday mornings when her children are at football practice Student A is able to join in the discussions set in her cohort work space, upload work to her web space, view and comment on other students' work and maintain a regular contact with her team of three cohort learning facilitators and her own personal learning facilitator. At her end of semester review, Student A is on course to reach the sixty credits required and in her individual telephone discussion with her named learning facilitator her electronic portfolio and learning space journal demonstrate her achievements to date. This pattern continues for Student A through year 1.

By year two it is apparent that Student A is a suitable candidate to mentor new students and she does this in the online learning community offering advice and support by answering other students' questions. Critically reflecting on this experience and lessons learnt in her journal, she gains credit for these activities.

Student A works in the cohort workplace community to establish an area for her action enquiries and is interested in discussing this online with her peer group who are also working in a similar work setting. One of the cohort facilitators suggests an audio conference to allow the group to share their understandings and enable them to test their ideas. Student A joins this discussion and finds the experience useful, if formal. Some of Students A's action enquiry outcomes are surprising to her, but she finds others within the cohort whose work is leading them to similar conclusions. They share their findings with other members of the cohort work group. Student A records her thoughts and developing ideas in her online journal.

During the year Student A visits two members of another cohort who are conveniently located. Using simple digital cameras they exchange different approaches to a common

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problem and share these with their cohort in the online community. Student A's head teacher welcomes this interchange and the fresh ideas it brings into the school.

In year 3 Student A begins her preparation for her exhibition. Her named learning facilitator initiates a telephone interview to ensure that she understands what is required and to help her plan the final year. Student A navigates to the cohort work group discussions and finds an alumni who offers help and advice on preparation and exhibition work. Student A spends some time looking at the examples of previous years' exhibition work exhibited online and reading other students accounts and previous cohorts' discussions. She begins a negotiation process with those in her work setting as this is where she intends to hold her exhibition during a week which coincides with both parents evenings and new intake open day; she has identified colleagues, parents and children as part of the key audience for her findings. She designs the validation exercise after discussion online with the cohort learning facilitators. By Easter student A has her exhibition in place and is delighted to find that some of her cohort have planned to attend. This is the first time she has met some of this now familiar group face to face. Student A records the exhibition, along with the other tasks required in this year, in her electronic portfolio. Her peers in the online community question her on her exhibited work and those who visited add their experiences and understandings gained. Student A uses the comments of those attending her exhibition to refine her defence and her exhibition.

b. Student B

Student B has been carer for three children under 10. He has recently gained part time employment in a primary school as a reading assistant following the last child reaching school age. Student B is 32 and has no formal qualifications.

Student B reads about the Ultraversity degree at his local library and fills in the online registration form from the computer in the library with the help of a friend. Student B states in the profile form that he wants to gain more understanding of how children learn in preparation for his children's developing learning experiences. Student B has no computer, email address or experience of ICT at this stage. He puts his friends email address in the

email contact field and his mobile phone number and states in his preferred communication field that he is inveterate texter. Student B's friend receives an email and student B himself receives a SMS to inform him of the sending of the email and asking him to respond via SMS, Student B is given a printout of the email by his friend later that day. The email explains that he will require a computer and internet connection to begin the programme but if he undertakes to get this connection by a given date then he may register for the programme. Student B sends an SMS to establish his agreement to get a computer and receives a return SMS to establish a time and date for a telephone conversation the following day with technical support. His attention is drawn to some discount and loan schemes.

Student B receives this call from technical support at the appointed time and a discussion takes place concerning the equipment required and the nature and possible costs of the connection. Student B is comforted to find that the simple camera, audio and SMS on his phone can all be useful throughout the degree to record his ideas and thoughts in his electronic journal and for placing sound and images into the cohort work group space to annotate and contribute to debate.

Student B registers in a local internet cafe, Whilst the registration is accepted the form sends a warning note to technical support that this student cannot upload and download data. A cross checking shows that technical support has had contact with Student B. Student B has his registration accepted and admission begins.

Two days later technical support sends an SMS to Student B to ask if he has started to investigate equipment. Student B responds with a date when he intends to look at equipment. He is asked by SMS to confirm when he has equipment and connection in place and the telephone number of the help line is sent via SMS to him.

10 days later Student B has his equipment but his internet connection is not established and he has no email address. Student B visits his local internet cafe after phoning the help line and getting the URL of the Ultraversity home page. After a few check questions the help

line also SMS his ID and password to his mobile. Student B logs into the online community at the internet cafe and is surprised to see a message from a learning facilitator and some of his cohort. He sees the first task is to post some information about his setting and is relieved to find that he can do this from the internet cafe. Student B finds a message from his learning facilitator who introduces himself, explains that he is Student B's main contact and suggests a time to contact him. Student B is surprised to find that his learning facilitator is aware that he has no connection and suggests they arrange the appointment date and time via SMS.

Two days later student B receives a telephone call from his learning facilitator who, using the online profile as a starting point, picks up an number of potential issues for Student B, including the lack of internet connection and formal qualifications. His learning facilitator informs Student B of the student support community and the areas and programme for those who have been out of studying for a period of time. Student B is reassured to find that there are a number of other students who have no formal qualifications and that there are a series of experts and two learning facilitators who are there to offer support and help to these students if this is needed.   The need for regular connection to the online community is established at this meeting and Student B agrees to continue to connect to the community via the internet cafe until his connection is established.

When his connection is sorted out Student B's friend visits and helps him establish the connection to the internet. However student B cannot connect to the online community. He telephones the help line who offer a number of suggestions, including checking that he has the correct ID and password. None of these are successful and so the help line starts an escalation process. This initiates messages to technical support who SMS Student B and arrange a telephone support session. This takes place the following day. Technical support quickly establish that the ISP used is not one of those who block some URLs, which can sometimes occur. In this case it is another simple problem and Student B is relieved to find that after 15 minutes a reliable connection is established.

Student B quickly navigates to the online community and finds the student learning support area. He reads his online portfolio so that he can check the comments his learning facilitator made. He thinks one of the comments is not correct so adds his own comments and expands some points. He cannot find his own web space so leaves a note for his learning facilitator, nor can he find his where he is expected to keep his electronic journal. He leaves a 'help' message in the support community. When Student B logs into the online community the next day he is surprised to see several messages from other students offering best wishes and a message from a year 2 student offering to help him through the early stages and giving a profile of herself with an honest account of her achievements and struggles in year 1. Student B accepts this offer and a mentoring relationship is established.

Student B approaches the first task with some nervousness. He notices that some other students are expressing concern about the requirements in the online community. The cohort learning facilitator directs the work group students to the work of previous students and Student B is relieved to see that he can post his task using a variety of media.

Student B receives a personal message from his learning facilitator, who is concerned that he may have forgotten to post in his electronic journal as it is still empty. He asks Student B to ensure he keeps a regular record and points out that he can keep images, video, text and audio files in his journal.

Student B is concerned that he will never remember to do everything he is supposed to and will never fit it all in with caring from a house and children. He contacts his mentor for support who shares a number of strategies she used to help her get started and points him to last year's discussion on this very issue. Student B decides to develop a programme for himself to enable him to fit in all the demands.

By six months Student B has established a pattern of work and connection. He is still struggling in some aspects of the work but is using the support area and has developed a small group with whom he is comfortable working and exchanging. He posts in the cohort

working group when required and has established a good relationship with his learning facilitator and mentor. At the six month review Student B is making process.

c. Student C

Student C is an experienced trainer with 15 years working in the IT sector.   He made a career move 5 years ago and started working in a school and is looking at ways of getting recognition for the experience he has gained over the past 20 years as well as developing his understanding of the use of ICT in education.

After Student C registered an interest, the learning facilitator picked up the fact that the way forward for Student C may be through an APEL process to gain credit for his prior learning in combination with taking additional modules.

As a part of the initial profiling phone conversation, student C asked about the possibilities of gaining credit for his past work experience. The learning facilitator explained how the APEL process works in general terms, and made the point that this was not an easy option and would require the prior experience to be matched with a current module on offer or perhaps the use of an Individual Learning Module. In any case, it would be difficult to undertake the degree if APEL counted for more than 1/3 of the first two years. The actual detail would require Student C to work with the APEL advisor and if that was the path Student C wished to pursue the learning facilitator could arrange for the process to be started.

15. Resources

Where appropriate, existing APU services and facilities will be available to Ultraversity students, as they are to all APU students. The students will have access to APU online library services, access to a UK Libraries plus card from the APU Library. Learning facilitators will support students in accessing APU provision, providing contact numbers. Pastoral support from APU will be accessed through the telephone. Many students will also have access to their work context support mechanisms.

There will be a different pattern of student support required because of the distance nature of the delivery of the degree and the work contexts of the students. The programme will run a support desk and programme specific technical support. Learning facilitators will also help provided ICT support required for the programme. The programme will be delivered using unique learning community software that encourages ease of communication and allows for shared and private areas in which to gather and create multimedia resources and references.

16. Programme and pathway operational management and evaluation

a. Initial Staffing

12 learning facilitators, 2 resource developers, 2 technical support personnel and a help desk for technical enquiries will staff the programme for the initial cohort, of 500 . Experts and guests will frequently be available online to provide specific expertise. The programme costing has provided for 3 full days of expertise per week for 30 teaching weeks. For the initial cohorts, all learning facilitators will have extensive experience of teaching and working in an online environment.

It is anticipated that becoming a guest or expert for a period of time on this programme, alongside some structured study in facilitation and mentoring online, would enable skills to develop amongst a group of individuals who could be learning facilitators for future cohorts.

b. Organisation and Management

The first cohort will be split into work groups dependent on themes identified. Facilitators will work in teams of 3-4, sharing the facilitation of the online communities formed from the work groups.

Each module will have a module leader, to take responsibility for coordination across the work groups, including moderation of assessment.

Overall responsibility will rest with a project leader who will coordinate the pathway and be the point of contact UCANA and the rest of the University, sharing tasks as appropriate with Ultralab staff.

In addition, the teaching team is supported by two learning material technicians who develop audio and video and multimedia materials. Some specialist technical modules will be prepared by specialist team members. There will be 'visiting' lecturer team members who are experts in particular field, invited as guests to online discussions and hotseats.

The whole learning community team will facilitate the learning and assessment process for each of the learning communities.

c. Pathway Organisation

The pathway modules will be allocated to the generic UCANA set.

The programme leader/s will oversee the pathway including:
- induction;
- programme development;
- student admissions procedures;
- staff training and development;
- student experience;
- appeals procedure;
- programme budget;
- assessment procedures and processes;
- learning and assessment;
- development of resources for students and learning facilitators;
- co-ordination of moderation;
- quality assurance and evaluation processes.

d. Student appeals procedure

The lead learning facilitation team will provide access for students to an appeals process in line with APU procedures. These procedures will also provide for support of students who, for whatever reason, wish to deal with someone other than their named learning facilitator.

e. Quality Assurance and Evaluation

As a part of the QA process, an evaluation will be carried out by online student survey at the end of each trimester. There is also an element of continuous evaluation in the on-line communities/conferences. There will be an area of FAQs, which will address on-going areas of concern and other repetitive queries. The evaluation will cover standard APU questions and additional more specific course related areas determined by the programme team. These forms will formally be monitored and the responses included to form part of the post-SAP report posted to the community.

Cohort work groups collate comments on delivery of each module, identifying strengths and weaknesses and making recommendations for future presentation. They use assessment and student evaluation commentaries in a document called the Cohort Work Group Review. At the end of each year these documents, with the annual report from the pathway external examiner, are reviewed to provide an annual report to APU quality assurance office.

The development of this pathway is an iterative process, and as well as the QA procedure outlined above, changes will be made to reflect the needs of the learners as we progress and these become clearer. This will be reflected in the provision for cohort 2 in terms of the lessons learned from cohort 1.

f. Individual programmes approval through virtual AAC

In the first year as a part of module C1 (Induction/Online Community) through community conversations and individual negotiation with learning facilitators, students will negotiate an outline of the modules they plan to study and a title for their award. This will be submitted to a virtual AAC where members of the committee can view and comment on proposals and mark them as approved when they are satisfied they meet the criteria. This

will be an ongoing iterative process and students will 'flag' initial proposals and subsequent changes bringing them to the attention of the committee for approval. Committee members will be able to log on at a time and place of their convenience to access the proposals.

Ultraversity Project Plan Outline

Context

ULTRALAB is a learning technology research centre at Anglia Polytechnic University. Our mission statement is "To research, apply and disseminate the benefits of new technologies, seeking to develop an empowering, creative and delightful learning environment that knows no boundaries."

The Ultraversity project aims to provide access to higher education to people who are committed to their work. The programme will develop researchers' effectiveness in their particular work role and develop their confidence to influence and improve practice within their work setting.

The programme will focus on 'understanding why and knowing how to ' and will develop individuals to become articulate, critically reflective problem solvers within their work context.

Aims

1. create a programme of undergraduate education based on a synthesis of workplace learning, reflective practice, and action research in an online learning community
2. meet the needs of learners who want to study but find it difficult for a range of reasons
3. research new forms of formative and summative assessment utilising online tools
4. research new forms of organisation and work practice for teaching, administration, and support staff to change the practice of undergraduate Higher Education

Objectives

1. Validate and develop a negotiated award pathway at APU
2. Recruit and run 2 cohorts of researchers through the pathway
3. Produce a report to TTA on Impact of researchers in their workplace
4. Publish and report at conferences
5. Engage with new partners to disseminate research findings
6. Develop software to support self directed learning
7. Develop a model of community focused online learning
8. Bring academic and practitioner knowledge into online communities
9. Develop and implement modules
10. Develop and implement workplace advocate scheme
11. Evaluate the degree programme

Success Criteria

1. programme is successfully implemented and has a high degree of researcher satisfaction and standard of work
2. new technology is used to support researchers learning
3. disseminate findings through website, presentations at conferences, research papers in journals and online
4. Ultraversity model is taken on and developed by HE institutions
5. collaboration between Ultraversity project team members and outside agencies

Degree characteristics

1. workplace learning for those in full time employment paid or unpaid
2. practitioner led reflection and action research model of learning
3. support through online learning communities with lecturers, and researchers taking the

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role of co-learners, experts, and facilitators of learning
4. assessment through assembly of portfolio of learning
5. bringing together of practitioner knowledge and academic research through the use of 'expert witnesses' in the online community
6. inclusion of researchers in the development of the degree programmer including online tools

Levels of relationship with other institutions

Level 1 - Ultraversity project team point towards freely available use of website resources and research findings

Level 2 - Ultraversity project team meet with interested parties to discuss learning philosophy, ideas behind the project, and practicalities involved, possibly exploring avenues for further collaboration (expenses to be met by interested party). Ultraversity staff involved in such meetings will inform the project team and steering group prior to the meeting.

Level 3 - partnership with Ultraversity to help develop online degrees using the philosophy underpinning the particular philosophical and pedagogical approach to higher education adopted by Ultraversity. The 'tests for potential partnerships' provide a simple framework for determining the suitability of projects. Ultraversity project team members (and the wider Ultralab community) are required to 'sponsor' a relationship, bringing it to the steering group for assessment of suitability and agreeing of a project plan.

Tests for potential partnerships with other institutions

Does the proposed programme have at its heart?:

reflection and action research as the predominat approach to learning

online learning communities at its heart

a patchwork approach to assessment

Steering group

Remit:

To regularly review project objectives and project management. Support learning facilitators in meeting the project objectives. Support project team members who wish to disseminate findings in line with Levels of relationship with other institutions and Tests for potential partnerships with other institutions.

Meetings scheduled first Monday of the month 9 am - 10am with a membership of:

Pete Bradshaw - pete@ultralab.net

Richard Millwood - richard@ultralab.net

Stephen Powell - stephenp@ultralab.net

Tim Williams - tim@ultralab.net

Ref: HRD/JD
Enquiries to:
Jenny Deacon (Ext 4787)

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23 March 2004

PLEASE SIGN AND RETURN

APU

The University that works for you

PERSONAL

Mr SJ Powell
41 Oakthorpe Avenue
Leicester
LE3 0UR

Dear Mr Powell

On behalf of Anglia Polytechnic University Higher Education Corporation, I am pleased to offer you the following appointment, with effect from 1 January 2004:

(a)	Job Title:	Ultraversity Project Leader
(b)	Work Base:	Essex Campus at Chelmsford
(c)	Salary Scale:	Principal Lecturer, £32,125 - £40,394 per annum (Pay Award Pending)
(d)	Commencing Salary:	£40,394 per annum (Pay Award Pending)
(e)	Date of Next Increment:	Top of Scale
(f)	Date of commencement of continuous service with Anglia Polytechnic University HEC :	1 January 2001

The other terms and conditions of employment are set out in the enclosed statement.

I shall be grateful if you will sign and return the enclosed copy of this letter as confirmation of your acceptance of this appointment.

Yours sincerely

[signature]

for the Vice Chancellor

I hereby accept the appointment described in this letter and enclosures on the terms and conditions indicated.

SIGNED ....*S. Powell*........................   DATE ....*28/03/04*..........

cc.   Steve Heppell

ACKNOWLEDGMENTS

Te Wānanga o Aotearoa
Translation
University of New Zealand

Final Report to Te Wananga o Aotearoa
Development of Online Delivery for Te Korowai Kohungahunga: Bachelor of Teaching Early Childhood

Executive Summary

This piece of work is very timely. The Ministry of Education has made a commitment to early childhood education by implementing strategies which will raise the number of young children attending early childhood services, by encouraging the participation of whanau and families in the education of their children, and by emphasising the need to raise the quality of early childhood education through teacher provision. This report is submitted as a contribution to teacher provision.

In a letter from Steve Maharey (Sept 2003), Te Wananga o Aotearoa was acknowledged as the first Maori educational institution to have developed a kaupapa Maori based Bachelor of Teaching in Early Childhood Education. This came at a time when TWoA was granted an exemption from the moratorium which has been placed on the funding of newly developed pre-service teacher education programmes and private training establishments.

This project set out to identify critical factors which need major consideration before determining whether TWoA has the capacity and capability to provide a proportion of Te Korowai Kohungahunga, the Bachelor of Teaching in Early Childhood Education, through online learning. The critical factors to be discussed in this report are Information Technology provision, the implications for staffing, professional development and research, online teaching strategies, and funding implication. Finally, a list of recommendations has been made which have emerged from the findings of this report.

Background

Early in 2003, Te Wananga o Aotearoa (TWoA) began processes to develop a kaupapa Maori Bachelor of Teaching in Early Childhood. Other than the early childhood strategic plan, the Ministry of Education's strategic directions fully supported this initiative by TWoA. This qualification will contribute to key outcomes the government has indicated that it wants to achieve, therefore the degree is critical to the following outcomes. As stated in *Nga Haeata (2001)* the supply and retention of Maori medium teachers are critical as they help to:

- Provide positive role models for Maori students
- Raise educational expectations and achievements for Maori
- Improve the quality of Maori immersion education
- Develop the capacity of iwi and Maori to initiate their own education programme (P25)

Goal 10 in Nga Haeata Matauranga (2001, p40) identifies that more Maori teachers will be recruited into early childhood education. As a Maori provider of educational programmes, TWoA will have the capacity to meet these outcomes both philosophically and academically.

The Early Childhood Ten Year Strategic Plan identifies one of its major Goals as improving the quality of ECE services (MOE 2002, p8). The strategy identified as meeting this Goal is that of increasing the numbers of registered teachers by increasing teacher supply. The actions required to carry this intent through is to ensure that ECE teacher education programmes support all ECE teachers in the use of te reo and tikanga Maori as well as develop teacher education programmes that are suitable for ECE teachers who work in Maori immersion situations (ibid p14). TWoA once again has the capacity to provide a teacher education programme which will be culturally, socially, and educationally appropriate to meet these outcomes. It is also intended that the participants undertaking this Degree are able to work competently and confidently across a range of early childhood settings.

The series of *Progress Reports responding to Hui Taumata recommendations* outline five emerging themes which the Government, in conjunction with Maori, will work toward and at the same time building a sustainable and cooperative relationship which

aims to improve Maori educational achievements. Two of the occurring themes specific to this application are *Tooku paa harakeke – Tooku puu kurakura: The family: the education cornerstone and Ooku rangi whakamataara: Striving for quality in education.* These themes advocates strongly for increasing Maori teacher supply and whanau education. Included in these reports is the *Maori Language Education Plan*, which also aims at improving teacher supply. The philosophy of kaupapa Maori education programmes embraces the involvement of whanau in the education of their young. The Degree offered by TWoA would target all sectors of the community.

The Tertiary Education Strategy 2002/07 contains six strategies to enhance the performance of the Tertiary sector. Strategy number two refers directly to *Te Rautaki Matauranga Maori*, which is to contribute to the achievement of Maori development aspirations. This strategy is divided into six objectives:

1. Tertiary education leadership that is effectively accountable to Maori communities
2. Strong and balanced Maori staff profiles within the tertiary education system
3. Quality programmes that recognise te ao Maori perspectives and support the revitalisation of te reo
4. Robust options for kaupapa Maori tertiary education that reflects Maori aspirations
5. Increased participation by Maori in both a broader range of disciplines and in programmes that lead to higher level qualifications
6. A tertiary education system that makes an active contribution to regional and national Maori/whanau/iwi/hapu development.
   (Website hhtp://www.tec.govt.nz/strategy.html 18/03/03)

TWoA and its current development in early childhood education reflect the objectives set by the Tertiary Education Council also.

In the early childhood sector it is recognised that there are a pool of Maori educators who are less likely to be qualified or registered than the total group of teachers (MOE 2002, p45). Scholarships offered to increase teacher supply is one strategy for attracting participants, however, we would suggest that there are other issues that may impact on

applications to teacher education programmes such as accessibility, institutional culture, and flexibility in the delivery of programmes.

Because TWoA are multi-sited they have the ability to take the programme to the people, their philosophical base is Maori and the modes of delivery offered by TWoA are varied such as wananga, online delivery, work based and night classes. TWoA are community focused and have the flexibility to cater to different types of personal scenarios.

The Hui Taumata Matauranga Report Back (2002) identifies that in order to develop professional capability, the objective is to empower learning institutions to develop and implement a curriculum that is culturally relevant for Maori. By the 28th November 2003, the development of a kaupapa Maori Bachelor of Teaching in Early Childhood was completed and is now awaiting accreditation.

In October 2003 the National Operations section of the Ministry of Education released a request for proposals for the development and provision of teacher education programmes that support kaupapa Maori or Maori immersion early childhood education. This initiative was influenced by the ten year early childhood strategic plan, *Pathways to the future: Nga huarahi arataki.* One of the strategies in the plan is to increase the number of registered teachers, so that by the year 2012, all regulated staff in teacher-led services are registered. It also includes goals which seek to improve the appropriateness of and effectiveness of ECE services to Maori, and to increase the participation of Maori children and their whanau. By November 2003 a proposal had been drafted and submitted by TWoA to National Operations in response to the call for submissions.

The Project

The project direction was determined by the extensive consultation undertaken in the development of the Bachelor of Teaching in Early Childhood for TWoA. There was a strong call for the degree to be taken to the people; that a variety of delivery methods be considered; that working people are able to access this programme and continue their employment. A clear statement was that the quality of all staff delivering the

degree is critical as well as resourcing. The following assertions informed this development:

- qualified lecturers are critical to this degree;
- noho marae and wananga must occur;
- *the need to seek possibilities of delivering online;*
- delivery by block courses be considered;
- open communication line directly to pouako such as telephone, fax, email, text messaging be available;
- the programme must cater for various personal situations such as working people, rural and city environments;
- be creative and innovative in delivery;
- strike the right balance between academia and hands on experiences;
- ensure sufficient resourcing is available at beginning of programme;
- ensure that programme has quality, up-to-date resources;
- consider the clustering of students on teaching practice;
- more opportunities for longer teaching practice experience;
- teaching practice to be carried out in a variety of early childhood services;
- the use and drawing on community expertise as facilitators;
- that all courses will be taught both te reo Maori and the English language;

Therefore the purpose of this initiative was to research the capacity and capabilities of TWoA to deliver parts of Te Korowai Kohungahunga online which appears to be a mode of delivery that will satisfy many of points raised above. The introduction of online delivery is an unknown factor in the progression of the degree. Consultation, research and planning of this service took cognisance of the fact that the delivery timeframe of July 2004 could still be managed and that the service is cost effective. Following are the findings of this report:

PART ONE
1. Rationale for Online Delivery

Information Communication Technology (ITC) delivery has emanated as a result of consultation demanding that modes of delivery include "taking the programme to them", and that flexibility and creativity be considered as fundamental considerations

in the development of Te Korowai Kohungahunga. It is also important to consider the characteristics of potential akonga such as:

- akonga who are employed and working fulltime in early childhood centres;
- akonga who are rural;
- akonga who have access to TWoA campuses;
- akonga participating in the programme on a national scale;

2. Principles for Design of Online Delivery

Online delivery for parts of the degree is considered to be an appropriate mechanism to meet this requirement, therefore, the purpose of this section of the report is to set out the guiding philosophical framework for taking Te Korowai Kohungahunga, Bachelor of Teaching in Early Childhood Care and Education online in accordance with Kaupapa Maori educational principles. Kaupapa Maori philosophy must be central to the learning activities and assessment processes used in this degree programme can be adapted to the online context.

The principal aim of using technology to take this degree online is to provide access to higher education for an important group who are of critical importance to the promotion of and advocacy for the strengthening of Maori perspectives and worldviews in the arena of education. The opportunity offered by online technologies will provide new ways of studying which will enable a flexible pattern of study. This according to Brooks (2003) and Howell et al (2003) is one of the major factors which make online learning an appealing option to different communities, because it is able to take account of changes in personal circumstances which might result in the need to take a break or slow down the pace of studies. This flexibility is of particular importance when technology is being used to provide access to tertiary education to people who may have significant other commitments in their lives other than studying as a full time activity. Failure to do this may result in high drop out rates. The design of the degree has at its centre a deliberate attempt to foster collaborative learning both in the face-to-face elements and online, where akonga will subject their ideas and practice to self-examination, as well as the examination of peers (Deubel 2003). Akonga will learn the skills to improve their effectiveness in their placements and practicum sharing this experience through the online communities. This will develop

their ability, and confidence to influence and improve practice within their work setting when they graduate and find employment.

The experience for the akonga should focus on 'understanding why and knowing how to' develop skills of critical reflection and problem solving (Zepke et al. 2001), with an understanding of Maori cultural aspirations, language, and Maori herstories/histories (Durie 2003, Bishop and Glynn 1999, Coxon et al 1994, Hemara 2000). Sharing through dialogue in online communities is central to this aspiration.

In line with Kaupapa Maori philosophy, each akonga will be a member of a lively online learning community, where collaborative learning will be generated through participation using a range of approaches to online learning through the adoption of different processes and protocols including reflective dialogue with peers, co-learning with lecturers, making a 'delightful' learning experience. Boyle (2000) argues that for real learning to take place, the establishment of effective learning communities is critical. This statement is supported by educators such as Hill (1999), Caldwell (1997), Sergiovanni (1996), Penetito (1994), Smith (1999) who all believe that any model of education needs to be empowering and emancipatory. The model of learning which underpins this programme is one of an autonomous, self-directed, critical, and reflective individual who seeks to learn collaboratively. This model emphasises an analysis of the values, morals and ethical dilemmas surrounding this type of work. According to Gee (2002) an online learning community needs a clear purpose and focus, therefore recruitment of akonga who will benefit from this approach requires a high degree of attention and is expanded upon in a later section.

The online learning community will play a significant role in providing affective / social support for all members by fostering social interaction. A review of technical infrastructure requirements relating to the community software and a programme website and the technical support required is set out in a separate section.

3. Staff Qualifications

It is expected that all appointed lecturers to this degree programme will have:
- The minimum of an academic qualification equivalent to the degree that is being offered

- A postgraduate degree such as Masters in Education or currently working toward a M.Ed is the preferred qualification

While this qualification is appropriate to the degree being offered, what needs immediate attention are the skills and knowledge lecturers would require to deliver distance learning online.

3.1 Implications for Staffing of Programme

At the heart of making this programme work are the TWoA Lecturers, who will take on the roles of tutor, co-learners, experts, coaches and/or mentors. They will provide the active facilitation of the online spaces as well as the individualised support of learners. According to Brooks (2003), the attitude of instructors, students, course administrators, and course designers has a significant impact on the quality of a distance education programme, therefore staff training and professional development are critical.

Below is a draft outline of the key responsibilities of someone working in an online degree.   It can not be over emphasised how essential it is that lecturers who are selected to deliver the programme not only have a good knowledge and understanding of Early Childhood education, but also embrace the online philosophy of the degree explained in this document.

3.2 Main Purpose of Task

To work with akonga as facilitators and researchers and to participate in the ongoing development of the online segment of Te Korowai Kohungahunga.

3.3 Main duties and responsibilities for staff to include

- To work collaboratively in the development of the online learning communities, including stimulating and co-ordinating topic discussions
- To take the role of 'expert' in learning communities in relation to issues of teaching and learning
- To act as an advocate for akonga as researchers
- To support akonga as researchers in their development as self directed learners
- To work collaboratively to develop papers including: resources, research activities, assessment to support learning and use of new technologies

- To be familiar with issues of teaching and learning in relation to Tertiary education including regulations and requirements of TWoA, Teachers Council, NZQA and current good practice in Tertiary institutions
- To be familiar with current 'workplace' learning theory and practice and apply appropriate strategies and practices
- To apply Kaupapa Maori philosophy and preferred practice to working with akonga as researchers
- To assess akonga work in accordance with regulations including attending of training and meetings as required for assessment, moderation, and professional development
- To take part in action research and scholarly reflection on the processes of on-line learning including the use of technology and approaches to learning
- To share research findings via mechanisms such as websites, journals, and conferences.

All lecturers must have an enthusiasm for exploring different approaches to learning using technology with a willingness to learn as being the most important requirement.

4. Professional Development Programme:

The aim of professional development is usually to move people from where they are to a state from which they would be able to work effectively from a different point or at another level. This provides the participant with the confidence and competence to perform successfully and take on new challenges (Murphy 2002).

For the successful implementation of the online degree, an extensive PD programme will need to be put in place. This will need to address a number of key issues:
- online facilitation skills
- assessment strategies and approaches
- base level of technical ability
- iterative development of degree programme through research

4.1 Process:

It is estimated that in order to cater for lecturer preparation, a six week lead in time before the beginning of the programme is recommended. Outlined below is a draft workshop outline:

- A 4 day face-to-face hui will mark the start of the training and topics of course design, structure, philosophy, and online issues will be covered.

- Following the hui, there would be a workshop of 5 weeks duration. This workshop will be participatory in nature and will be held in the Interact community software. The same underpinning philosophies and values will inform its design and running as the degree programme. Facilitators will be expected to commit to 10 hours of online work per week over the duration of the workshop and will be expected to contribute to conversation and activities.

- Successful participation in the workshop will be a pre-requisite of going on to facilitate the degree.

4.2 Key areas that will be addressed include:
- translating face-to-face teaching skills online
- designing virtual learning spaces
- assessment online
- generating participation
- facilitating learning in the degree programme
- working as a virtual team

4.3 Professional development costing

Item	Days	Day rate	Costs
Initial face to face hui	4	$ 700	$ 2, 800
5 week online facilitation	5	$ 700	$ 3, 500
Degree start face to	5	$ 700	$ 3, 500

face hui			
		Total	**$ 9, 800**

The degree team will develop a programme of regular reviews at which they will examine how the degree programme is progressing and the needs of individual akonga who they feel are at risk of failing. Lack of activity in the learning community is a key indicator of this. This is particularly important because of the intensive online nature of the degree and the infrequent opportunities to meet face-to-face.

Delivery of this online degree will adopt 'team teaching' methodology. At the start of each semester, the lecturers will collectively agree the approach for modules to be covered, including integrating the face-to-face and online components, and agreeing assessment processes. An end of semester review process will highlight strengths and weaknesses that can then be taken forward to next semesters planning. This iterative and action research lead approach is essential to ensuring that this innovative degree is successful and meets the needs of the learners.

5. Technical Support

A person with online technical and media skills should join the team to support students and facilitators with technology connected with the degree. This may be someone from the ICT department at Te Wananga o Aotearoa, but whoever it is must have dedicated time to this degree so that a guaranteed level of service can be offered.

5.1 Main Purpose of Job: To work with akonga and lecturers to support them in the use of ICT connected with the degree programme.

5.2 Main duties and responsibilities to include:

- helpdesk support with Interact community platform
- support with multimedia, images, movies, etc.
- general computer application support for akonga and lecturers
- supporting the creation of digital resources

6. Research Methodology:

TWoA has a commitment to providing a quality, relevant, and appropriate academic programme in order to develop the potential of early childhood teachers and management. In order to provide this service it is important that processes are implemented to ensure that the programme TWoA offers is current and applicable to akonga. This can only be achieved through ongoing research.

This is a new degree in a new context and as such the lecturers will need to find out how to best make it work. Development of the online degree will be underpinned by employing an action research methodology linked to the Quality Assurance mechanisms of TWoA and would include involving akonga in the process. Results from these activities will be disseminated via the programme website to help create the sense of co-research between the programme team and the akonga.

6.1 Action Research Model:

Action research is the application of fact finding to practical problem solving in a social situation with a view to improving the quality of action within it and requires the collaboration of researchers, practitioners and all participants within the context that has been identified for the action research to occur (Burns 2000). The action research model was first coined by social psychologist Kurt Lewin and involves a cyclic sequence.

6.2 There are four basic characteristics of action research:

1. Action research is situational (diagnosing a problem in a specific context and attempting to solve it within that particular context

2. Action research is collaborative (Teams of researchers and practitioners working together)

3. Action research is participatory (Team members take part in implementing the research

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4. Action research is self-evaluative (Modifications are continuously evaluated within the context, and is ongoing in order to improve practices)

This degree will accommodate the opportunity to apply appropriate research methodology, therefore providing important data for future developments of Te Korowai Kohungahunga. Recent research inquiries pay particular attention to the importance of devolving power and control in research (Bishop 1996, 1997, Bishop and Glynn 1999). In the search for a research model that is conducive to the kaupapa of Te Korowai Kohungahunga, an inclusive approach was selected based on a philosophy of collectivism, which is prominent in both kaupapa Maori and Early Childhood ideology. 'Participant driven research' ensures the right of the people to speak for them-selves. It is important that the research is placed within a context where control and power are located within the collective and knowledge is gathered and processed for the benefit of the collective.

6.3 Maori View

The Canadian socio-linguistic, Jim Cummin's (1989) model of reciprocal interactions endorses the findings of Metge (1984), Mahuta and Ritchie (cited in Hirsch & Scott 1988) which argues that a Maori approach endorses the aspects of control sharing, collaborative learning contexts, participants setting their own learning goals, an integrated curricular as opposed to content being taught in isolation. Cummins's (1989) believes that empowerment is a critical factor and that participants who are made responsible for their own learning; develop the ability, confidence and motivation to obtain successful outcomes.

This reciprocal model is described as Ka'ai (1990) and Pere (1984) as the whanau concept, which embraces such concepts as aroha, manaaki, wairua, tautoko and tiakitanga. This practice of whanaungatanga acknowledges the supportive nature of the group, which creates a support system drawing on loyalties, obligations and commitments (Hohepa, 1992).

The research model proposed by TWoA has been informed by both Kemmis and McTaggart's (1988) model of action research but place a strong emphasis on a Maori

research paradigm. Following is an outline of concepts and processes which provide the basis for this action research model as well as a diagrammatical layout of the process. This model was developed specifically for Te Korowai Kohungahunga.

Whakawhanaungatanga: Establishing relationships based on principles of whanaungatanga ensures mutual trust and respect and underpins a successful research process that will encourage positive changes from a kaupapa Mãori and bicultural perspective for the benefit of young children.

Whakamana: Consultation and negotiation with all participants ensures that those involved have ownership over the process and will determine the methodology and action to be undertaken. Participants include staff and akonga involved in the delivery and implementation of Te Korowai Akonga.

Nga Whainga: Participants will identify research directions and plan goals and objectives, based on identified needs which are specific, concise, realistic, achievable, and measurable, to ensure attainable outcomes. Research directions will be based on *'finding things out'* or *'making improvements'*

Whakatakoto Kaupapa: A clear plan of action will be identified by the group to ensure that goals and objectives will be met.

Whakatinana te kaupapa: Implementation will be a process determined by the needs of the participants.

Arotake: Assessment will be based on critical self reflective practises with the intention of identifying positive changes within the degree programme and identifying further sites of change.

Whakatakoto Kaupapa Ano: This indicates a need to re-plan, implement and assess identified sites of changes. This process is ongoing until lecturers and akonga have made the changes needed to improve the focus identified for the research focus.

Successful development of the degree programme will depend upon a rigorous action research programme supported by other approaches to evaluating whether or not the degree is meeting the intended purpose. As well as developing the early Childhood

degree successfully, it is hoped that more generalised lessons can be drawn for the development of online courses for Te Wananga Aotearoa.

6.4 It is proposed that there are three strands to the research approach:

1. Lecturers will be supported in their action research. This will include sessions at face-to-face meetings and online through a community of good practice for the lecturers and other staff working on the programme;

2. Data collection and analysis/interpretation to feed into the action research being carried out by the lecturers;

3. An end of year overview of the project. This will entail drawing on the lecturers' action research and the analysis/interpretation of data collected. The focus will be to draw out key lessons learned and implications for development of the online approach for the Wananga.

6.5 Research questions could include some of the following as well as other questions:

1. Is the Early Childhood degree meeting its intended aims and objectives?
2. What are effective online learning strategies?
3. How are the assessment strategies supporting student learning?
4. What are the cost implications for mixed mode/online delivery?
5. What are appropriate strategies for any technical issues that arise?

Action Research Model

Whakatakoto Kaupapa Ano

Whakawhanaungatanga

Arotake

Whakamana

Te Anga

Rangahau

Whakatinana

Nga Whainga

Whakatakoto Kaupapa
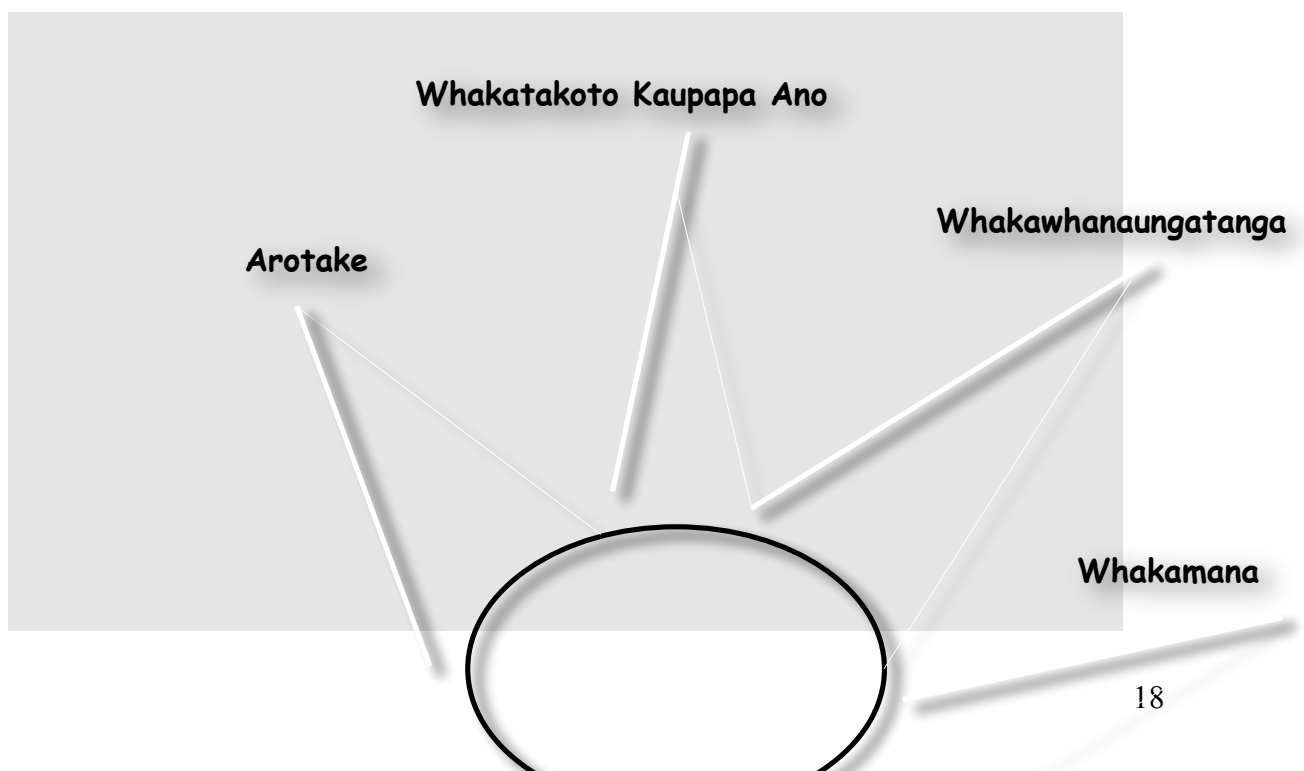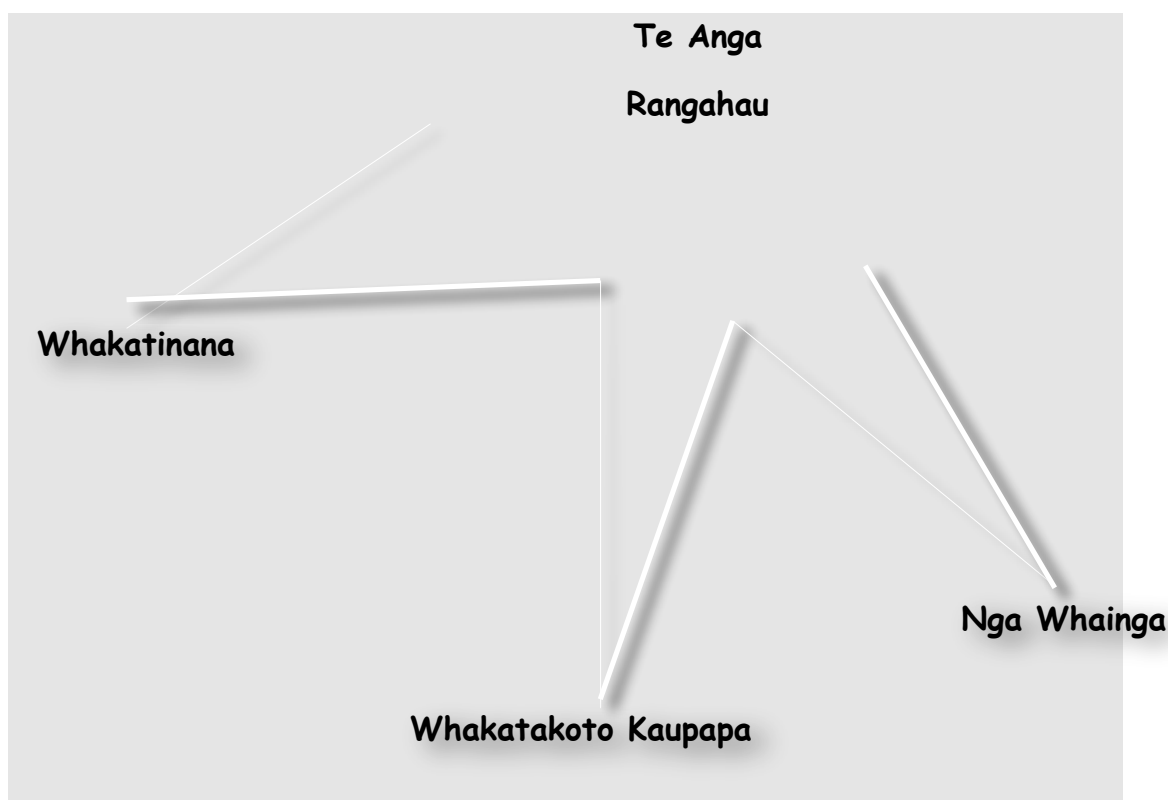
In order for this programme to succeed, support must be provided to carry through the initial processes of action research, preferably by Ultralab. Following are estimated costs to carry this out.

7. Overview of costs to support research:

Consultancy support for supporting action research by lecturers in online learning context 15 days per semester = 30 days (plus expenses for travel as agreed)

Survey construction, data collection, and description 10 days per semester = 20 days (plus expenses for travel as agreed)

Reporting on project 10 days (plus expenses for travel as agreed)

7.1 Costing

Work	Days	Day rate	Cost
Consultancy support	30	$700	$ 21, 000 (+GST)

Survey construction, collection, and description of data	20	$400	$ 8, 000 (+GST)
End of year report	10	$ 700	$ 7000 (+GST)
		Total	**$36, 000 (+ GST)**

8. Approaches to Online Learning

8.1 Online Learning Communities – Learning protocols and processes

Online learning communities use software accessed through any computer linked to the Internet with a web browser. This is primarily an asynchronous environment that allows individuals to read and contribute at a time and place that is convenient to them, providing the opportunity for reflective activities that exploit the asynchronous nature of online software (Macfarlane et al 2003, Pringle 2002). Those communicating in an online environment for the first time often need support to adjust their expectations of when their postings may receive replies. Participants will most likely access the community at quite different times, changing the nature of how people interact. Expectations of when replies to postings can be expected need careful managing as others will also access and contribute to the communities when they choose.

Just as there are protocols, both tacit and explicit, for learning in face-to-face situations so there are in online environments. These protocols and individuals' experience of them is at an early stage of development. Consequently, we need to be clear about the purpose of online activities and the processes, protocols, and behaviors that best enable learning to take place. Online learning communities work best when they empower the community members and a co-learning philosophy is applied where all contributions and contributors are valued for their input.

In this degree, we are pushing at the boundaries of our understanding of online learning communities in this particular context and should see our experiences as an enquiry into the field.

8.2 Participation contract

An agreed purpose for the community and shared expectations of members are essential. So from the outset, an exploration of how learning might take place in an online community and how this behavior will be exhibited is important. Therefore this contract is supported by a Code of Ethics developed specifically for this programme. *The Code of Ethics is attached as Appendix A.*

9. List of Strategies:

9.1 Hotseats

Hotseats provide the opportunity for 'experts' to be asked questions in their particular domain or specialism. This simple question and answer conversation format often develops into a rich dialogue between the participants and the hotseat guest, exchanging ideas and thoughts. As the hotseat develops participants answer each other's questions and comment on the responses given by the hotseat guest. Participants may return a number of times to extend points and seek clarification. The number of contributions to a hotseat can range from only a few people, up to as many as 30. The number of participants does not necessarily impact on the 'success' of the hotseat, but if there are over 30 people contributing, the hotseat can become difficult to read and engage with.

9.2 Noticeboards

These are used to share information between students and facilitators. A threaded conversation tool will be used for simple sequential contributions. Typical contributions will fall into the following categories:

- akonga may ask questions and lecturers will respond to them
- Lecturers will share information
- aspects of the degree programme are discussed for clarification
- support is offered
- social contributions build the sense of community

9.3 Focused conversations

These are used to discuss a specific topic or subject. They are usually initiated with a

short stimulation resource (written, audio, video, digital; still) and an initial posting by the facilitator whose job it is to stimulate the conversation and support the students learning through appropriate interventions. The most powerful way to encourage students is to model desired behaviors, this includes linking to www resources, constructively challenging student contributions, identifying 'fertile' threads of conversation, sharing experiences both positive and negative, appreciating others contributions, and encouraging reflective thinking.

9.4 Summaries

Long and complex threads of conversation may require summarizing. This should be an activity shared by the students and facilitators and can be used to pull together a conversation, identify areas of agreement and disagreement, create a resource for future reference, and provide a starting point for further conversations by identifying key issues or ideas.

9.5 Evaluation and reflection

This is an enquiry into the processes of learning and outcomes for students. This information can be used within each group to reflect on the work of the group. It will also be used to inform the continued development of the degree programme and development of the online learning communities. At points chosen by lecturers, the opportunity for akonga to reflect upon their experience of the degree programme is built in. This could include:

- a review of hui and inter-hui activities;
- Moments to reflect on the content, methods and interaction used for the degree programme;
- Focused reflection on specific learning styles or processes following an activity;
- Other review processes that are appropriate for the groups

9.6 Action learning sets and study groups

Typically, these are not supported by lecturers, but will depend upon the akonga to organise themselves for any given activity. Following are some guidelines for this process.

- Small groups of 5-6 who work together for an agreed purpose
- Focused discussions on real issues brought to the group
- Collaborative sharing, brainstorming, and evaluation of ideas
- Sharing of information including school policies, initiatives, etc.
- Analysis of articles and ideas
- operate over agreed periods

9.7 Use of images

The use of images can be a powerful tool for sharing experiences. Some ideas could be:

- uploaded image of community members so that their contributions are accompanied by both their name and a picture
- taking digital image and posting them on the community pages can help maintain a feeling of connection between the group
- annotated digital photographs of classroom observations for sharing ideas and stimulating discussions
- uploaded images of facilitation/support team with brief biography so that researchers can put a face to a name

9.8 Linking to resources

- annotated web links to resources
- explain what the resource is, and what was particularly interesting and relevant

9.9 Field trips

- links to a series of online sites and resources
- intended learning outcomes identified and shared
- clear instructions about the activity to be undertaken, e.g., explore a particular resource/interactive activity
- individuals bring back learning to the community to share and discuss

9.10 Jigsawing

- small groups take 1 article/paper each

- at an agreed time they share a summary each has produced

- optional discussion to follow

- shares the workload, encourages collaborative working

10. Percentage of programme to be delivered online in the first year:

It is envisaged that as the programme progresses, the time allocation for teaching online will increase. For example, in the first year it is calculated that 45% of the programme will be delivered online. Year two will increase to 55% and by year three, 75% of the programme will be taught online. For the first year programme, it is estimated that six courses will utilise online learning which calculates to approximately a minimum of 5-10 hours per course per week. Of course, the maximum amount of time akonga chose to spend online cannot be controlled. The minimum allocation of time is based on estimated lengths of time required for akonga to engage in meaningful dialogue related to course content. The grid below provides an overview of the year one programme of Te Korowai Kohungahunga.

**INTERIM PROGRAMME FOR ONLINE DELIVERY OF FIRST YEAR DEGREE COURSES FOR
TE KOROWAI KOHUNGAHUNGA: TE WANANGA O AOTEAROA 2004**

Course	July			August					September				October				November			
Weeks	19th	26th		2nd	9th	16th	23rd	30th	6th	13th	20th	27th	4th	11th	18th	25th	1st	8th	15th	
Induction																				
Te Tiriti o Waitangi																				
Nga whakaaro Piiwai																				
Whanake Tangata																				
Te Whakapapa o te reo																				

KEY OUTLINING DELIVERY MODES

▓	**Block periods of one week**
≡	**Noho marae (usually on weekends: would begin Friday nights and end Sunday)**
▒	**Periods allocated for akonga to access online learning**
Sept-Oct	**6 days teaching placement**

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INTERIM PROGRAMME FOR ONLINE DELIVERY OF FIRST YEAR DEGREE COURSES FOR TE KOROWAI KOHUNGAHUNGA: TE WANANGA O AOTEAROA 2005

Course	Feb-March	April				May					June							
Dates	25th	7th	14th	21st	28th	4th	11th	18th	25th	2nd	9th	16th	23rd	30th	6th	13th	20th	27th
He Whariki Matauranga																		
Te Hangai o te reo tika ana																		
Matauranga Ngaio																		
Mahi Whakaako 1																		

KEY OUTLINING DELIVERY MODES

	Block periods of one week
	Noho marae (usually on weekends: would begin Friday nights and end Sunday)
	Periods allocated for akonga to access online learning
	Teaching Practice

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P5

11. Sites for Delivery:

Because of the nature of online delivery, it is not necessary to target any TWoA sites for the delivery of Te Korowai Kohungahunga. Potential akonga would be able to access the programme from anywhere, however, they would need access to computer and internet facilities. For the face to face components of the programme, TWoA Conference site at Glenview, Hamilton is the only identified delivery site.

12. Transition plan for online delivery over a three year period:

A scoping exercise was worked out in order to gauge what the implications would be for Te Korowai Kohungahunga over a three year period in terms of resourcing, staffing, costing and administration.

Activity	Yr 1	Yr 2	Yr 3
Face to Face	End semester 1 Hui a kaiako	Beginning of each course	Beginning of each course
Resources and approximate costing	Resourcing completed for year one $5,000 • Lecturers input/student input • Warren/website management &development	$5,000 per year	$5,000 per year
Staffing	80 akonga = 4 staff	70 Akonga (1st year) 80 akonga (new intake) = 1 extra staff	70 akonga (1st yr) 70 akonga (2nd yr) 80 akonga (new intake)= 1 extra staff 220 akonga in total = 6 staff members.
Professional Development	15 days 1 week f2f + 1 6 week online 10	Research focus • online (5 days) • degree programme	Evaluations
Research	Action research into programmes	Ultralab: Ongoing	
Administration	• moderator • practicum co-ordinator • admin/person	Ongoing	

While the Part One of this report focuses specifically on philosophical, staffing and programming issues pertaining to the online delivery segment of Te Korowai Kohungahunga, the Part Two will present findings based on an analysis carried out on programme software and other technical issues related to this development.

PART TWO

13. Resourcing: Technical Infrastructure Requirements – Website/Community Software

13.1 Review of community software

Of the two systems practically usable such as NetGuru and Interact, the evaluation process shows Interact to be the most suitable for the purpose of the Early Childhood degree in terms of meeting the pedagogical and practical requirements (see table below).

13.2 Evaluation against criteria on a scale of 1 good, 2 acceptable, 3 poor

Criteria	NetGuru - evidence		Interact - evidence	
Underpinning constructivist philosophy in overall design	Instrumentalist 'training' approach with a heavy reliance on learning objects as a means of transmitting content. Focus on assessment through 'testing'	3	Ability for students to take full control of learning tools in selected spaces. 'Drop box' for portfolio style assessment	1
Navigation: the ability to find objects and spaces	Lack of consistence in navigation bars for resources and relationship to conversations	3	Clear side bar navigation and breadcrumb trail enables easy navigation between different learning spaces and conversations	2
Linking with others: identifying groups/individuals to talk to	Simple search available that allows content and users to be found	2	Simple search available that allows content and users to be found	2
Empowerment; tools to create groups, discourse, and media	Create threaded conversations only.	2	Wide range of tools available, 'conversation suite' could be developed further	2
Privileges: to allow smaller audiences for risk taking and building trust	Assigned only memberships. Ability o set up restricted sub-groups	1	Developments will allow individuals to elect to join 'open' groups. Ability o set up restricted sub-groups	1
Identity: clarity (when appropriate) about who contributed, read something, etc.	Images feature not available. Individual's profile not helpful or clear	3	About section with ability to upload images appended to contributions	1
Audience:	Unclear	3	Membership lists in each	2

knowing who could be listening and has listened			community	
Private space: to draft and redraft, store, upload	No	3	Folders, documents, articles, URL's, etc.	1
Notification – knowing what's new for you	No	3	Possible to see where contributions have been made since last visit. Notification system being developed	2
Discourse variety: Q&A, brainstorm, conversation	Simple conversation only	3	Forum, weblink, note, noticeboard, journal	2
Support	TWoA support desk is established	1	Online support communities	2
Software development	Unknown	3	Developer is NZ based in a HE context and is responsive to requests	1

13.3 Summary analysis of Netguru software:

A number of issues were identified from this analysis which indicated that Netguru may not match the requirements of the online delivery of the Te Korowai Kohungahunga. These included:

- methodological and philosophical ideas underpinning NetGuru - an instructional approach not constructivist
- software language used is that of training and commerce, not education
- difficulty in customizing for Maori culture and language
- inappropriate online tools

The preferred community software Interact is hosted by Christchurch College of Education. The skin can be customised and a Maori version is currently under development which will be available very soon.

13.4 Summary analysis of Interact software

Interact community software has a pedagogical design and philosophy which is consistent with the requirements of the degree programme. It enables:

- control of the learning tools is placed in the hands of the learners, that is they are able to create their own learning spaces, objects, and conversations
- use of language and metaphors inline with educational philosophy
- use of a Maori language skin
- a developing range of online tools

- direct feedback to the developer to improve and hone the software

14. Website

A degree programme website should be developed. This should be hosted and maintained by the technical team of Te Wananga o Aotearoa. This will include the production of learning resources directed by the lecturers. Page file sizes should aim to be as low as possible and should not exceed 100KB.

14.1 Website content should include the following:

- Course timetable
- Course outline
- Background information about the programme: rationale; philosophy; 'onlineness' (communicating the likely experience of online degree to perspective students)
- Research findings about how the implementation of the degree is progressing
- Akonga regulations and procedures

15. Internet Infrastructure considerations

'Closing the digital divide' (www.executive.govt.nz/minister/maharey/divide/pr.htm) is emphasised by the New Zealand government as a priority in developing an ICT strategy. Much progress has been made in particular with connecting schools to a broadband network, however broadband access for private individuals is still not common. It is important that this be considered when developing learning resources including the website, and advising akonga and lecturers about the use of Internet technology. In particular, care should be taken to keep web pages (maximum size 100KB) as small as possible and other media, where possible, should be accessible in a range of formats that cater for a range of levels of Internet access.

16. Key learning resources

16.1 Recommended Minimum Specification for a Computer would be:

PC

Pentium II 400 MHz, 128MB RAM, 56k modem, monitor that displays in 1024x768 resolution, Windows 98 SE or above, Internet Explorer 6.Mac PowerPC G3, 128MB RAM, 56k modem, monitor that displays in 1024x768 resolution, Mac OS 9.2 or above, Internet Explorer 5.2 (or Safari)

17. Resources Developed for Online Delivery:

"The success of an online course is affected by its pedagogical richness, which is the degree to which a course addresses learning styles, use of media, and interactivity with content, testing and feedback, and collaboration" (Sonwalkar 2002) cited in Deubel (2003). The development of resources for the first four courses of Te Korowai Kohungahunga was carried out with the idea of creating resources which would provide variety and initiate some in-depth conversation and dialogue related to certain topics. An overview of the schedule and processes for the development of resources are as follows on page :

RESOURCE DEVELOPMENT SCHEDULE

Resource Requirements	Timeline	Administrative Requirements
Course: Te Tiriti o Waitangi WTKK 501.1 ▪ Produce 5 video clips of approximately 3-5 Minutes duration regarding personal perspectives on Te Tiriti o Waitangi from Community Professionals. ▪ Produce 4 newspaper clippings regarding current issues related to te Tiriti o Waitangi ▪ Produce 3 cartoon clips from newspaper regarding current issues related to Te Tiriti o Waitangi	Tuesday 9th March, 1pm	▪ Draft information for interviewees ▪ Draft consent forms for interviewee ▪ Identify and contact interviewees
Nga Whakaaro Piiwai no nehe: WTKK 502.1 ▪ Produce 2 video clips of approximately 5-10 mins of people sharing their perspectives of traditional childrearing and birthing practices ▪ Produce 2 stills with captions (whakatauaki) of Maori symbols which represent traditional concepts and views of young children	16th March, 3pm	▪ Draft information for interviewees ▪ Draft consent forms for interviewee ▪ Identify and contact interviewees
Te Whanaketanga Tangata Mai i Te Ao Maori Ki Te Ao Whanui: WTKK 503.1 ▪ Produce 6 annotated stills. One of each of the following: Infant (new born), infant (6months), toddler, young child, tuakana/taina, intergenerational, within a context of education. ▪ Prepare a script relating to a Maori perspective on conception	26th March 3pm	▪ Draft information for interviewees ▪ Draft consent forms for interviewee ▪ Identify and contact interviewees
He Whäriki Matauranga: WTKK 504.1 ▪ Produce a video clip of 10minutes duration related to the history and development of Te Whäriki, the early childhood curriculum framework ▪ Produce 3 audio clips of 3-5 mins duration of Early Childhood Professionals articulating their perspectives of the value of play, problem solving and creativity in the education of young children	31st March 3pm	▪ Draft information for interviewees ▪ Draft consent forms for interviewee ▪ Identify and contact interviewees

P5

18. Success factors affecting online learning:

According to Rzoska (2001), the critical factors which have a direct impact on the success of online or e-learning are areas that TWoA would need to pay careful consideration to if this programme is to succeed. These areas are:

1. regular access to a computer, especially in evenings and in weekends
2. pre-programme ICT training
3. positive attitudes to trying something new
4. readily available ICT support
5. reliable internet service provision.

19 Estimated Costs: (These figures are approximates)

- Hosting and service cost of Interact $5 dollars per student per year (+ GST)
- Customization of Interact interface $15, 000 (+GST)
- Te Wananga o Aotearoa web design services to produce media – 1 day commitment per week (TWoA estimate needed)
- Continuous and ongoing PD programme required for facilitators $9,800.00 (Refer to No. 4.8, p9)
- Funding for longitudinal research study $36,000.00 (refer to No. 7.1, p15)

20. Report of Recommendations:

These recommendations have emerged as a result of the findings outlined in this report. There are five critical areas identified for consideration.

1. Technical Issues:

1.1 Interact community software be utilised for Te Korowai Kohungahunga. This software is hosted by Christchurch College of Education

1.2 Te Wananga o Aotearoa web design services are used to produce a programme website which links to Interact and carries key information about the degree programme.

1.3 Te Wananga o Aotearoa web design services be utilised to develop key learning resources, in particular media, other than text and to enable different Internet access connection speeds to access resources

1.4   Principle of media redundancy to be applied, that is audio, visual, textural presentation of resources to allow akonga to choose their preferred option in order to meet their learning styles

1.5   Web page file size not to exceed 100KB unless exceptional circumstances

2.   Research:

2.1   Action research methodology be adopted in the planning, development, and delivery of   the degree through iterative cycles

2.2   Research should be embedding in the project; this should be a collaborative effort between Te Wananga o Aotearoa and Ultralab S. This must be supportive of the TWoA Quality Assurance processes

3.   Online Strategies:

3.1 Reflection on practice and action enquiry methodologies be adopted including activities such as reflective authoring; small group work; learning journals; action enquiry; hotseat discussions; sharing of workplace observations; different approaches   to discourse, multimedia presentations, action learning sets

3.2   Expert guests be used to bring specific expertise to akonga

3.3   Portfolio assessment methodology should be applied

3.4 The degree should enable a flexible delivery pattern for those unable to commit to 3 years uninterrupted study

4.   Staffing/Professional Development

4.1 Employment of lecturers for Te Korowai Kohungahunga should be at least 6 weeks in advance of the start date of the programme. This will provide ample time for staff to be prepared for online delivery.

4.2 Lecturer selection and development of a PD programme as outlined is critical to the success   of the project.

4.3 Funding be allocated for the Ultralab representative to facilitate PD for staff of Te Korowai Kohungahunga

4.4 Technical staff be identified and employed to support akonga and Lecturers

5.   Funding implications:

5.1 Funding be provided for ongoing professional development for at least the first two years of the programme

5.2 Funding be provided for ongoing development of resources during the first three years of the programme

5.3 Funding be provided to engage Ultralab's support with the research process to improve the quality of online delivery for Te Korowai Kohungahunga

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Appendix A: Code of Ethics

Te Wānanga o Aotearoa
Translation
University of New Zealand

Code of Ethics and Professional Conduct for Akonga of Te Korowai
Kohungahunga

Naumai haere mai , welcome to Te Korowai Kohungahunga, Bachelor of Teaching in Early Childhood Care and Education, at Te Wananga o Aotearoa. We want the early childhood website to be a cooperative educational online place for all members of this learning community. In order to create such a place, users must be responsible for how they use the system and must at all times be accountable for their actions online. This document outlines the rules for the early childhood website. When logging into this system, users are agreeing to abide by these rules each time they use the early childhood website. Please ensure to maintain a check on these rules as these are subject to change.

Nga Ture: The Rules

Permission to Post Work:
In order to make the site an interesting place for its users, we must be allowed to post the work you do on the Web. TWoA promises not use your work in any place other than the early childhood website

No False Statements:
You cannot create any content that is false or misleading

Respect:
You must not generate any material that is obscene, indecent, hateful, and causes or encourages harm against anyone

No obscene language or images:

You cannot post any data which is insulting and obscene.

No borrowing work without consent:

You must not use anyone else's work without asking their permission, which includes also issues of copyright and intellectual property rights.

No Junk mail or spam:

You must not use unsolicited commercial email, or any other mail that might constitute 'spam' or 'junk mail'.

Work may be viewed by others:

The work you produce can be viewed by all lecturers, other akonga on the early childhood website as well as course moderators of TWoA who will at times be given specific instructions to do so.

Content can be removed or altered:

You consent that TWoA lecturers may decide at any time to remove content, information or material from the early childhood website or make changes to, or discontinue any aspects of Te Korowai Kohungahunga. If you have any questions about any information that has been tagged for removal please contact your lecturers through email or phone.

Protecting your password:

You will be given a password and login details to access the early childhood website. It is your responsibility to ensure that this information remains confidential to yourself alone. If you lose or want to change your password for any reason, then please contact your website administrator either though email or phone.

Safeguarding your information:

As a member of the early childhood website you must at all times take care when sharing personal information about yourself or your friends. If anyone makes you feel uncomfortable about the types of questions being asked of yourself, talk with your lecturer immediately.

Terminating accounts:

TWoA can terminate your early childhood website account at any time. If you wish to terminate your account you must contact the website administrator to do so.

Inappropriate behaviour:

It is important that you talk with your lecturer if you observe, hear, or become aware of something that you think is inappropriate behaviour while using the early childhood website.

CODE OF ETHICS FOR ONLINE DELIVERY OF TE KOROWAI KOHUNGAHUNGA: BACHELOR OF TEACHING IN EARLY CHILDHOOD. TE WANANGA O AOTEAROA

Philosophical and Theoretical Underpinnings:

This code of ethics is based first and foremost on the kaupapa of Te Wananga o Aotearoa and sets out to provide a process which supports aspirations such as holistic educational opportunities for all, maintenance of a unique Maori cultural learning environment, provision of practical learning experiences, support, encouragement and guidance to all tauira, and to encourage all learners to achieve to their fullest potential. One of the major underlying principles and that which will provide a framework for this code of ethics, is the statutory basis of *Wananga* as provided in the Education Amendment Act 1990, Section 162. This provides a definition of Wananga as follows:

A Wananga is characterized by teaching and research that maintains, advances, and assists the application of knowledge and develops intellectual independence and assists the application of knowledge regarding ahuatanga Maori (Maori tradition) according to tikanga Maori (Maori values, beliefs and practices)

Implicit within this definition is a code of ethics based on tikanga Maori, which embraces concepts such as mana (reciprocity, and compassion), manaaki (respect), awhina (embrace, assist), whanaungatanga (obligations, loyalty, sharing) and tapu (social control, restrictions and protection) (Pere 1994). These ideas will provide the theoretical framework for the Code of Ethics for the online delivery of Te Korowai Kohungahunga, The Bachelor of Teaching in Early Childhood Care and Education. A cursory examination of literature both nationally and internationally reveals some explicit links between the philosophical underpinnings of ethical principles within various contexts and tikanga Maori. For example, ethical principles, rules and conventions distinguish socially acceptable behaviour from that which is considered socially unacceptable (Burns 2000, pg17). Within the context of this programme, tikanga Maori and ethical reasoning maintain and preserve both the kaupapa of the degree and that of Te Wananga o Aotearoa.

Principles of COE:

TWoA are obligated, under the law, to implement policies, practices and procedures that protect their akonga and staff from personal harm or litigation. This COE ethics is developed under the following Acts.

Privacy Act 1993

The core of the Privacy Act is twelve information privacy principles. These principles provide the rules in the collection, storage, security, accuracy, use and disclosure of personal information as well as individual's rights to access, and correct personal information.

Copyright Act 1994 s 14

Copyright is a property right that exists, in accordance with this Act, in original works of literary, dramatic, musical, or artistic work; sound recordings; films; broadcasts; cable programmes; typographical arrangements of published editions.

Work is not original if it is a copy of another's work or it infringes the copyright in another work. Section 15 (1) provides that copyright does not exist in a literary, dramatic, or musical work unless and until the work is recorded, in writing or otherwise.

The owner of the copyright in a work has the exclusive right to, in accordance with sections 30 to 34 of the Privacy Act 1993, copy the work; issue copies of the work; perform the work in public; display the work in public and to make an adaptation of the work.

Context for COE:

Online delivery of Te Korowai Kohungahunga, The Bachelor of Teaching in Early Childhood Care and Education, Te Korowai Manukura, Te Wananga o Aotearoa.

What is the COE?

The COE provides a set of shared values for all akonga and staff of Te Korowai Kohungahunga, Bachelor of Teaching in Early childhood Care and Education. The COE is needed to:

- Ensure that our practices reflect tikanga Maori
- Provide guidelines for our professional conduct
- Articulate principles which can be invoked when we face an ethical dilemma where there are no rules or policies to direct our action
- Enhance the protection of akonga and staff of Te Korowai Kohungahunga, Bachelor of Teaching in Early childhood Care and Education where reliable assistance can be found in the COE
- Assist in fostering whanaungatanga amongst the community of online learners regardless of their location, social, cultural, economical, and educational context
- Provide a common set of statements, a bottom line, and a sense of purpose

As online learners, everyone must observe the following guidelines during our professional activities. Their purposes are to support and maintain ethical practices amongst the learning community of Te Korowai Kohungahunga.

Why Have a Code of Ethics?
- To define accepted or acceptable behaviour
- To promote high standards of practice
- To provide a benchmark for members to use for self evaluation
- To establish a framework for professional behaviour and responsibilities

Codes of ethics (COE) are created in response to actual or anticipated ethical conflicts. All COE must have a philosophical and theoretical framework and be located within a particular context (Chris Macdonald, http://www.ethicsweb.ca/codes/coe2.htm)

GUIDELINES

Lore of Tikanga Maori:

We will observe the lore of tikanga Maori which governs this code of ethics. We will apply considerations and practices that will maintain the mana of each member of the online community by displaying traits such as manaaki, aroha, and awhina, which are based on whanaungatanga. We must respect the manner in which others entrust us with information and knowledge from their personal perspectives.

Legality:

We observe the laws and regulations governing all online and professional activities such as The Copyright Act 1994 and The Privacy Act 1993. We ensure that all online activities are consistent with the ethical guidelines of TKK, TWoA.

Honesty:

To the best of our ability we will provide truthful and accurate communications. We will ensure that communications are concise, clear, coherent, and creative in an attempt to address the needs of our akonga as a community of learners. Before using another person's work, we will obtain permission to ensure legalities are observed and maintained.

Confidentiality:

In respecting the confidentiality of akonga and TWoA staff, we will disclose personal and professional information only with their consent or when legally required. We will seek requests from akonga or staff members before using their material for demo purposes.

Quality:

With the goal of producing high quality work, we will negotiate realistic and honest agreements on the schedule, budget, and deliverables with either TWoA IT staff or prospective contractors. When working on any project, we will fulfill our negotiated roles in a timely, responsible manner to meet any stated expectations.

Fairness:

We respect cultural diversity in our staff and akonga. We serve the best interest of our akonga as long as such loyalty does not require us to violate the public good. We will avoid conflicts of interest in the fulfillment of our professional responsibilities and activities. If we are aware of conflict of interest, we will disclose it to those concerned and obtain their approval before proceeding.

Professionalism:

We seek candid evaluations of our professional performance from internal and external monitors, staff and akonga. We will also provide a reflective, evaluative analysis of the online service we provide in order to remain current and up to date with our service. We advance the IT communication profession through our integrity, standards, and performances.

Te Wānanga o Aotearoa
Translation
University of New Zealand

Code of Ethics Statement from the Staff of Te Korowai Kohungahunga

Our Privacy Statement:

We acknowledge that your privacy is very important to you. Because of this we have provided a statement to inform you about how the information and material you provide will be used and protected while you are a working online as an akonga of Te Korowai Kohungahunga.

Once you are enrolled as an akonga of Te Korowai Kohungahunga, information such as your name, date of birth and student identification number will be passed on to the Information Technology Centre who will then establish login details so you are able to access the early childhood website and any other restricted sites which are relevant to you. These details will consist of a username and a password.

The early childhood website is provided by TWoA which has its own Privacy Policy. This policy is available on the website and any questions related to this policy can be directed to the Website Administration desk. You are encouraged to read these policy statements so you are clear about the way in which we will use your information.

Appendix B: Consultation Minutes

Ngahihi Matauranga

IT Consultation Hui held 5th February 2004, at 40 Bryant Rd, 3.15pm – 5.45pm

Present: Warren Williams (IT Development Manager, TWoA), Stephen Powell (ULTRALAB), Rita Walker (Project Director, Ngahihi), Doreen Greenland (Administrator Ngahihi)

Late Arrivals: Paora Stucki (Director Korowai Manukura, TWoA), Amiria O'Malley (Director Early Childhood Teacher Education, TWoA), Neville Withers (Academic Quality Manager, TWoA), Rosemarie Scott (TWoA)

Nga Taake Whanui

1. The purpose of the hui, an opportunity for IT team to informally meet to discuss the online delivery of Te Korowai Kohungahunga (Bachelor of Teaching ECE).

2. To identify and organise required tasks into some form of timeframe

Discussion

- Accreditation process should occur within the next six weeks, ready for a July start date
- TWoA have salaried IT staff e.g. graphic designers/ application developers already in place to create web, screens
- Keep it simple. There needs to be balance i.e., too much information (information overload) and not enough (boredom), also a need for flexibility but not to the point where students loose the kaupapa
- Delivery to be innovative and interesting e.g. story building, flashing lights/bells etc, etc
- Delivery will be determined by what students are expected to achieve (learning outcomes) e.g.; students to interact online, debate works well etc
- 6 week block courses work well if incorporated with face to face delivery
- Expected time students spend online to be stipulated by the faculty
- Adaptable - courses can be reviewed accordingly
- Envisaged that systems will be up and running 2 weeks prior to students entering programme
- Helpdesk – IT responsible for technical component, lecturer responsible for course

- SOE will have an online gateway for students to access
- Ensure students have access to computers. Computer specifications/checklist, possibly a website for students to register online
- Firstly look at what one or two papers possibly look like online, strategies for delivery, review software etc
- Professional Development – actual experience training rather than having to read through pages of information. PD is ongoing

Timeline
Week 1 – up and running – net-guru
Week 2 – Awanuiarangi
Week 3 Software

May/ Midway

June 1st – PD Training
Mid June – Ready
July Start

Meetings

Next meeting Thursday 12th Feb 3pm at Tower Block

Thursday 19th Feb 3pm venue TBA
Thursday 26th Feb 3pm   "
Thursday 4th March 3pm   "

Meeting closed 5.45pm

Ngahihi Matauranga

**IT Consultation Hui held 12th February 2004, 8th Floor Tower Building
3.00pm – 4.30pm**

Present: Warren Williams (IT Development Manager, TWoA), Daniel Matthews (Multimedia Developer/Webmaster, TWoA), Stephen Powell (ULTRALAB), Rita Walker (Project Director, Ngahihi), Doreen Greenland (Administrator Ngahihi), Paora Stucki (Director Korowai Manukura, TWoA)

Nga Taake Whanui

1. To further discuss the online delivery of Te Korowai Kohungahunga

2. Feedback thoughts and ideas in regards to Net-guru

Discussion

- Author = moderator?
- A need to sort out each role and what that involves, part of documentation forming a sound base from which to work
- Assessment: Students can be credited e.g. for their thinking skills, accessing data, contributing to conferences etc. credits are clearly shown within the marking criteria
- Digital cameras used e.g. for observation purposes. Concept similar to Learning Stories. Students learning and extending on their use and understanding of other tools
- Course readings or key passages can be put online for students to access, share discuss etc
- While there is a need to deliver content there needs to be balance. Content can also come from the students e.g. resource links etc
- Wananga in the 1st year could focus on essay writing, formatting, referencing etc. Website where students can get further help
- Software needs to be adaptable to TWoA pedagogy
- Templates
- At this point there has been no response from Awanuiarangi. If still no response by Friday then may need to cancel

- Links form one course into another. Information generated into next topic

Net-guru
- Login/password for net-guru received. Still need to play around with it and explore possibilities
- Navigation somewhat complex, language could be more user friendly
- Consider changing terminology so that it is more inline with the Maori kaupapa of the degree i.e. use of te reo Maori, Maori background etc
- Administrator: Net-guru Manual. Warren will make document available as required
- Net-guru meeting on Tuesday 17th February 10am – 12 noon, Head Office Te Awamutu
- Stephen meet with Rita on Saturday 14th February, Ngahihi at 9am. Purpose to work through courses in more depth. Set up sample classroom

Meetings

Next IT meeting Thursday 26th February, 3pm at Tower Building

Thursday 4th March 3pm: venue TBA

Ngahihi Matauranga

**IT Consultation Hui held 4th March 2004, at Ngahihi 69 Enderley Ave
3.15pm – 4.30pm**

Present: Warren Williams (IT Development Manager, TWoA), Stephen Powell (ULTRALAB), Rita Walker (Project Director, Ngahihi), Doreen Greenland (Administrator Ngahihi),

Nga Taake Whanui

3. To further discuss the online delivery of Te Korowai Kohungahunga

4. Evaluation of Net-guru

5. Website Plan/Structure

6. Resources

7. Technical Support

Discussion

- Evaluation of Net-guru and Interact: Showed Interact to be most suitable for the ECE degree programme
- Need a website;
    - **:** Under School of Education (SOE)
    - **:** Develop SOE site
    - **:** Community Software
    - **:** Effective marketing tool
    - **:** Keep URL simple
    - **:** Rule of thumb no more than 3 clicks
    - **:** Could create library resource
    - **:** Warren to see Paora in regards to marketing to ensure that TWoA
        are fully informed

- **Website Plan/Structure**

```
┌──────┐
│ TWoA │
└──┬───┘
   │        ┌──────┐     ┌─────────────────┐
   └───────▶│ SOE  │────▶│ TKKM - Interact │
            └──────┘     └─────────────────┘
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┌─────────────────┐ ┌────────────┐ ┌─────────────────┐ ┌───────────┐ ┌──────────┐
│ course Prescription │ │ Assessment │ │ Contact Details │ │ Resources │ │ Interact │
└─────────────────┘ └────────────┘ └─────────────────┘ └─────┬─────┘ └──────────┘
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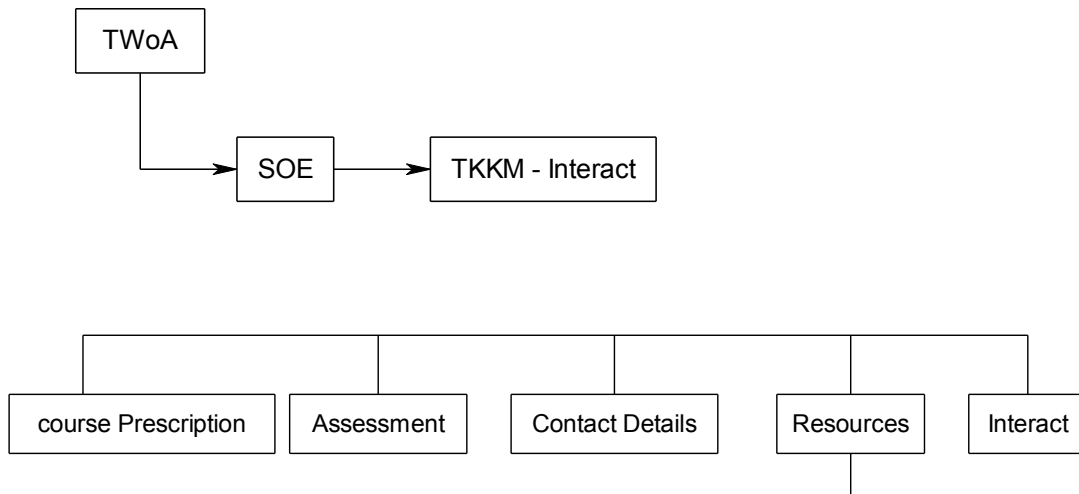
- **Resources**
  - : Content of resource = degree team / Colors etc = Warren's team
  - : Develop own resources; video clips, stills, locate snippets of interest
  - : Gather existing resources
  - : Be mindful of Digital Copyright Laws
  - : Theme/format has to flow throughout entire website (TKKM-Interact)
  - : Time restraints: standard template can make changes e.g. colors, text, macrons…within half a day
  - : Make up 3 mock case studies
  - : Consider contacting University or Wintec Media Studies to contract a second year student to collate the resources

- **Technical Support**
  - : TWoA has technical support for Staff but not for students although an informal helpdesk is available
  - : Feedback area (email address) where students for example are able to send their queries to someone who will be able to assist
  - : There is a need for a support group to be set up within the framework this could be in the form of FAQ access, email support person, helpdesk
  - : Warren's team can set the above up, simply provide the text

Next Meeting:

Wednesday 10th March
1pm, Tower Building

Ngahihi Matauranga

IT Consultation Hui held 10[th] March 2004, 8[th] Floor Tower Building
1.15pm – 2.45pm

Present: Warren Williams (IT Development Manager, TWoA), Stephen Powell (ULTRALAB), Rita Walker (Project Director, Ngahihi), Doreen Greenland (Administrator Ngahihi), Paora Stucki (Director Korowai Manukura, TWoA), Neville Withers (Academic Quality Manager, TWoA)

Nga Taake Whanui

8. Website Plan/Structure

9. Software / Resources – Evaluation Net-guru and Interact

10. Technical Support

Discussion

- **Website:** To be developed, draft up a SOE website (refer to consultation 3 notes)
  Stream/Download, website 5 pages envisaged as follows

  ❖ (1) Welcome Page
    : Important first image, first impressions, make it dynamic, an area
    to engage peoples interest
    : Homepage to remain static but have something which is captivating, possible ideas a collage of significant Maori, a few
    lines of text, resources, an image of a people working on the course with a spiel about each

  ❖ (2) Resources
    : Hotlinks to imagery, avoid a lot of images

  ❖ (3) Administration
    : Student support, student regulations, where assignments go etc…

  ❖ (4) Student Experience
    : Could have images of students sharing their experiences e.g.

someone from a rural area, single mother, mature student….

❖ (5) Research

: <u>Professional Development</u>: Implications for staffing suggestions,
   Preparing staff 6 wk period (probation).
   Staff to have completed online course themselves
   Staff formula to be in place
   Staff to be on site for face to face
   Identify resourcing, strategies, provision of resources
   Job description for staffing to be quite clear

: <u>Action Research</u>:
   To be written into job description, is an ongoing process
   Sharing information e.g. end of semester student surveys
   Students to have ownership

: <u>Specialization of ECE Degree</u>

- **Ratio:** 1- 40/ 1-35 can be delivered on a higher ratio dependant on assessment as

pressure points occur during this time

- **Software:** Review of community software. Net-guru and Interact.
   : Interact hosted by Christchurch College of Education sold as a
    product. Philosophically more applicable to ece degree.
   : Interface e.g. skins can be customized, a Maori version is
    currently under development.
   : Hosting and service costs of Interact $5.00 per student
   : It would indicate from Stephen's report that there is some debate
    in terms of Net-guru and it's overall function within TWoA. Net-
    guru should be given the opportunity to question and address
    concerns as outlined in the evaluation
   : If Christchurch College of Education are already delivering ece
    online could look at purchasing resources etc, or whatever else
    Interact may have to offer
   : Also important to investigate further whether TWoA are viewed
    as complementary or in direct competition with Christchurch
    College of Education
   : In light of the above Paora Stucki to make contact with someone
    at Christchurch College of Education/Interact. Glen Davis
    technical contact person (see Stephen). Also need to ascertain

Interact structures e.g. sorting out breakdowns, power cuts,
what
happens, what kind of backup systems are in place. This kind
of
information is important for the purpose of accreditation
: Rita expressed that in light of Stephen's understanding and
knowledge in regards to the degree and online delivery it was
important that he be present when documentation comes up
for
accreditation

- **Marketing:** Probably base on models for other schools within TWoA, keep the same e.g. prospectus…Bring in someone from marketing, and communications

- **Administration:** Contact information to remain within TWoA structure

- **Online Enrolment:**
  : Queried this with Chona, seems like a good idea but don't
  know how to put in place.
  : There is some interest in this option, and it could be done as
  an institution through ordinary process
  : Can enroll centrally but for the purpose of efts would still
  need
  to know what campus

- **Quality for Staff**
  : There is a need for technical support. This will need to be
  timetabled in (for Warren) and will be crucial for
  Accreditation
  : As a guideline work on average hrs per week
  : Lecturers will need some kind of helpline, helpdesk
  : In regards to software, online forum, email support (Interact)
  : IT help TWoA staff can help with TWoA software. Will need
  to
  coordinate some kind of strategy

- **Costing**
  : Scoping development over 3 years
  : Assurance that TWoA will fund the whole programme, an
  important aspect in terms of accreditation

- **IT Support**
  : Support person needs to be a named person, not simply
  someone
  who happens to be available at the time
  : Will need to work out details of this position, look at the
  technical and functional aspects, could possibly be a .5
  position

Stephen Powell, thoughts mostly about learning P6

A specialist in inquiry-based, work-focussed, online supported learning

- Home
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Ultralab South Breakfast Presentation – Ultraversity

Posted on August 2, 2004, 10:48 pm, by Stephen Powell, under ...

Gaining a degree qualification without quitting the job you love!

Ba. (Hons) Learning, Technology and Research Anglia Polytechnic University Cohort Pathway Approvals Document

Ultraversity offers a BA. Hons Qualification in "Learning, Technology and Research" and provides access to higher education to people who enjoy their work. The programme both develops students effectiveness in their particular work role, and also aims to help them gain the confidence and skills to influence and improve practice within their work setting.

The Ultraversity degree (from Anglia University in the UK) is delivered totally online and uses students workplace as the research focus of their degree. In his session, Stephen will explain how the degree programme works for groups of students in the UK such as teacher aids, office support staff, and for a wider range of students who are all committed to continual learning, trying new approaches and improving their professional practice.

Project plan

Ultraversity degree programme aims

Ultraversity degree programme characteristics:
- workplace context determines subject discipline
- full-time
- 100% online
- learning facilitators (lecturers), researchers (students), and expert witnesses (both subject and job related) as co-researchers
- online community of enquiry

Learning processes, protocols, and assessment:
- the Ultraversity model
- workplace reflective practice and action enquiry
- assessment through a portfolio of patchwork texts (Professor Richard Winter)
- online community of enquiry
- building towards an 'exhibition'!

Degree programme scope:
- ist cohort started July 2003 with a cohort 350 researchers
- 2nd cohort started April 2004 with a cohort of 100 researchers
- 3rd cohort planned start January 2005 with a cohort of 250 researchers

Researcher characteristics:
70% qualify for waived tuition fees, large number of mothers with young families, people who felt they had missed the opportunity for Higher Education

Workplace groups:
Teaching assistants, school office staff, special education, information centres, health workers,

Some researcher's work!:
Ultrastudents unofficial but great!

The technology:
- Portfolio tool
- community software
- Blogs

UV us an action research project – what does this mean for the development of the degree?

Comment (RSS)

16 Comments

1. *Gina* says:
   August 3, 2004 at 9:55 am

   And if anyone is interested in research on the impact this programme is having on support staff in schools, please visit our research blog here

   http://slartibartfast.ultralab.net/~blogger/tta/

   where you can download out reports.

2. *Wei-Yen* says:
   August 3, 2004 at 12:14 pm

   Its great to read you are still around. Its interesting that the course is 100% online. I would be very interested to read about how the communication flows work in practice. Are you back in the UK btw?

3. *Stephen Powell* says:
   August 3, 2004 at 7:39 pm

   Thanks for reminding me Gina.

   Hi Wei-Yen, I am in NZ at the moment so will no doubt bump into you in the near future up in Hamilton.

4. *Richard Millwood* says:
   August 4, 2004 at 7:58 am

   Stephen – what happened to exhibition? I am wondering about the notion of audience for students' work – how is their skill in communicating what they have learnt to an audience developed over three years or so and what is their eventual aim in terms of capability to communicate and defend ideas to critical audience?

5. *Stephen Powell* says:
   August 4, 2004 at 7:10 pm

   Good point, came 'out of my mouth' but does need highlighting under learning processes and protocols.

Also I will add a diagram that shows the degree modules.

P6

6. _Ginny_ says:
   [August 20, 2004 at 11:39 am](#)

   How to Ultraversity recruit for online facilitators, I'd be intersted in working for ultrversity as a facilititor and i have the experience. NO links on any of the ultraversity sites to point me in the right direction? Grateful any help you can suggest.

7. _Stephen Powell_ says:
   [September 18, 2004 at 11:40 pm](#)

   I answered Ginny in reply to an email she also sent.

8. _johnson_ says:
   [October 15, 2004 at 12:25 pm](#)

   At the breakfast presentation this morning Stephen Powell explained how the Ba. (Hons) Learning, Technology and Research degree programme at Anglia Polytechnic University works.
   He explained how a key objective of the degree was to provide access to higher education to people who enjoy their work, but want to study in Higher Education and canï¿½t afford to take three years away from work to study. The programme aims to both develop students effectiveness in their particular work role, and also aims to help them gain the confidence and skills to influence and improve practice within their work setting. The Ultraversity degree (from Anglia University in the UK) is delivered totally online and uses students workplace as the research focus of their degree.

Leave a Reply

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« [Following Jonathan's link on the Blog of blogs](#)

[NAVCON Blogathon](#) »

- Search for:
  [   ] [Search]

theguardian   P7

Work in progress

Stephen Hoare reports on the distance-learning course that uses your job as the raw materials

Stephen Hoare
The Guardian, Friday 20 August 2004 02.43 BST

Tom Whitehead, a teaching assistant from Parklands junior school in Havering, has ambitions to teach. Turning his back on an eight-year career working as a geological surveys technician on North Sea oil rigs, he decided to bring his experience to the classroom.

"I settled down as a house husband and when my kids were old enough I started an Open University degree in science, and got a job as a lab technician at a secondary school," he says. "But then I decided that my vocation lay with primary-age children. If you can reach them young you can inspire them. So I changed my job - and my degree."

Last September, Whitehead enrolled on a new online degree in learning technologies from Ultraversity, the distance learning arm of Anglia Polytechnic University (APU). Anyone who has a job that involves the use of information and communications technology in any shape or form can take their subject to a higher level by learning about the theory and practice of communications. "This is a degree about learning and research using new technologies," says project leader Carole Chapman. "It is aimed at adults in work, and the ages of students range from 18 to 50 and above."

The degree is particularly relevant to junior staff working in education, the health sector, youth work, social work and even new media. Ultraversity had promoted its degree through its links with employers and Whitehead's employer, the London Borough of Havering, pointed out its career development potential. The course content is directly related to the job you are doing. The tasks you perform as part of your job can be used as the raw material for analysis, discussion and ultimately your assignments. These reflect the participants' ability to apply knowledge learnt to real-life situations.

Online assignments are backed up with input from an online tutor, student chatrooms and threaded discussions. Students must also have a workplace mentor, who in Whitehead's case is his headteacher. "I am submitting the work I do at school where

relevant," explains Whitehead. "I have submitted an assignment based on some educational software I've been using with the children."

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Ultraversity has designed its course to meet the needs of adult students who may have left school with none or few qualifications, or who may simply have failed to get into university. Chapman explains that students tend to be highly motivated because they have personal aims and ambitions. The role of the online tutor is to get students to compete against themselves as they gain in confidence.

Philip McCann, 25, a nursing auxiliary from Ulster, has proved himself a well-regarded assistant in the operating theatre. He left school without A-levels, but having found a vocation, he wants to boost his job prospects. Studying learning technology is the ideal way.

"I'm taking part in online discussions with 10 to 15 nursing auxiliaries from all over the UK," he says. "We are sharing ideas and I am now reflecting on workplace procedures and how to respond better to critical incidents."

APU's online department has devised teaching materials relevant to the needs of adults in employment. "We allow students to submit assignments in a range of ways," says Chapman. "It could be audio, video, a series of still images, or a mind map. Some people have even submitted a poem, narrative or story as evidence of study. What matters is that the student can create and sustain an argument as well as being able to access expert resources."

Online degrees also provide a viable option for students who are unable to afford tuition fees. The cost of the Ultraversity course is £600 a year. "This is very much about broadening access," says Chapman. "The government has been talking about 50% of young people going to university. Our online degree is going to provide more people with a way of study that enables and empowers them."

Case studies

"I want to go into press photography"

Vicky McIlvenny, 20, is studying for an HND in photography at Tameside College, Manchester

"I did a national diploma in photography at Tameside College and decided to stay on to do the HND. It's a two-year course and I've just come to the end of the first year. So far it's been brilliant. I've picked things up quite easily. We have quite a few tutors who we can go to for help. There are only six of us on the course, so we've got to know each other and the tutors really well. It's half lads and half girls, all around the same age. I know quite a lot of people because I've been here for three years now. There's a real family atmosphere at the college.

P7

The course is full-time. We have two and a half days of college and the rest of the time is free to do our own photography. I like printing in the dark room and the work-based stuff best because it gives us an insight into what it's going to be like when we start work.

We did some work for the performing arts department where we had to take photographs of dance, music and drama students, and put them around their department. It was good work-based experience. I like the individual work as well. In the second year we'll be doing more individual stuff because there will be less tutor involvement.

I thought the course would be more digital-based than it is, with the industry going that way. I'm planning to do some digital work next year because I eventually want to go into press photography.

At the moment I've got a part-time job in a pub, but I'm hoping to get some work in a friend's photographic studio over the summer. When I finish college, I want to do a top-up year in press photography at Sheffield University to turn my HND into a degree."

"We went to the slums of Nairobi to visit the sick"

Richard Amungwa, 27, is studying for a foundation degree in healthcare at Totton College, Southampton

"I did a diploma in philosophical and religious studies in Uganda while doing voluntary work alongside missionaries, some of them doctors. We went to hospitals and to the slums of Nairobi to visit the sick and to work with nurses, and I became interested in the health field. I thought the course would help me to decide exactly what area to go into because it covers occupational therapy, mental health and general nursing.

I'm very happy at the college. The course is going well, apart from the fact that, because it's new, some of the tutors are still finding their feet. The work is quite demanding - you need to put in the time and be determined. It runs for three days a week and for the other two days I've been working at Western community hospital in Millbrook to get more ward practice.

I've been on three placements so far. The last one was in the daycare unit at Southampton general hospital. I've also worked with a surgery in Southampton; I went out with a community nurse and a community psychiatrist giving mental-health tests to patients, and with the rehabilitation team and care assistants. It's been great to be able to gain experience with such a variety of people.

My mentors have been very supportive. They have arranged for me to go to other places when I wanted to learn something specific that I could not learn on the

placement I had been given. The tutors are very encouraging and respond to requests for help, which helps you to keep going.

I've just finished my first year and there's one more to go. After that I would like to work in mental health care or general nursing here for a while, then I plan to go back home to Cameroon.

Interviews by Katie Shimmon

P7

More from the Guardian   What's this?

Northern Ireland unionist parties blamed for fuelling flag protests 02 Mar 2013

Man dies in 'russian roulette' incident 05 Mar 2013

Meet the three other survivors from English football's 1,000 club 01 Mar 2013

Vicky Pryce trial: jury retires to consider verdict 05 Mar 2013

Peter Hardwick obituary 28 Feb 2013

Could beditation be the answer to exam nerves? 04 Mar 2013

More from around the web   What's this?

'My dress is back to front' Susanna Reid has wardrobe malfunction on BBC Breakfast (Express)

How to improve your CV whilst at university (Milkround)

7 investment traps that could harm your wealth (Hargreaves Lansdown)

Schools Guide 2012 (Tatler)

Consumer Services Industry: Market Research Reports, Statistics and Analysis (Report Linker)

The 8 worst UK cities and towns to live in (E-How)

P8

Ultraversity Face-to-Face

Tuesday, 14th, - Friday 17th September - 2004

Ultralab, Chelmsford

Tuesday 14th		Lead by	
10.00	Anglia Room	Stephen	F2F Introduction - explanation of aims:
10.15-11.45	Anglia Room	Stephen	Workplace degree - Philosophy, implications
11.45			Break
12.00-12.30pm	Anglia Room	Gina	Experts
12.30 - 1.30 pm			Lunch
1.30 - 2.30	Anglia Room	Gina	Research
2.30 - 3.00	Anglia Room	Tim	Learning Sets/student groupings
3.00			Break
3.15 - 4.30	Anglia Room	Ken	Quality Assurance
4.30 - 5.30	Anglia Room/other		Individual meetings - to be arranged. Includes AR & GR re AE; CE & TW re Reflective practise

Wednesday 15th			
09.30 - 12.30	Anglia Room	Stephen	Cohort 1 Moderation
Breaks to be agreed	Studio	Tim	Cohort 2 Meeting
12.30-2.00			Lunch
2.00 - 5.30	Anglia Room	Stephen	Cohort 1 Moderation
Breaks to be agreed		Tim	Cohort 2 Meeting - Marking and Moderation document

Thursday 16th			
09.30 - 10.30	Anglia Room	Lesley	Workplace Advocates
10.30 - 11.30	Anglia Room/other	Anthony/Gill	Action Enquiry revisited - ethics
11.30			Break
12.00 - 1.00	Anglia Room	Pete Bradshaw	Formal evaluation of modules - planning a process
1.00 - 2.00			**Lunch**
2.00 - 3.00	Anglia Room/other		Individual meetings - to be arranged. (meeting with Joan Adams SoE)
3.00			Break
3.30 - 4.30	Anglia Room	Rex/Lindsey/Tim/ Stephen	Admin
			Cohort 3/recruitment/
4.30 - 5.30	Anglia Room	Colin/Tim	Reflection practice - What is a reflective practitioner?

Friday 17th			
09.30 - 10.45	Anglia Room/other	Stephen	Mentors
10.45 - 11.30	Anglia Room	Lydia	Staggered Cohorts

11.30   Break

11.45 - 1.00   Anglia   Richard   Assessment feedback
                      Room/other

1.00   **Finish**

P8

Ultraversity Facilitators Face-to-Face

January 25th - 28th 2005

Ultralab, Chelmsford

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Tuesday 25th January	Location	Involved	Lead by	
10.00 - 10.30	Anglia Room	All	StephenP	f2f introduction - f2f aims
10.30 - 12.30	Anglia Room / Studio	LF	StepehnP	Authoring modules - process, practice, review experience
				Introduction folowed by working in teams, looking at relevant modules
13.00 - 14.00		All		Lunch (provided)
14.00 - 15.30	Anglia Room / Studio	All	Lindsey/Rex (supported by Tim)	Researcher centred administration - flow chart of experience
15.30 - 16.00				Break
16.30 - 17.30	Anglia Room	All	Gina / Shirley	Role play

Wednesday 26th January	Location		Lead by	
09.30 - 11.30	Various	LF	Tim	Assessment process (30 mins)
				Then working in teams: - C1 -

standardisation
- C2 - planning
- C3 - planning

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11.30 - 12.30					Lunch (Self service)
12.30 - 17.00	Ann Knight Building	LF	Lesley / Pete		Evaluation
17.00 - 17.30	Anne Knight Building	LF	Lesley		Equivalence and assessment (discussion)

Thursday 27th January

09.30 - 12.30	Anglia Room / Studio	All	Tim, Lesley, StephenP		Team planning – modules, team organisation, etc.
					12.15 - 12.30 feedback
12.30 - 13.30	Anglia Room				Lunch (provided)
13.30 - 19.00	Ann Knight Building	All	Gina, Sarah, Ricahrd		Team day - research

Friday 28th January

09.00 - 10.00	Anglia Room	All	Jonathan, Greta, Mark		Technology review - portfolio tool, FC, Blogs, WIKI
10.00 - 10.30	Anglia Room / Studio	LF	Ken		Field pathway feedback
11.00 -	Anglia	LF	StephenP		Experienced

| 12.00 | Room / Studio | | | students as mentors, student reviews, progression, students with concern, workplace advocate, peer review, learning sets **P9** |
| 12.00 - 13.00 | Anglia Room / Studio | All | StephenP | House keeping - future f2f, expenses, AOB |

CETL meeting 10th March at Bournemouth University.

Richard Millwood, Chris Wensley, Pete Bradshaw, Lesley McGuire, John Wardle, Stephen Powell

Background to Ultraversity

Explanation of staffing, Stephen Powell (Leads Project and Cohort 1)Tim Williams (Field Pathway Leader and Leads Cohort 2), Lesley McGuire (Cohort 1 Module Leader and Leads Cohort 3 – also Practitioner role within Cohort 1)

Richard and Pete from the steering/ strategy group.

Initial purpose of the meeting is to hammer out the relationship between us.

Plans for the future (CETL):

All one-year courses and all online:

MA called Digital Creativity – people who have a degree already but want to go on further – often conversions – will attract people who are talented already doing exciting things

2nd year an H Level top up – level 3 top up – builds on work based learning. From Foundation level to Hons – would have own market already since students doing Foundation.

MA – Visual and interactive education in practice – aimed at teachers who already have a B.Ed. but want to do more exciting things with their teaching – probably teachers doing media to begin with (certainly people in education or anyone involved in teaching media).

Does not have to be a traditional one year – could be over 18 months

3 year plan.

If all go well would then go on to adopt a BA model.

Essential Elements of UV:

- **Widening participation and innovation across the board**
- **Online to permit people to take part regardless of physical distance, phobia, disability etc.**
- **Work practice or context based – this will be a challenge – what is it in your work based practice is an essential element of your learning?**

Content comes from the practitioners and their context. Meta content. The content we provide is about the process rather than the subject area.

There will be a collaboration amongst the students with a particular expertise e.g. Health. Expert hotseat – the value is that although it may be of specific to certain areas but often still interests others from different contexts.

Report done into "Skills for Tomorrow's Media" – September 2001

Definitely looking for it not just to be a conversion – looking for people already doing things, cannot leave their work but should get credit for things that they are doing.

UV students are part time students but the course has full time equivalency.

£3200 from HEFCE and £600 from students – many students apply for fee waiver as well as sponsorship. Pricing debate to be had – if it was a B.Ed could set the price as wanted.

Advocate system – someone who can support and help to smooth the path. Peer mentoring – others within the course.

Notion that researchers will work together and support each other – learning facilitator sets up the discourse.

- **Community learning – as good as the facilitation – communities of practice v mixed communities**

Assessment model drives the degree of collaboration – will also provide a tension between student and facilitator.

- **Exhibition is final element** – we wanted a coherent experience for students, but had to break it down into assessable chunks. Problem is how to value the end product. Pilot exhibition to look at logistics – like doing research design – then try it out. Is the representation of the exhibition lots of writing? Care needs to be taken to evaluate and assess the exhibition rather than their ability to write about the exhibition. Important to identify the audience for the presentation

The big weakness in academia is the fact that people do not communicate effectively the results of their research. Exhibition works particularly appropriate for media.

- **Negotiation through ILPs (Individual Learning Plan, Independent Learning Modules)**

Issues that need to be considered:

Pedagogy
Organisation of a remote team

Bournemouth plan to move forward:

Will appoint someone from Sept 1st 2005 to steer the development of the 3 degrees (.5) Need someone to act as a critical friend, sharing the documentation, supporting at validation, someone to mentor and perhaps run the OLTAF course. Does someone from UL need to come to Bournemouth – or someone to come from Bournemouth to UL

Might also need someone from Ultralab to present jointly to SMT of Bournemouth and to chair of validation group.

Also need to collaborate on research.

How do we cost the Ultralab contribution?

Start Sept '06 or Jan '07

It could be someone seconded into the work – a conduit person – with prime responsibility

The setting up of online community with us – OLTAF module – shared community

A draw down model – pay on a daily basis – consultancy model (drawn up plan and budget would be prefereable.)

Look at the project up in two parts:

Up to validation – Feb '06 - June '06 (Recruitment can start from Feb '06)
First to school committee, then academic committee, then internal university meeting, once through that – advertise and recruit then bring in others from outside. Phase 2 would be Feb '06 – training up facilitation team.

0.3 to 0.5 time up until validation and then consultation funds for the learning facilitators to be trained and supported.

Costs £250 - £300 per day, need to consider travel costs

If we are setting up an online community there are two costs:
1. Set up costs
2. Engagement costs

Facilitator training:

To do the OLTAF 30 credit MA module - £400 per person or could be a whole package such as L&T in Scotland (£6000 for the whole thing)

2nd CETL Meeting at Bournemouth University on 7th June

Present: Chris Wensley, Jonathan Wardle (check spelling), Pete Bradshaw, Lesley McGuire

Process for validation of the course:

First have to convince the School Committee – bit like getting planning permission.

Then a formal presentation,(Design Stage) which is run by the school and chaired by one person from the school. They invite one person from another school who will chair future meetings. They are interested in 4 things:

- Will it attract applicants?
- Does it offer career opportunities after completion (Value added)?
- Will it make a profit (or at least not a loss)?
- Is it rigorous and at the appropriate level?

Then it goes to another meeting – Independent Chair at which there are 2-3 people from outside, 1 academic, 1 industrial (from appropriate industry) and 1 other.

At this meeting they ask questions about the planned process and they look specifically at content. Usually this meeting is ok but often with provisions.

Since this course is a Master's (MA) there should be less problem relating to the body of knowledge and where that is coming from. Currently there is an unusual course running (MA by project – in computer animation) this course could replace this.

By Xmas BMS need a good picture of what student's experience is likely to be – to give a clear idea of marketing group

Issues identified for consideration:

Role of the facilitator and numbers of students per facilitator
Assessment mechanism
Module leadership

Role of the expert – hotseats or facilitator expertise
Time allocation/ number of facilitators in team - there could be reduced/ different
buy in depending on time commitment by tutor
Could be a nice way of bringing people in and fertilising the project (also cross
fertilisation within the university)
What are the requirements/ characteristics of the facilitator?
Does the facilitator have to be an expert – of the same level as the student?
Should module leaders also be facilitators?

Actions agreed:

Revised budget acceptable to BMS
Chris to send payment schedule to Lesley for Ann Constable (our finance officer)
Lesley to send some example MDFs to Chris with exemplars of activities and
fleshing out for students – this also needs to include examples of one ILM from
level 2.
Lesley to send a copy of the original pathway guide

Developing engagement in Ultralab's online communities of enquiry

Pete Bradshaw*[a], Stephen Powell[a] and Ian Terrell[b]

[a]*Anglia Polytechnic University, UK;* [b]*Middlesex University, UK*

This paper provides an account of the development of online communities at Ultralab for students engaged on masters-level programmes, doctoral research and continuing professional learning. It considers the ways in which the engagement of learners, and their consequent participation, is seen to be dependent on several factors—the learners' perception of purpose, their sense of identity and trust, framing of learning activities, interventions from learning facilitators and tutors, and the information architecture of the learning space. The notion of engagement in this online community in higher education (HE) is explored. The term 'community of enquiry' is used to indicate the key purpose of the community—that of practitioner-based enquiry, or research.

Introduction

Ultralab is part of Anglia Polytechnic University (APU) and has been running online projects from pilot phase through to large-scale implementation using online learning communities for over 10 years. This has encompassed both formal and non-formal learning for adults and children. In this paper we consider the research findings from the projects and the implications for online learning communities in higher education (HE) through our experience of developing Ultralab Learning—an online community of enquiry. Our action research uses a variety of data drawn from discussions, surveys and reflective accounts, and co-authored works documenting experiences.

In doing so we:

- discuss the notion of an online community of enquiry and its relationship to online learning communities;
- contextualise the development of Ultralab Learning in the range of online projects undertaken, with particular reference to HE;

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- identify key findings from research into these projects, and analyse the key factors that may be used to provide leverage for online communities to become effective learning communities in HE;
- describe a model for online learning communities in HE.

Online community, learning and enquiry

The development and availability of online tools for communication has led to a concomitant rise in the concept of an online community (Harasim, 1993). By this may be meant a community of people that communicate, and in some senses 'meet', exclusively online. Alternatively it might mean a community that communicates, or meets, face-to-face, and which uses online technologies to extend its communication modes. Whichever definition is adopted the salient feature is the notion of 'community'—a group of people with shared interests and the use of information and communication technologies. The range of cases that could be considered to be an online community is thus a broad one.

For the purposes of this paper we are considering a subset of this range. Namely the case of a community, or group, of learners who come together with facilitators and/or tutors to share resources and participate in discussions exclusively, or predominately, online. This narrowing down of the range is done to focus the findings being reported and to allow the conclusions to be seen to apply to specific cases, rather than a general field. It also reflects the type of community that Ultralab has developed in the projects that it has undertaken.

Further, we are considering communities of practitioners, the majority of whom are school teachers, who are engaged in research-based enquiry leading to masters-level awards. These are learning communities, with the specific focus of enquiry and for us these practitioners are part of a community of enquiry. A further narrowing of the focus of this paper comes from our considering only the experience of the community developed by Ultralab, identifying key findings that may be applied to HE in general.

We put learning at the heart of the community's purpose. Learning about the process of enquiry and learning about the individual's and group's findings from their enquiries. For Eraut (2002) this causes some problems with the definition of community as being something in which members must participate before they can learn, as he views professional learning as something that can largely take place in isolation from others. While having some sympathy with this viewpoint, we are looking here at ways in which learners may engage in community in what could broadly speaking be identified as a social constructivist approach to learning. Without their participation, identifiable and demonstrable, it will be difficult to discuss such engagement. If members of a community are not participating in it, then are they really members of the community?

In a traditional context, it is clear that people may be considered to be members of their local community without taking an active part. In a purely online community we argue that membership requires more than the passive reading of other people's posts and discussions. While this is a valid method of learning, a more active contribution is required for true membership of the community, and it is this that forms the heart of this paper.

Given this definition of online community as being an online space that provides for overt communication between a group of people (the embodiment of the community), we now turn to the concept of a learning community.

Trivially, any group of learners that congregates to learn together could be considered a learning community. In our work we have been considering such communities, or groups, that congregate primarily online. In doing so they interact via electronic means, share resources and content, and interact with their tutors or learning facilitators. This clearly puts our discussion in the field of e-learning.

Salmon (2002) identifies four possible models for the future development of e-learning:

- content as the basis for learning;
- learning objects;
- m-learning;
- learning through community.

By definition, the first two models (content and learning objects) offer a resource-hungry approach. The need to identify suitable content, to make it available to learners and to break it into learning objects places the online teacher, tutor or facilitator at the centre of learning. It disempowers the learner. The time required to source the content and to keep it up to date is disproportionate to the learning gains.

M-learning, delivering learning to mobile devices, is, as yet, a less developed option with the potential to be part of a learning community model. Information on a cross-European project may be found on the Ultralab website at http://www.ultralab.net/projects/.

In line with Salmon's analysis, our view is that it is the community model that seems to offer the most potential as a vehicle for professional learning in the immediate future. Learners on our programmes are professionals—serving teachers and school leaders. We follow Eraut (1994) in believing that their learning comes from making their professional experience-based knowledge explicit. We do this through providing opportunity for interacting, scaffolding (Vygotsky, 1978) and reflecting on their knowledge-in-action (Schön, 1983; Eraut, 1994).

The use of online community also provides a means of addressing Knowles' (1984) model of successful andragogical learning. This model states that adults learn best when learning is:

- based on solving problems not assimilating content;
- negotiated with learners, so that their expectations and needs are met;
- relevant to their immediate context, in their professional lives;
- experiential.

We link these key ideas to a model of tutoring based upon creating, and 'facilitation' of, an environment where professional learning is enabled and supported.

In designing our online community spaces, we do not eschew content altogether. Rather we provide stimulus and starter references, to allow the development of participative online discussions. The discussions are central to the learning, and the summaries of earlier cohorts or topics are used as resources for future groups. If the knowledge is to be found in the experience and reflection-on-action of the learners, then these summaries, which make that knowledge explicit, are as valuable as any from third-party writers.

Thus far we have identified the concept of online community and how it may be used to provide opportunities for learning. These principles underpin the work of Ultralab over the last 12 years or so. In the next section we consider this work and, in particular, that undertaken in the use of online learning communities in the HE sector.

Development of Ultralab learning: an online community of enquiry

Ultralab's online modules were developed from 1996 and are offered as part of the University's MA in Education. Fully online, they are aimed at serving teachers and tutors. In 2001, new modules were developed called Online Learning, Tutoring, and Facilitation (OLTAF) and Online Learning and Learners.

OLTAF puts online teachers enrolled on the programme in the position of online learners. In doing so, we explicitly ask those enrolled on the course to reflect on how it feels to learn in this environment and how they perceive the impact of the learning on their role.

One participant reported,

> One of my first learning points has been to feel the pressure of having to make contributions in order to support the community. My response to this is to try to concentrate on the key points in discussion and support the insights of others. It will be interesting to explore the notion of community for learning as a learner without also being the tutor. (Module Team, 2002)

The online modules are assessed in the traditional manner of assignments handed in at the end of the module. For one of these assignments, learners are required to submit an annotated portfolio. This consists of snippets from the module and their own practice, with reflections on the effectiveness of tutoring, styles of learning, space design and evidence of learning. The other assignment is an action enquiry report.

We complement our MA modules with school-based activity such as the West Essex Action Research (WEAR) project, in which project teams in six schools planned a piece of practitioner research to develop teaching and learning. Discussions are conducted online about each phase of the research and enable practitioners across different schools to exchange ideas. The community is also a means of keeping in touch and on course over the period of the project.

In 2001, the online space used for these modules was rationalised and an online community, Ultralab Learning: an online community of enquiry, was established. Those enrolled on MA modules or other programmes such as WEAR are all members of this community. The space provides

- an overarching area, used for induction, social and general discussions;
- a space for learning materials and resources (a 'cybrary');
- module-based discussion areas.

Students are thus members of two communities—the broad Ultralab Learning and that relating to their specific module or project (see Figure 1).

When a student has completed a module they remain members of the Ultralab Learning community and, if appropriate, are registered in another community for their next module. Thus the community of people is permanent and, along with those established for masters-level professional learning with the National College for School Leadership (NCSL) (see Figure 1) provide the context for our findings.

Key findings from the use of online communities for masters-level learning

Having worked in online communities with learners on masters-level programmes for over seven years, we have seen the design, purpose and focus of these communities go through several

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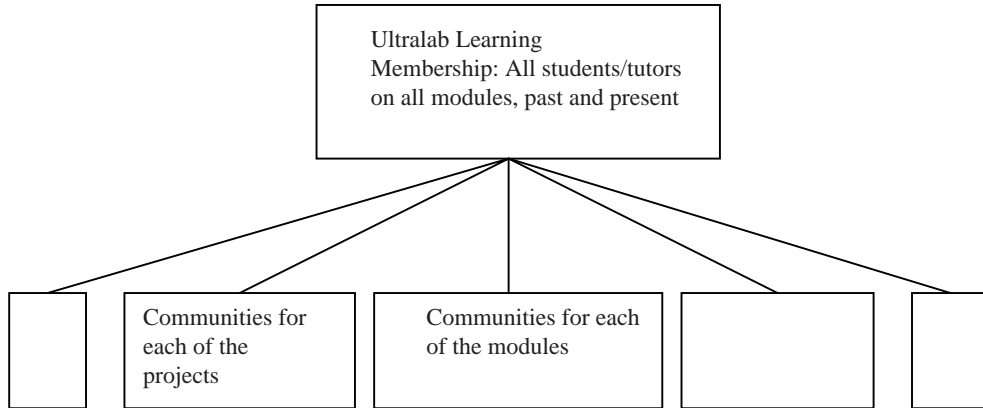
Figure 1.   The online community model for MA-level modules and school-based projects

iterations. These changes have informed the use of online community for subsequent projects, such as Ultraversity.

In this section we present the key findings that led to those changes and describe some of the changes themselves. In doing so, while focusing explicitly on the masters-level communities, we are drawing out key findings for the use of online community in the HE sector in general.

Induction process for online learners

Time needs to be given to induction, with specific activities designed to negotiate expectations, provide guidance to the online space and resolve technical problems. We support this with synchronous online activities—phone conferences or online 'chats'. This is an additional strategy to our normal use of asynchronous activities.

Exploring the nature of online community learning and self-directed enquiry also forms the basis of induction activities. Yet the induction period is also one of introductions and forming social connections through conversations such as describing interests and individual work contexts.

Encouraging participation by also using the online environment as an area for social interaction

When engaged in any continuing professional development activity, teachers often report that the social interaction and networking is as important as the formal sessions (Terrell, 2002). To engage learners in online community, tutors have provided opportunities for social interaction. These allow for the informal networks developed at induction to continue and provide an online equivalent of the learning circle face-to-face meetings arranged by candidates. The metaphor of a social space is used, with the name 'The Shack' referring back to the bar at the old Brentwood campus of the university!

Support for community discussion through reminder emails, telephone and synchronous activities

The online space can be an isolating one, with comments made asynchronously and by individual remote learners. Learners appreciate tutors who support the community through other channels of communication. This, they argue, reminds them of their focus and priorities, engages their attention and encourages them to spend some time on their research learning and development. The prime channel of communication should be the many-to-many community space, however, if overload on tutors is to be avoided.

Modelling behaviour and presence

Where online teachers are overtly engaged in conversations, providing feedback, setting focuses, acting as either facilitator or expert, candidates are more likely to respond. Where the tutor is not overtly engaged, candidates are likely to focus on the barrenness of online space. It is also apparent that where a tutor or guest contributor provides lengthy answers, this will invoke similarly lengthy future contributions. There is a fine line here between the desire for brevity for readability, and the need for in-depth responses for deep professional learning.

Informal versus formal professional learning spaces

'The Shack' is used as an induction space, and so all are encouraged to contribute there initially. When analysing these contributions it is clear that some students feel that this is as natural a place to discuss their learning as the more formal module space.

> The orientation time was useful, but I can see a need to balance the 'playing' and 'wanting to get on' according to different needs and experience. Welcoming comments in the Shack are good icebreakers. (Module Team, 2002)

Formative versus summative learning

There is a tension between the formative nature of learning exhibited during the conversations and the MA requirement for a summative report to be submitted at the end of the module. The structure of the modules relies heavily on the use of asynchronous discussions. Some students feel that they are repeating work by having to write an assignment at the end, and their main reason for enrolling on the module is for pragmatic practice-related learning, which they perceive as disjointed from the demands of the academic masters-level criteria. One student, illustrating the view of some others, commented:

> In honesty … I'm not really concerned about the assessed outcome of the unit. I'm working this course as a stand alone to experience online learning and to learn about its methodology. Hopefully this will help me to tutor on NPQH [National Professional Qualification for Headship] more effectively. (Module Team, 2002)

This attitude often results in students failing to submit work to the deadline or standard required as they have gained more from taking part in the course than from the demands of the formal assessment.

Assessing contributions

Addressing the above, we have considered the accreditation of comments in the discussions. We have looked at models used elsewhere (e.g. Open University IET, Stirling) in which marks are awarded for the contributions of students during the asynchronous conversations. We have a problem with this being a driver for participation as we feel it would distort the authenticity of comments, with students contributing purely to gain marks. Developing this model, however, we have an assessment of student portfolio, supplementing the action enquiry report. In here, we are assessing students' reflections on the conversations so they can be central 'actors' in the discussions or 'peripheral performers' but are still able to demonstrate learning from the conversations.

Impact of software and design

Some students cite the CMC software as a barrier to participation (Module Team, 2002). One group of students were averse to its use and preferred to focus on the technicalities of the environment rather than the interaction with others. To minimise this effect we have redesigned the interface to provide less need for navigation, providing more structure within the module. We have found that we have reduced the number of negative comments about the software by having:

- a limited number of places to contribute;
- a limited number of units per module (five, as compared to up to 11 in earlier modules);
- only one or two units live at any one time, with only one conversation per unit;
- static pages with navigation to conversations remaining unchanged throughout the module.

Learning space design

Some learners will read all the resources made available to them before they feel able to contribute to discussions, even stating that they are not prepared to discuss anything before they have learned about it. It is also a question of planning, some students wish to be able to see not just the resources but the learning activities from the outset so that they can plan their time.

We see a tension here with the need to keep students focused on the same topics to encourage discourse and to go through the learning process and not jumping straight to the assessment activities. Individual preferences for learning styles play a part here as no doubt does past experience and expectations of what constitutes learning. Stephenson (2001) accepts that this should be both expected and worked with. There is need to consider learners' preferred learning styles. Those who report a more assimilative style will tend to read the resources before contributing. This needs to be acknowledged in course design.

We have found that providing fewer resources at the beginning of a conversation, and focusing the discussion on students' own practice, reduces the effect of this time-delay. We have also built reading weeks into the programme, and made the conversations and activities more time-limited. Our experiences concur with those reported by Owen (1999) in that the use of conversations alone is not enough. Resources, activities and the recording of learning in portfolios must support students' learning.

Collaboration and community

Thorpe (2002) speaks of the 'rhetoric of collaboration' and points to the large claims made by some online enthusiasts. In our conferences sharing through debate is evident, resources are exchanged, issues discussed. However, synchronous discussions are by their nature not conducive to shared contribution, as members can post at any time and frequently work as individuals. To counter this we have introduced activities that force students to work offline in pairs or larger groups (action learning sets) to come up with findings that they then post for others to comment on.

The online experience of 'time'

It seems to us that time in an online learning programme exhibits some unusual behaviours, at least in the minds of participants. In the MA modules, as in NPQH, we have experimented with having few or many units and conversations open at once. On the one hand, the asynchronous nature of the space allows time to be slipped and for students to contribute whenever they wish. This should be liberating, and is a theme that appears in evaluation comments from learners.

One commented on this freedom:

> I have welcomed the opportunity to continue my own professional development within my own time without geographical constraints. (Module Team, 2002)

On the other hand, time slippage has meant that students typically look to deadlines to complete activities and without them, fail to participate. It is as if with no structure to time, students find it difficult to structure their learning. We have moved to a set of time-limited activities with a clearly defined pathway through them. This has been criticised by some students who look to e-learning to provide open paths:

> Time restraints on discussions have been the greatest barrier to the action enquiry module, being ready to contribute to a discussion, only to find it ending two days earlier. It would help if all discussions were open until completion of the module. (Module Team, 2002)

Previous models of having all conversations open at any one time have resulted in little or no interaction, however, as the presence of learners in any one conversation is diluted.

Conclusions for a model of learning and teaching

We are engaged in developing a model of learning and teaching that comes from the interaction of traditional learning, the theories of communities of practice, activity theory, and of situated professional learning and the use of technology. This is a model designed for learning that is manifested by the developing professional practice of the learners. Much of the knowledge and understanding is tacit, and a key objective is to make this knowledge explicit, sharing learners' reflections on it and its application to their professional role. There is a balance here between the knowledge acquired through participants' previous experience, new knowledge and understanding through reflection in- and on-action, and the selection and use of appropriate propositional knowledge as a tool for reflection and analysis. In some instances, the propositional

knowledge comes from the inclusion of external experts in dialogues adding another dynamic to that of the community of learners.

There is also a balance between the formal and informal learning. This is very marked in face-to-face situations, and needs to be reflected online. The use of the Shack allows for informal interaction. We are constantly looking to develop self-directed and collaborative learning, but this needs to be nurtured—it does not happen on its own.

Notions of community, the components of the learning programme and the role of the tutor, or facilitator underpin our model. These three come together to shape the learning experience and influence the design of the programme and the online space in which it takes place. In this concluding section, we look at each of these in turn and summarise our approach.

The community aspects of our online learning programmes are used to overcome isolation and to develop social learning. Through their use, learners are encouraged to reflect on their experiences and the tacit knowledge they have developed. Within the community there is a common domain, that of professional educators, and through active participation, this reflection is taken further as each learner analyses and critiques the individual and shared understandings of the group. There are also the dimensions of identity and personality, crucial to online environments. Through induction and synchronous events the role and persona that people exhibit online is explicitly discussed to try to overcome the issues of only receiving partial information about fellow learners through text-based communication.

The components of an online programme are as listed above—discussions, activities, resources and knowledge. In designing our programmes we are conscious of the balance between the immediacy time demands of synchronous events. We provide some synchronous opportunities but they are generally only popular with a few learners. The bulk of the activities and discussions are asynchronous, with contribution being possible at any time. We do have a tight timeline for activities though, so that the group is kept on-track and together. Previous experience with open-ended deadlines or having many discussions running in parallel have not been successful. Learners have become frustrated by the lack of activity in the particular discussion they are engaged in if others are engaged elsewhere. Time is a difficult concept online. For those who are engaged it can run very slowly and they can make many contributions in a short period. For others time can seem to move very quickly and, if they have not contributed for a while, they can lose the thread of the discussions very easily.

We provide resources in the form of an electronic library ('cybrary'), but are careful not to overstock this as a large proportion of learners prefer to read all resources before contributing. This emphasis on reading results in a stagnation of discussion. Included in these resources is the summary of the discussions from previous cohorts, thus developing the shared knowledge. In this use of computer-mediated conferencing we are distinguishing our programmes from the traditional distance learning models, but the resource-based nature of these latter still has a role and is valued by many students.

The role of the online tutor is key in balancing the demands of time, drawing out the personalities to involve all members of the group, structuring and designing the online space, and meeting individuals' needs and styles. Expectations are shared at the beginning of each programme and the tutor needs to support the online community activities and discussions with telephone and email communications, sometimes referred to as 'back channel'. We encourage tutors to have a weekly or fortnightly communication with all students, to be overt when they are in

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community and to model behaviour. If a tutor has the habit of always contributing, challenging and following up comments made then learners are more likely to follow suit.

Notes on contributors

Pete Bradshaw works for Ultralab at Anglia Polytechnic University in Chelmsford and from home in Milton Keynes. He has been involved in ICT in education for over 20 years as teacher, advisory teacher, lecturer, researcher and consultant. A member of the team that developed the Ultraversity degree, he has a particular interest in online community and online presence. He currently leads the postgraduate programmes at Ultralab and previously worked on online elements of NCSL programmes. From September 2005, he will be an ICT in Education lecturer at Nottingham Trent University.

Stephen Powell has worked for Ultralab for the past six years. In his role, Stephen has worked on a number of online projects that utilise the Web and online communities to research learning and technology. Currently, Stephen is the project leader for the Ultraversity project, an online, workplace, research degree for undergraduate students. This project currently has over 300 full-time students and is supported by a staff of 15 academics, three technical support staff/software developers, and two finance and student liaison officers. Prior to Ultralab, Stephen taught in state secondary schools for six years as a Geography specialist, Humanities generalist, ICT enthusiast and Special Educational Needs Coordinator and for five of these years was at Brooke Weston City Technology College.

Ian Terrell is Director of the Midwheb Partnership for the Professional Development of Teachers based at Middlesex University, where he leads postgraduate research and development programmes in schools and LEAs. He was previously Director of Research at Ultralab, a research and development unit at Anglia Polytechnic University, researching into new technology and learning primarily leading the research work in the field of online learning communities. He moved from this role after being Head of Continuing Professional Development at APU. He is co-author of *Learning to lead* and *Development planning and school improvement for middle management*, as well as many journal articles and conference papers.

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DRAFT Agenda - ULTRAVERSITY F2F Monday 27[th] Feb – Thursday 2[nd] March

Focus: Ultraversity project and BALTR Pathway development:

Monday		
12 - 1	Lunch	Claire / Maureen
1 – 1.30	Introduction	Stephen
1.30 – 2.30	Pathway post 15/30 – Implementation in Plone	Tim
2.30 – 3.00	Break	
3.00 – 3.30	Administrative changes	Lindsey / Rex
4.00 – 5.15	Future organisation BALTR planning session – recruitment, operation, module leaders	Tim / Stephen
	Tuesday	
9.00 – 10.00	Research	Sarah, Gina
10.00 – 12.30	Team time	C1, C2, C3, C4-5
12.30 – 14.00	Lunch	Sort yourself
14.00 – 14. 30	Module development – Plone, Gearbox	Ian / Alison / Kris
14.30 – 15.00	C4 Assessment & Feedback	Hame
15.00 – 15.30	Ultraversity model – business development (Bournemouth / MALTR)	Lesley / Stephen
15.30 – 16.00	Break	
16.00 – 16.30	C1 - buddying, negotiation research plan, exhibition, learning sets	Ken
16.30 – 17.00	C3 skills workshops, resource portals	Lydia, …
17.00 – 17.30	C2 learning sets, ILM	Shirley, …
17.30 – 19.30	FoE open evening	All
	Wednesday	
9.30 – 5.00	Team together day (CPD)	Kevin / Lydia
Thursday		

9.00 – 10.00	Annual Monitoring review plan and next steps from Monday	
10.00 – 11.30	Field pathway organisation planning and responses	
11.30 – 12.30	Team meeting	

What our researchers say

"Since starting this degree, I have found that I very much enjoy the Ultraversity approach to learning. I was concerned about how this degree would affect my job within the school but I now feel that it will be a great support system for my role and a good opportunity for developing my knowledge and abilities. I have found that doing this degree is already making me look at my role more objectively and I think this research will definitely benefit me in the workplace. My chosen areas of further research will develop my knowledge and therefore improve my professional practice."

Ultraversity Cohort 1, 2004

"The community spirit has been excellent also, I feel free and uninhibited to speak to my facilitator and fellow researchers about any areas of concern. I thought at first I would be by myself but actually feel part of a team..."

Ultraversity Cohort 1, 2004

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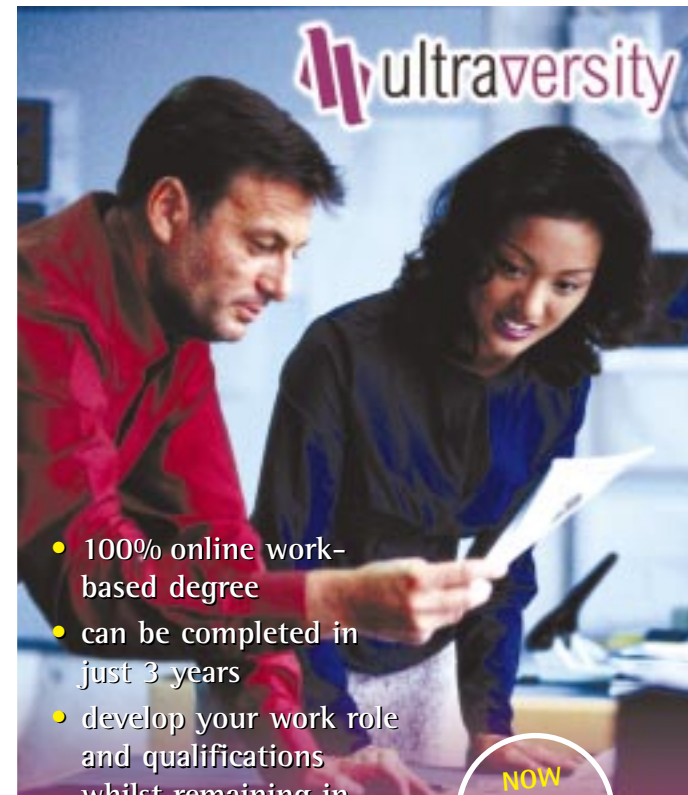
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"Making learning delightful through the use of new technologies"

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Universities adapt to a shrinking world

As technology gives distance learners easier access to their institutions, it is helping campus-based students to study on the move. Stephen Hoare checks out the leading platforms behind this convergence

Stephen Hoare
The Guardian, Tuesday 7 March 2006

The distinction between distance learning and studying on campus is becoming increasingly artificial. While providers of distance learning such as the Open University are boosting the quantity and quality of face-to-face seminars, traditional bricks-and-mortar institutions are supporting students on and off campus through virtual learning environments (VLEs) based on commercial or open access platforms.

Universities now operate learning platforms on which students access multimedia course material and self-study tutorials online. The platforms - in effect, giant online libraries - might also include student bulletin boards and forums as well as chat rooms that can be used by staff and students to supplement tutorials. Peter Scott, head of new media at the Open University's Knowledge Media Institute, says: "These technologies are enhancing traditional face-to-face contact, rather than replacing it. At the OU we call our offering 'rich blended learning'."

The Joint Information Systems Committee (Jisc), which supports the use of ICT in colleges and universities, says it treats distance learning as e-learning. "All learners are becoming distance learners, because they are increasingly working from home or on the move. We are looking at platforms such as personal digital assistants, mobile phones and iPods," says communications manager for Jisc, Dr Philip Pothen.

Indeed, the UK's first podcast study support material is about to be published. The EBS Trust has developed a multimedia maths programme, Maths Tutor, on seven DVDs. Two-minute tutorials on subjects such as Pythagoras' theorem can be downloaded to an iPod.

Leicester University's e-learning project, Leicester Online, is finding a common technology that will improve the learning experience for distance and campus-based

students. Leicester Online will be available to all students and includes a digital library, administration, counselling and study support. All students on campus have broadband access in study bedrooms and the library.

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"My remit is to introduce e-learning across the board," says Leicester Online's director, Professor Gilly Salmon. "If you separate out distance learning completely, you will not be benefiting either the distance or the full-time students."

Leicester broadens its net

As a traditional, research-led, campus university, Leicester has 11,000 full-time students and 7,000 distance learners in areas such as the Far East, the Middle East and the Caribbean. As tuition fees rise, the growth in distance learning is seen as a way of widening participation. It could become increasingly important for domestic students wanting part-time, flexible study options.

"Our distance learning happened as a result of entrepreneurial activity over many years," says Salmon. "As you begin to scale up, you are having to develop the technology to pull it all together."

Leicester uses a proprietary VLE called Blackboard, which merged with its main rival, Web CT, last November. The university's medical school uses another commercial platform, developed by Tribal.

Salmon compares the systems: "We like Blackboard because it is a very easy platform to use - for anything from announcements, resources online, student bulletin boards and forums and links to the library for people doing entirely online courses. Tribal needs more central support."

She explains that having a proprietary system frees staff to become more productive or take on greater responsibilities. "John Fothergill, our pro vice-chancellor, uses Blackboard to talk to his students. He no longer has time for personal tutorials, but the students are very happy because they can contact him at any time."

Some universities, however, are moving away from costly commercial systems to more flexible, open-access systems, such as Moodle and Boddingtons, which are based on free software and shared content. The trend is towards greater collaboration and cost-sharing between institutions. Moodle has been described as a solid system that allows academics to structure courses and to add multimedia content.

Jisc is putting its weight behind Shibboleth, a newly developed access management system that comes from the US. The platform's advantages are that it is single sign-on and gives students access to the complete range of virtual and managed learning environments and learning resources across the worldwide academic community. Jisc has negotiated licences for around 200 commercial resources, access to which will be

free for UK full-time and distance learning students.

"Shibboleth is becoming the international standard and is the platform we are **P14** endorsing," says Pothen. "We are funding a range of early-adopter projects in further and higher education to test it. From next year we will be using it for access management. We wanted to make as much content available as possible to distance learners - all learners."

Moving to Moodle

The Open University is switching its VLE from Blackboard and Web CT to the open access system Moodle. "We are moving to Moodle because it is an open-source, open-tools, collaborative environment," says the OU's Peter Scott. "The market for VLEs is being driven by universities and by students and their requirements."

He anticipates that cutting-edge web technology will vastly improve the storage capacity of VLEs and enable a better interaction with the student. This is why the OU has begun organising content into databases that will facilitate sophisticated research.

"We generate data so that students can search for meaning rather than content and syntax," says Scott. "It is called semantic web research and is very different from web-page formatting on HTML. A semantic-based system is a lot more powerful. Much of the groundwork is going on at the world wide web consortium headed by Tim Berners-Lee." Moodle may not provide the entire answer but its design is moving in the same direction as OU's semantic web research.

Anglia Polytechnic University's Ultralab, another leading research institution in new media, is also a strong advocate of open-access platforms. It has developed a completely online distance-learning degree - the BA (Hons) Learning Technology Research - delivered through its online arm, Ultraversity.

Ultraversity is experimenting with a range of open-access platforms alongside learning management software it has developed in house. Plone, for example, is a new system that enables Ultraversity students to organise their e-portfolios, while Hot Seat is an asynchronous, topic-based discussion forum led by an academic who is an expert in a particular field.

Ultraversity project leader Stephen Powell reckons these tools could soon become much more widespread. "No one else is using Hot Seat," he says. "It is a concept that all universities have picked up on - having the expert enter your community. The strength of it being asynchronous is that Hot Seat opens up learning to people who wouldn't otherwise be able to access it."

But Powell is unwilling to commit to one system. "The world is awash with open-source VLEs. The universities that develop them are pushing them as open source. The

software is free but they want other people to come in and help fund the development costs. For example, Sakai, the new kid on the block, has been pump-primed by US universities. Boddington has come out of Leeds University."

While acknowledging that Moodle is the strongest of the bunch, Powell sees disadvantages: "We did think about using Moodle and we carried out an evaluation. Moodle is very, very structured. It is fine for a fixed course over a fixed time, but with our particular programme and our type of students we needed something a lot more flexible."

Low-cost videoconferencing

New media lecturer Steven Verjans from Leuven University, Belgium, is part of an Open University pilot to trial two new internet-based videoconferencing tools. He is using Flash Meeting, a flexible, low-cost, internet-based videoconferencing tool to deliver in-service training for university lecturers, and Hexagon for student support.

"By the end of the eight-week course on e-learning our lecturers had become fervent adopters of Flash Meeting," says Verjans. "They are using it for a range of purposes, from running international masters programmes, conducting interviews with academics in Africa, student supervision and counselling, to organising overseas exchanges. All you need is a microphone, a webcam and a PC. This is a flexible tool when full-blown videoconferencing is not feasible."

Old-style videoconferencing never really caught on in universities as it was too clunky. Barriers to use were the difficulties of gathering a group of people at a pre-arranged time along with the cost of setting up a studio.

Peter Scott, head of new media at the OU's Knowledge Media Institute, believes universities need flexible, low-cost solutions. "Flash Meeting will give you a conference any time, any place, on any platform without needing to download anything extra for it to work. With Hexagon you can drop in on people, see them at work and have a chat. A student could see his tutor, for example."

Scott believes small-scale, niche applications are the way ahead for videoconferencing, which has become bogged down by costly technology. Flash Meeting and Hexagon use voice over internet protocol (Voip) technology to create an audio-visual instant-messaging system that can support small groups of distance learners and provide an alternative to face-to-face tutorials.

He invites me to log into the Hexagon website to see him in his virtual office. The home page is a honeycomb of updating thumbnail images, each representing an individual room. I quickly find Scott's room and click to enter. As we chat, he manipulates the webcam and zooms in on a whiteboard used for student tutorials. Up

to 30 users can videoconference in a room at any one time.

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Nick Hine, director of applied computing at Dundee University, is also taking part in the OU pilot. Dundee is using the technology for an international language project and for a schools field trip project.

"Flash Meeting is a more generic tool," says Hine. "You can have one-to-one sessions or you can configure it for small or large groups. It's a user-friendly technology that we can use with researchers working in different countries. Hexagon is a collaborative working tool. You could use it for student support or to keep teams of researchers close to each other."

But there other options that universities could use for small-scale videoconferencing. Ultraversity uses commercially available products to help boost student communication and to hold the occasional tutorial. "Apple's iChat enables you to conference with a group of four people over the internet via a webcam," says Powell. "It makes videoconferencing feasible on a small scale."

Much more ambitious and far better resourced, the Joint Information Systems Committee (Jisc) has joined forces with several UK research councils to develop Access Grid, a system based on multiple video-streaming that allows users to access and swap software. Jisc's Philp Pothen says: "Access Grid is much more than a videoconferencing system. It has just been launched, but already three or four universities are using it."

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theguardian

The university where everyone's a stranger

This month will see a new kind of graduate emerge from the realms of cyberspace: the first UK graduates to have been tutored purely online

Stephen Hoare
The Guardian, Tuesday 20 June 2006 23.54 BST

Business adviser Sue Melvin found it on the internet, while graphic artist Kate Luck was told about it by her former careers adviser at Notschool.net. They are among 340 undergraduates studying for an online degree in learning technology and research from Ultraversity, the distance learning subsidiary of Anglia Ruskin University. All are taught 100% online and have never met their teachers.

This month the first cohort of 150 students will graduate with a BA (Hons) and, in November, they'll finally clap eyes on their academic tutors at a degree ceremony at Chelmsford cathedral. In fact, Ultraversity is the only UK academic body to offer degrees only taught online. There is no face-to-face element. So what's the attraction about being virtual undergraduates, beavering away on their own?

Luck, 18, is a junior Mac art worker for a graphic design studio in Wellingborough. "I'm training to become a graphic designer and I wanted a vocational degree that allows me to develop other avenues such as product photography. I'd thought about a conventional university but I get uncomfortable sitting in a classroom where everyone's working at the same pace." As a student from the online learning community, Notschool, Luck was familiar with Ultraversity's underpinning technology.

Melvin, 50, a business adviser with Basildon enterprise agency, believes beefing up her ICT skills will give her a headstart in designing services that better meet the needs of start-up businesses.

The idea, inspired by Professor Stephen Heppell, then head of the ICT in education research institution, Ultralab, was taken beyond the development stage by a team of

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academics committed to e-learning. The principles behind the degree are that all students are in jobs, content is negotiated between student and facilitator, and assignments can be submitted in various online formats such as PowerPoint, digital video and audio to create an e-portfolio.

"This is a new media degree for the knowledge age," says Ultraversity's project leader, Stephen Powell. The adult continuing education/distance learning market served by Ultraversity sees it competing with foundation degrees (part-time vocational degrees, part college-based and part work experience). The key difference is that foundation degrees cover a much wider range of subjects and are employerled through the involvement of sector skills councils. Ultraversity makes no pretence to be anything other than student-focused.

Its main rival is the Open University - the UK's biggest distance learning provider. While OU delivers a few courses or modules in a fully online format, all its degree programmes are taught by supported distance learning - a mix of online and face-to-face teaching and summer schools. This makes OU more expensive compared to Ultraversity's £850-a-year course fees. OU degrees also take longer to complete - on average six years - while Ultraversity is designed to take three years while the student is in full-time work.

But there are down sides. Ultraversity's drop-out rate is 40% - higher than the OU's but comparable with other fully online courses. Unable to comment on Ultraversity, OU pro vice-chancellor David Vincent believes OU's approach is the more influential. "We're transforming distance learning by putting out structured units associated with learning software, which will allow students to form learning communities. It's a new way of delivering distance learning."

More choice

Other universities are aware of the market for online study and are starting to offer more choice. University of East London has just announced a unique partnership with commercial e-learning provider Thomson ICS and degree courses, says a spokesman, have been "selling like hot cakes".

Gilly Salmon, professor of e-learning at Leicester University, believes other universities can learn from Ultraversity's approach. "What I'm chiefly interested in is the structure of the degree and the level of online support. [Ultraversity] must be breaking learning down into very small, bite-sized chunks because students need to know they are making progress. Few of us are sufficiently motivated to get through a week of study let alone three years or more."

Salmon, at one time in charge of the online certificate in management at the OU Business School, feels online methods are now part of the learning mix at most

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universities and, as such, strongly interwoven with traditional pedagogy. "Online resources, VLEs, and contact with lecturers is supportive to students regardless of whether or not your degree has a physical location. But there is no evidence to show higher tuition fees or rising costs of student accommodation are pushing students towards online study. These choices are made for personal reasons."

Ultraversity's Stephen Powell believes his strongest selling point is the learning journey undertaken by the students themselves. "Our emphasis is on communications - students working together. It's not a solitary experience. The selling point for employers is that they are getting a graduate who is a problem-solver - someone who is highly motivated and is going to make a difference to your business."

While conventional degrees test learned theory through academic essays and dissertations, an Ultraversity degree involves working with peers, sharing knowledge and honing ideas through asynchronous conversations with fellow students. The aim is to boost students' confidence in handling new media, manipulating databases, using the internet as a research tool and networking effectively online.

Assignments are set by tutors to reflect real-life situations or issues students face in the workplace - so they have an immediate application. "We call our approach 'action research methodology'," says Powell. "The curriculum or focus comes out of their professional development requirements . It is identified in negotiation with their learning facilitator, which is why we call our students researchers and not undergraduates."

Ultraversity has two virtual learning environments. Day-to-day communication between students and tutors is through First Class, a platform once used by the OU before it switched to Moodle. Each student has a facilitator, a tutor who they can telephone or email and whose role is to direct their studies. Then there is Plone, a US open access system, on which sits Ultraversity's "hot seat" virtual master classes - online lectures given by world-class academics followed by asynchronous discussion.

Ultraversity's main appeal is to those in junior or middle management in public services - people who need a degree to further their careers and want to use ICT more proficiently. When it was launched three years ago, Ultraversity academics believed the main market would be teaching assistants wanting to become teachers or NHS staff looking for professional development. But the market has proved much wider.

And the experience of a fully online degree is not as robotic as it sounds. Sue Melvin describes a chat room set up for her cohort - where the lecturers are barred. It's a "laid-back" virtual student union bar called Ultra Thirsty. "People drop in and we put music downloads on it. We chat socially or about work and you get to know people socially. One topic isn't allowed. We never talk about our assignments!"

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'That's the beauty of this degree, it's "forcing" me to be brave and do things that I feel I cannot do, but really I can. You've given me ownership of my learning and...I'm hanging on to it.'

Kath Marshall, third-year student

The e-portfolio route to accreditation

Ultraversity, Anglia Ruskin University

Background

The BA (Hons.) Learning, Technology and Research (BALTR) degree course at Ultraversity – a distance learning arm of Anglia Ruskin University – is delivered and assessed without a single face-to-face meeting before graduation. Designed by Ultralab, the course supports a wide variety of learners studying from home and from the workplace. The first cohort of 140 students graduated in summer 2006.

Technologies, systems and policies

BALTR is designed as a research-based degree. Modules depend on action research rather than on course content, and include development of the skills needed to undertake research enquiries. Students, or researchers as they are known, take charge of their own programme of learning, negotiating with their personal facilitator a range of activities based around their work environment.

They upload evidence of learning outcomes into their own portfolio space on Plone™, a platform selected because it is open source and considered simple to use and flexible.

For Ultralab project manager, Stephen Powell, the course ethos of personalised and negotiable learning was the deciding factor behind the choice of software. FirstClass® – a conferencing software which facilitates group collaboration and document sharing – is used alongside Plone to establish an online community to provide a network of support and to enable peer review of outcomes.

From the outset, researchers take ownership of the technologies they use and are encouraged to set up their own weblogs and use other emerging technologies outside of the conferencing software to reflect on the progress of their learning. They can choose to keep their space on Plone private or can upload resources, such as images or podcasts, for peer review – a comment box on Plone offers the opportunity for this if peer-assessment is selected as a learning pathway by the researcher. The decision is theirs.

Rethinking assessment practice

Those opting for the BALTR degree are typically 35-40 years old and unable to commit to traditional face-to-face courses. The design of the assessment allows them greater flexibility in how they demonstrate their learning, and, in doing so, provides a sense of empowerment. 'That's the beauty of this degree, it's "forcing" me to be brave and do things that I feel I cannot do, but really I can,' was the feedback from one third-year student.

Their research may also make a lasting impact on the way their workplace operates – at the end of the course, researchers exhibit their findings for critical feedback from a selected audience. The critical feedback and outcomes from the exhibition are then assessed in a 'patchwork' of evidence connected by a text or audio commentary within the e-portfolio.

Undergraduate student researchers – the Ultraversity model for work based learning.

Ian Tindal, Stephen Powell, Richard Millwood.

Abstract: Technology is creating a global learning landscape for the 21st century; if Higher Education Institutions are to continue to meet the needs of today's learners they must explore approaches where the role of technology is central to new models for learning. The four year long Ultraversity project was set up by Ultralab at Anglia Ruskin University to explore the development of a wholly online, three year duration, undergraduate, work-based degree with students using action research methodology. The experience is designed to be highly personalised and collaborative in nature, rather than individualised and isolated. Students engage in the processes of inquiry together, making it possible to collaborate and support without plagiarising because they are studying in their own work context. This paper describes this model of personalised work-based learning and the Internet technologies used to connect the distributed student body and teaching team. Issues are identified relating to the model and the tools used to support it.

Keywords: Work based learning, personalised learning, e-learning, learning technologies, assessment for learning, higher education, independent learning, critical thinking, creativity, e-portfolio, institutional risk.

1 Background

The four-year Ultraversity project started in January 2003. It was devised to research new approaches to learning in Higher Education Institutions (HEI) and to address the government priority for HEIs to widen participation and fair access (HEFCE Strategic Plan, 2005).

Conventional models of study at University fail to meet the needs of many students and employers. Today's workforce is mobile and aspirational; they seek personal development. Meeting their demands requires approaches that are personalised, this gives students choices about what, how, and where they study. Employers are becoming increasingly sophisticated in their expectation of training, Charles Jennings (2006), Global Head of Learning Reuters identifies an evolving need; "What is in fact required in organisations is a change from training for skills to 'learning for performance". The traditional topic based approach to HE learning prepared students well for specific futures in an era where 'a job for life' or a career in academia was a common expectation of HE learners. A growing trend will be the ability to remain in the workplace whilst studying, to earn a living, and keep up-to-date with fast changing professional contexts – lifelong and lifewide learning (Reichmann, 2003).

2 Personalisation of the learning experience

Harvey (2005) uses the term "Work-Integrated Learning" when describing the Open University's development of a generic work-based learning framework that has the

potential to be adapted to a wide range of subject specialisms. As its starting point, this approach has much in common with the Ultraversity model in its emphasis on the motivational imperative of self-direction, learning from experience, and problem or task-focussed orientation for the adult learner drawing on Knowles' theory of Andragogy. By developing a generic framework for work-based learning, where the emphasis is on the students' ability to critically evaluate the work environment, it is possible to use a wide variety of work settings to enable the student to gain higher education credit points for their work experience. The concept of 'undergraduate student' as 'researcher' developed by Ultraversity goes one step further in that it moves away from the prescription of a curriculum, thus allowing the learner a high level of discretion in identifying relevant theories and models and applying them to authentic learning opportunities in their workplace.

Another active area of research into personalisation of the learning experience is through computer-interpreted behaviour and includes work on IMS Learning Design and a long tradition of approaches under the term Adaptive Hypermedia. Burgos, Koper, and Tattersall (2006) discusses personalisation in terms of adaptation identifying three agents in this process including the learner, the teacher, and the set of rules derived from other stakeholders. For Koper, this approach to personalisation is seen as problematic from a resource and time standpoint as mediation between agents would necessarily be complex. IMS Learning Design offers the possibility of a technological solution to adapt the learning experience offered.

The attraction of this approach is obvious for a programme of learning based around a subject-discipline with content that is predetermined and where student study contexts are closely aligned. The complexity of research driven learning developed by Ultraversity is more difficult to design adaptive systems for and the Ultraversity project has chosen not to pursue this route, instead achieving personalisation through a process of dialogue based negotiation between learner and teacher. Coats and Stevenson (2006) explain this as a process whereby "both teacher and student play an interactive role, in which teaching and learning are seen as complex and socially mediated". In the online context, Stephenson (2001) identified the particular challenge of aligning the expectations of learners with those of the teachers in terms of approaches to teaching, learning, and assessment to be taken when student and teacher do not meet but communicate via the Internet.

It is apparent to the authors that approaches based upon computer interpreted behaviour would potentially have much to offer students on a programme such as Ultraversity in the developing of specific skills to support them as learners.

3   Ultraversity Approach to HE

To research the issues outlined above, the Ultraversity project developed an undergraduate degree programme, BA (Hons) Learning Technology Research (BALTR). The programme is delivered fully online with no face-to-face study. Internet technologies are deployed to offer Higher Education in new and creative ways for people in full time employment, in work they wish to pursue and to provide the opportunity to improve their performance in the workplace.

In developing the programme, many of the 'standard' HE organisational boundaries were 'tested' (fig 1) including the incumbent University technological offerings, organisational practices, curriculum design, approaches to learning and teaching and assessment.

Approach to HE

Dominant designs		Ultraversity
➤ Widespread use ➤	Internet Technologies	Realisation of potential ➤
examination and essay	**Assessment**	outcomes orientated e-portfolio
teacher controlled, specified tasks	**Personalisation**	learner managed, open activities
administrator convenience	**Administration and support**	needs driven, learner focussed
Pre-determined, benchmark statements	**Curriculum**	self-identification for relevance
lecture, information acquisition	**Learning and teaching**	experiential, collaborative, inquiry based
personal growth	**Individual change**	habit of a lifetime learner
sometime in the future	**Impact**	fulfillment and workplace performance

Figure1: An alternative approach for HE

4 Paper methodological approach

The findings in this paper are based upon research using a hybrid of systematic and naturalistic inquiry. The authors' experience as practitioner researchers developing the programme, and their observing and interacting with students is triangulated with data drawn from an online questionnaire (July 2006) focusing on student perceptions and follow-up semi-structured interviews (September 2006) to develop some richer understanding. The questionnaire was completed by some 65 of a potential 142 respondents and 15 semi-structured interviews were conducted.

5 Model of personalised work-based learning

This model has combined tried and tested methods found elsewhere in HE as well as developing approaches in teaching and learning in particular in relation to assessment and delivery of a programme using Internet technologies (fig. 2). There is an emphasis on the social, interactive and conversational nature of emerging web based services and tools – sometimes collectively referred to as 'e-learning 2.0'.
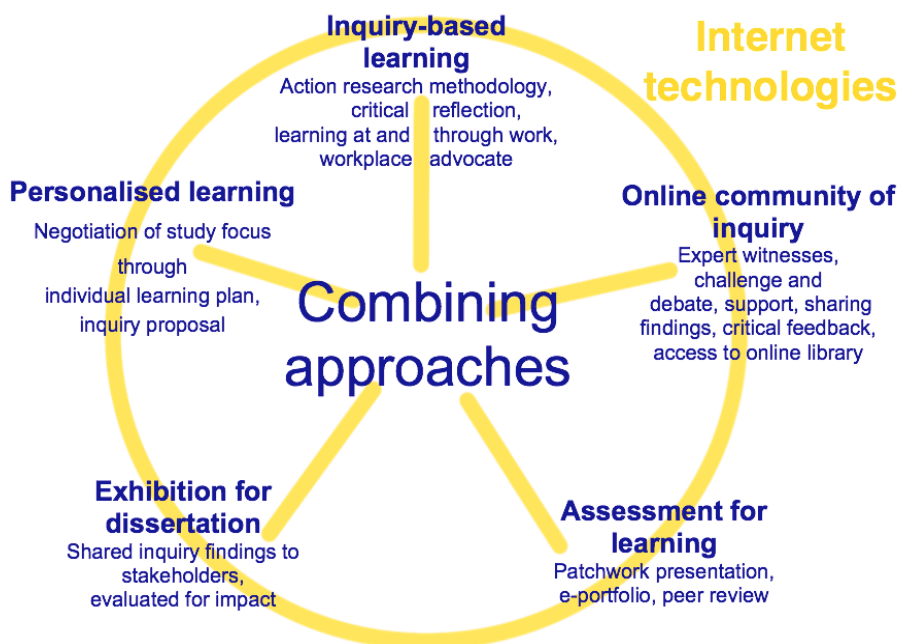
Figure 2. Model supporting workbased learning

6 Personalised learning

The BALTR curriculum design is a series of 'open' module frameworks of generic outcomes. Learners identify subject knowledge that is relevant to their own context and needs, and through a process of negotiation with teaching staff develop a set of learning activities and assessment products that are recorded in Individual Learning Plans and inquiry proposals - the tools for personalisation. The processes of 'learning' and 'inquiry' define the content of the degree with a focus on a practical understanding or 'knowing why and how to' in their chosen discipline. Inquiries are authentic and embedded in the daily work of the learner but also enables them to meet the requirements of the modules and assessment criteria.

The exit survey of the first cohort indicated that 86% of the students surveyed believed personalisation was a significant feature of their experience and 77% that their study was relevant to their needs.

> "I felt that the Ultraversity programme was ideally suited to me because I run my own business and therefore I was able to tailor the work to not only benefit myself but also to target specific areas of my organisation."

Jack (2006)

> "The modules made it possible to tailor to my own needs. The title 'Work Place' degree says it all really, in every module we were encouraged to make it relevant to our situation and the Individual Learning Modules were constructed around this ideal. This made the tasks more relevant; I could see that the results would really make an impact, so I put even more effort into them. It didn't seem selfish to study. …..The Learning Facilitators offered great support and encouragement, they allowed the researchers to learn from each other, and discuss difficult issues, in my opinion this was

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> the best possible help. I learned a great deal from researchers in the
> online community, deep issues were discussed"

> Binks (2006)

Harvey and Norman (2005) reports similar findings "Students have described how they were highly motivated by the fact that their learning in the workplace was valued and could be used within their higher education award."

7   Inquiry based learning

This is based upon Action Research methodology that has an emphasis on critical reflection on an individual's work practices and inquiry into their work context. This leads to an action that is planned, implemented and evaluated with the intention of making a positive impact on their work – learning for performance. This approach is designed to enable students to effectively integrate study and workplace activities with the support of a 'workplace advocate' who is identified by the learner as someone who can help with work place issues.

8   Online community

Researchers work and learn together in an online community environment where social construction of knowledge is realised through collaboration and critical friendship between learners. Engaging in processes of inquiry together as a cohort makes it possible to collaborate and support without plagiarising because learners are studying in their own work context.

The course designers valued unstructured or 'chance dialogue' (Powell, 2004) where learners initiate their own conversations, but also designed an experience that had opportunities for purposeful conversations initiated by teachers (Laurillard, 2002). This was achieved through the development of a facilitated online 'community of inquiry' where a rich experience of challenge and debate, support, shared findings, critical feedback, access to an online library, and conversations with invited experts could take place. The exit survey indicated that 62% believed that the level of collaboration was significant and some 35% that there was some collaboration with 3% believing there was no collaboration at all.

Participation in this community is not punctuated by the delivery pattern of modules, or determined by the access restrictions applied by Virtual Learning Environments (VLE). The Ultraversity model allows for ongoing interaction between students 365 days of the year. In addition, the choice was made to allow learning resources to be available outside the 'teaching' time so that students could plan and take responsibility for their learning.

Experts join the communities to 'host' focused conversations that engage learners in critical dialogue. This is not a 'lecture' by an expert, but an opportunity for learners to direct conversation to meet their own needs – in effect an 'inverse' lecture.

> "I found them quite helpful, I would look through the questions and
> answers and posed some myself, it was good to talk to an 'expert'."

> Binks (2006)

9   Assessment for learning

The project required the development of an assessment regime that supports the aim of widening access to HE on a national and international basis. Part of this approach was to attract students whose attitude to examination was negative, possibly because of experiences in previous periods of study. There are no timed examinations; students have the ability to express themselves through multimodality using an e-portfolio approach making use of alternate genre, rich media and technology such as video, audio, websites and weblogs.

The online technology rich model evolved from Winter's "Patchwork Text" model, with its emphasis on a reflexive approach and the use of creative imagination, peer review and discussion, "It's time we found an alternative to the student essay. For tutors across the country, it's marking time again and, reading essays, we realise that many of our students have yet again taken refuge in 'surface learning'." (Winter, 2003).

Students assemble pieces of work for their assessment e-portfolio with a 'retrospective commentary', which 'stitches' them together synthesising ideas and forming conclusions. This concluding activity should provide an honest view of the learning journey including learning from failures, celebration of success and identifying new questions for future inquiries. The exit survey indicated that 88% of students believed that they had developed critical thinking skills that were transferable to different contexts.

Students are encouraged and credited for experimenting with Internet technologies that support their inquiries and creative expression.

10   Exhibition for dissertation

Towards the end of the programme, learners are required to construct an exhibition of their findings primarily based upon the final year of their studies but drawing on the whole three-year experience. The exhibition is given to an audience identified by the learner, wherever possible in their place of work. This critical evaluation of the exhibition helps validate their findings.

Through this process learners demonstrate to themselves and stakeholders the progress they have made in terms of personal growth, and in their ability to perform in their work role. Initial findings indicate that students are engaging with the notion of being a lifetime learner. The exit survey indicates that 72% believe that study has had a positive impact on their career development with 49% reporting a positive impact on their salary already – that is before their degree was awarded.

The exit survey indicated that 70% believed that impact on the workplace was significant.

> The module requirements were generic, but the personal application of
> those requirements meant that I could tailor them to suit my needs and
> those of others in my school.
>
> Lancashire (2006)

The focus of individual student's exhibitions is analysed below and indicates the breadth of themes and workplace contexts in which the model developed can be applied to workplace learning.

What did they study?

Action Enquiry titles analysed by principal theme and workforce for 148 researchers in their final year, 2006

total in each theme	workforces / themes	care (1)	charity (2)	early years (10)	HE (1)	health (13)	LEA (3)	research (1)	school (117)
4	assessment					1			3
3	behaviour								3
17	communication			3		1	3		10
2	community				1			1	
2	CPD								2
8	environment	1							7
6	inclusion					1			5
28	learning			3		4			21
19	literacy								19
13	management					5			8
1	multicultural								1
2	numeracy			1					1
9	parents			3		1			5
17	pastoral		1						16
5	resources		1						4
7	special needs								7
5	teaching								5

Figure 3 What action did student researchers take?

11 Internet technologies

The Nesta Futurelab publication on Personalisation and Digital Technologies (2005), argues that there is already a high degree of personalisation in the experience of lifewide learners, however in the formal context this is still largely unrecognised.

Downes (2006) observes that despite the rapid increase in educational institutions adoption of Internet technologies, most people who inhabit the online world are in fact elsewhere. There are a myriad web2.0 spaces that enable them to generate and share their own content in ways that they chose to amongst their own 'learning networks'.

The trends and tensions outlined above can be seen playing out in the Ultraversity project since 2003 (fig. 4).
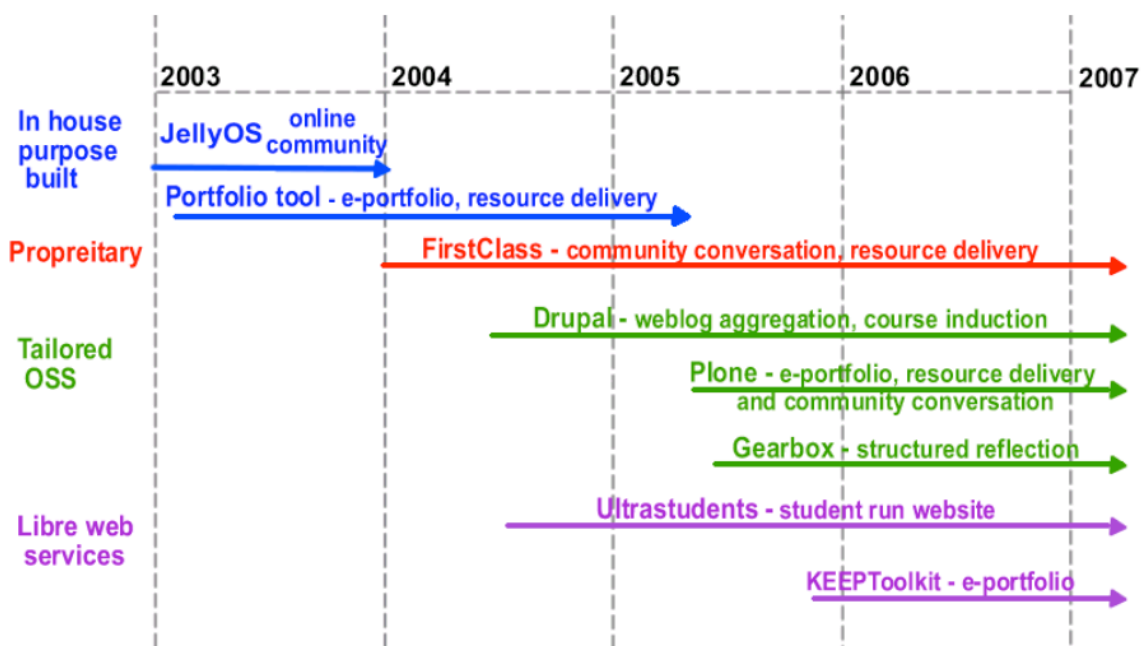
Figure 4 Evolution of Internet Technology Use

Initially there was a reliance upon in house purpose built tools and proprietary software. Although attractive in that it allows for a high degree of control over tools development, the resource requirements were significant making it an unviable approach. It was apparent that the next step was to harness the considerable potential resource savings offered by tailoring open source solutions (OSS) to our needs. An evaluation of options based upon technological, pedagogical and operational considerations identified Drupal as a web aggregator and as a vehicle for induction activities and the Plone content management platform for the realisation of our vision of a VLE.

Plone was selected as 'multilayered' technology providing a 'low threshold and high ceiling' (Papart, 1980) user interface with symmetry of use in the tools available to all user groups. Individuals with relatively low levels of technological ability have the ability to easily master a rich set of creative online tools and to develop 'virtual spaces'. Plone is supported by a strong open source community, and this should ensure that it is robust and likely to be a long lived platform.

With the increasing availability of 'libre' web services students developed their own community (www.ultrastudents.co.uk) where they could communicate outside the institution's provision. More recently, the Ultraversity project has itself adopted these libre web services such as KEEPToolkit, building their use into module activities as a formal part of the Ultraversity programme. Clearly there are advantages in terms of resource savings in using software developed and hosted by someone else, however there are also issues to overcome such as those posed by Quality Assurance and interoperability.

12 Concluding thoughts

Since the inception of this project, the www has evolved at a staggering pace. The use of learning technology in what seemed to be brave and experimental ways now appears 'pedestrian' when compared to what might be now possible.

The authors identify a vibrant academic discourse at the intersection of technology and pedagogy; however, they believe that adoption and innovation is located in isolated pockets of excellence only.

Findings from the first cohort of learners and the graduation of a large cohort indicate that our model of personalised work-based learning is successful for many students.

As the staff involved in the delivery of the degree have a well established background of working with online technologies and are an effective remote working team, there was little disruption in transferring to the Ultraversity approach. However we do not know yet how well a team used to conventional working practices would adjust to this technology based model of learning.

Developing learning technologies from scratch is attractive, as it allows for ultimate customisation, however, it can be consuming and expensive. Likewise, OSS software is also expensive to customise. Libre web services have become a viable alternative and offer tremendous opportunity for reducing the HE resource requirement. How sustainable this will be in the long run is unknown.

Our model of work-based learning has encouraged learners to take control of their own learning and explore beyond the 'approved' Internet technologies that we provide. We find that our learners are moving faster in their ability to explore and adopt Internet technologies than we as a project within an HE institution can.

The authors believe a step change in innovation and adoption will require a shift in how HE institutions view risk, "The fundamental barrier to change in education is the risk averse nature of the powers that be in a society that is characterised by risk" (Fryer, 2004). Rather than being perceived as the mavericks who threaten the wellbeing and reputation of HEI, risk takers should be nurtured and supported, their successes should be celebrated and no undue stigma should be appended to failure if institutions are to achieve successful innovation and widen their appeal to today's learners.

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How to represent adaptation in eLearning with IMS Learning Design, Daniel Burgos, Colin Tattersall and Rob Koper Educational Technology Expertise Centre (OTEC) The Open University of The Netherlands

Inter-disciplinary inquiry-based learning project (IDIBL)

Tuesday 28th August

1. Document purpose and assumptions

The purpose of this document is to form the basis of a dialogue between stakeholders and interested parties in the Inter-disciplinary inquiry-based learning project (IDIBL) project. The different sections describe and explain the position to-date and in some cases no more than a brief outline of the purpose of the section is included.

As a part of the project-planning phase, it is useful to identify and then clarify assumptions of the different groups including stakeholders, sponsors and the project team.

The innovation proposed in this document will benefit from the University's ethos as described on the web site:

"We show adaptability, rigor and flexibility in identifying and meeting the needs of individuals and organisations."

"We respect and value the traditional role and achievements of scholars and universities, while seeking to create a model of higher education which is focused on innovation and application."

And this document is based on the following assumptions:

1.   the work proposed by the IDIBL project forms part of the development plan for the University of Bolton;

2.   the IDIBL project scope, vision, goals and objectives are supported by the senior managers of the university;

3.   the existing quality assurance and validation mechanisms at Bolton University are willing to support and ready to take part in this innovation;

4.   administration support staff are available in finance, student recruitment, admissions, student services, information systems and technology;

5.   marketing and communications department will take part in the planning for this proposal in order to fit the student audience anticipated;

6.   staff working on the project will have a passion for teaching and learning and prepared for changes in working practice;

7.   online technology provision at the University of Bolton will over the next year develop in such a way that alternatives to WebCT are available by September 2008. Innovation in this project will be carefully considered for sustainability and wider adoption across the University of Bolton;

8.   where successful and sustainable, innovations in teaching, learning and course design are embedded in the University with participation from departments (see '3 Scope and Rationale' for further detail);

9.   the financial viability of developments should be evaluated and that the overall 'value proposition' to students, employers and university needs to be identified and reported;

10.   the project needs to run for five years to give time to gather significant data, report findings and make effective impact;

11.   this is a research project that will develop and run a Masters Level pathway as the focus for action in its research and;

12.   It is not the intention for IEC to become a significant teaching department.

2.   Background

The IDIBL project team was employed by the University of Bolton in the Institute of Educational Cybernetics (IEC) on the basis of work undertaken at Anglia Ruskin University in successfully developing a model for undergraduate study. The model developed successfully widened access and participation and also brought together and developed innovations in teaching, e-learning, and assessment.

Bolton University has a global reputation for technology-based learning leadership through IEC in its JISC-related work. The director of IEC identified the combination of experience and expertise as a significant opportunity for the University of Bolton to extending its status as a provider of professional work-based learning.

3.   Scope and rationale

Over the next 5 years the IDIBL project will research, develop and model new approaches to inquiry based learning to:

1. enhance the existing reputation of Bolton University, as a professionally-focussed university;
2. capitalise on the global reputation of the University of Bolton for technology-based learning leadership through IEC in its JISC-related work, by extending its status further for innovation in pedagogy at HE level and;
3. stimulate development across the University of Bolton successful models of e-learning and inquiry-based learning where appropriate.

Over the life-span of the project action research methodology will be used to develop and research the project aims and objectives. A pathway will be delivered as a means of modelling the ideas developed by IDIBL, but the IEC does not aim to develop more fully as a teaching department.

A model of learning and a pathway framework will be developed that can be undertaken at ages 14-90 from foundation through to a PhD level. The IDIBL project will develop and validate a new open framework that can be readily adapted by departments to their own subject disciplines and professional contexts of potential students.

This work is designed to act as a focus for departments who wish to develop their own

programmes and enhance the community of practitioners within the University of Bolton.

Research foci

Specifically the project will focus on researching and developing:

1. online communities of inquiry - learning and action learning sets, specialist guests, etc.;
2. use of emerging technologies - university supported core technology, social software, web services, etc.;
3. assessment - patchwork media - learning journals, formative, summative, peer, self, etc.;
4. 'teaching' strategies - facilitating reflective learning through modelling and intervention, etc.;
5. retention and progression strategies based on motivational approaches etc.;
6. widening access and participation - relevance of course, flexibility, etc.;
7. staff working practices - team teaching, collaborative assessment, etc.;
8. negotiated learning - work-based standards and competencies
9. progress files - Personal Development Plan (PDP), etc.;
10. workplace impact - learning for performance, etc.;
11. partners and stakeholders; HEI, professional bodies, employer engagement, etc.;
12. Student support for distance online students - student advisors, admissions, fees, etc.;

Ways of participation

It is anticipated that teaching departments at the University of Bolton will take advantage of the IDIBL project in different ways and these might include:

1. engaging with the ideas of the IDIBL project;
2. develop own modules to take on some of the IDIBL project methodology;
3. integrate selected IDIBL modules with existing department programmes;
4. developing own programme from validated modules and;
5. adopt practices from IDIBL that affect key issues such as retention.

4.   *Vision*

The vision that underpins this project is founded in the success of the Notschool.net project begun in 1998. The driving force for Notschool.net was that there should be an education for 'those for whom school did not fit' and that technology could make the organisation of this education possible. This same thinking is the basis for our vision, although adapted to the HE context and to the specific challenges found there.

The vision is comprised of the following statements of belief, in each case supported by recent successful experience:

- •   there are students for whom much university provision does not fit but who have the capacity to achieve when offered personalised learning;
- •   students can attain individual fulfillment in learning and at the same time make a positive impact in the home, workplace or society;
- •   facilitated community of inquiry, based on trust, respect and confidence, can raise the quality, depth and breadth of learning;
- •   assessment processes can and should inform support for learning and its application rather than distort or distress learning;
- •   negotiated learning and awards motivate agile and committed learning;
- •   university staff's interest in teaching and learning can be revitalised and job satisfaction improved;
- •   study which is inter-disciplinary and inter-cultural is of positive benefit to society and implies no reduction in standards;
- •   ownership of learning leads to confidence in lifelong learning through critical thinking and action inquiry;
- •   the application of online technology to knowledge creation & sharing is a given in present and future society. Citizens and professionals need an explicit conceptual knowledge of online technologies, rather than a tacit operational knowledge, in order to be most effective as technology change continues

5. *Aims*

These are the aims for the IEC in instituting this project as stated above:

1.   to enhance the existing reputation of Bolton University, as a professionally-focussed university;

2.   to capitalise on the global reputation of Bolton University for technology-based learning leadership through IEC in its JISC-related work, by extending its

status further for innovation in pedagogy at HE level and;

3.   to stimulate development across Bolton University of successful models of e-learning and inquiry-based learning where appropriate.

More specifically the IDIBL project aims to:

1.   establish a new framework for awarding qualifications at the University of Bolton which permits negotiation of learning and negotiation of award within a quality framework of standards;

2.   develop new partnership models to supplement those existing at the University of Bolton so that employers may engage with the scheme;

3.   evaluate this action research in order to improve access, retention and achievement for students identified as falling outside current provision;

4.   develop new approaches to online, distributed e-learning using existing and emerging technologies and;

5.   disseminate within the university and more widely the results of this action research.

6. Objectives, Deliverables and Roadmap for 2007-8

These objectives are broad and will necessitate a breakdown into sub-objectives with more detailed timelines and castings - this will form the planning documents outlined in Section 11 Implementation Strategy to be co-ordinated by those named in section 9 Roles and Responsibilities.

No.	Title	Objective	Start date	End date	Deliverables	IDIBL aim supported	Responsibilities
1	Project evaluation	Ongoing evaluation of the activities and deliverables of the IDIBL project	Sept 2007	July 2010	Yearly evaluation reports	1, 2, 3, 4, 5	Richard
2	Validation	Validate a	Sept	Mar	Approved	1, 2	Stephen, Richard

			2007	2008	pathway and module documentation		
		framework of modules that allow for study from foundation to professional doctorate level based on Interdisciplinary Inquiry-based Learning through online communities					
3	External partnerships	Investigate partnerships between Bolton University and other organisations to explore new forms of HE provision	Aug 2007	July 2008	Funding, letters of intent, contracts or offers in kind	2	Richard
4	Internal dissemination	Promote approaches developed by the IDIBL project throughout Bolton University	Sept 2007	July 2008	Adoption of methods proposed in other departments	5	Mark
5	Liaison	Liaise with Learning and Teaching staff and participate in internal conferences to keep them in touch with	Sept 2007	July 2008	High levels of internal awareness - noted on minutes of committees and in internal publications	5	Mark

			Sept 2007	July 2008	IDIBL developments		
6	Project research	Conduct research activity to evaluate the new Masters programme and to develop new organisational models for delivering such courses	Sept 2007	July 2008	Internal papers, conference presentations and published journal papers	2, 3, 4	Richard, Mark, Stephen
7	Market research	Investigate potential student, employer and other stakeholder reaction to the negotiated learning model around organisational improvement	Sept 2007	Nov 2007	Documents supporting validation process	1, 2	Stephen & Richard
8	Technological development	User focussed input into the specification of infrastructure based on IEC learning technology developments, university existing capacity and innovation	Jan 2008	July 2008	Infrastructure plan, equipment and technical support in place for delivery	4	Oleg, Stephen, Richard, Mark

9	External dissemination	To propose analysis, invention and results in peer-reviewed context and publish outcomes	Jan 2008	July 2008	Research reports in journals, presentations at appropriate conferences and web-based dissemination	5		Richard, Mark, Stephen
10	National and international policy	To join national and international advisory and policy making fora where possible to influence and explore new proposals	Sept 2007	July 2008	Membership of fora and attendance at meetings	5		Richard, Mark, Stephen
11	Implementation	Students recruited to first cohort of Masters programme	April 2008	Sept 2008	Minimum 30 Masters level students recruited	1, 3		Stephen, Richard
12	Marketing	Promotion and marketing of the course	Jan 2008	July 2008	Strategy developed and implemented with University of Bolton marketing department	1		Stephen
13	Website	Development of a project website for both internal and external	Oct 2007	July 2008	Hosted open source content management platform including	5		Richard, Mark, Stephen

		audiences to communicate the IDIBL project and disseminate research			aggregation of personal weblogs into community-driven website.		
14	Internal policy	Provide guidance on aligning IDIBL project with the University of Bolton policies and initiatives	Sept 2007	July 2008	Input into project steering group meetings	1, 2, 3, 4	Oleg

Task	Start	End
1) Project evaluation	03/09/2007...	30/07/2010...
Ongoing evaluation of the activities and deliverables of the IDIBL project		
2) Validation	03/09/2007...	25/07/2008...
Approved pathway and module documentation		
3) Partnership	03/09/2007...	25/07/2008...
Investigate partnerships between Bolton University and other organisations to explore new...		
4) Internal dissemination	03/09/2007...	25/07/2008...
Promote approaches developed by the IDIBL project throughout Bolton University		
5) Liaison	03/09/2007...	25/07/2008...
Liaise with Learning and Teaching staff and participate in internal conferences to keep them...		
6) Research	03/09/2007...	25/07/2008...
Conduct research activity to evaluate the new Masters programme and to develop new...		
7) Market Research	03/09/2007...	23/11/2007...
Investigate potential student, employer and other stakeholder reaction to the negotiated...		
8) Technological development	03/09/2007...	25/07/2008...
User focussed input into the specification of infrastructure based on IEC learning technolog...		
9) External dissemination	03/09/2007...	25/07/2008...
To propose analysis, invention and results in peer-reviewed context and publish outcomes		
10) External policy	03/09/2007...	25/07/2008...
To join national and international advisory and policy making fora where possible to...		
11) Implementation	03/09/2007...	29/09/2008...
Students recruited to first cohort of Masters programme		
12) Marketing	03/09/2007...	25/07/2008...
Promotion and marketing of the course		
13) Website	03/09/2007...	07/09/2007...
Development of a project website for both internal and external audiences to communicate...		
14) Internal policy	03/09/2007...	25/07/2008...
Provide guidance on aligning IDIBL project with the University of Bolton policies and...		

Gantt chart (2007 – 2009):

- Project evaluation
- Validation — Stephen
- Partnership — Richard
- Internal dissemination — Mark
- Liaison — Mark
- Research — Richard
- Market Research — Stephen
- Technological development — Oleg
- External dissemination — Richard
- External policy — Richard
- Implementation — Stephen
- Marketing — Stephen
- Website — Richard
- Internal policy — Oleg

11

7. Stakeholder analysis

A key stakeholder analysis will identify who in the University of Bolton has an interest or concern in the work of the IDIBL project.

Who	Title	Interest / concern
Dr Paul Birkett	Head of Academic Quality and Standards Unit	Validation process
Oleg Liber	Director Institute of Educational Cybernetics	Championing IDIBL project within University of Bolton
Andy Graham	Director Learning, Retention and Professional Practice	Linking activities with department initiatives
Sue Burkinshaw	Educational Development Unit Co-ordinator	Linking activities with 5 Learning and Teaching Fellowship posts
Dr. Peter Marsh	Deputy Vice Chancellor	University of Bolton strategic overview
Patrick O'Reilly	Head Information Systems and Technology	New technological developments
Tony Unsworth	Director of Finance	Sources of student funding - Hefce, fees
Sara Burgess	Head of Student Services	Student support
Carole Sykes	Head of Student Data Management	Maintenance students records, certification
Mike Lomas		
Hilary Birtwistle	Head of Strategy, Policy and Development Support	University of Bolton strategic overview
Prof. Rob Campbell	Director of Professional Research Development	???
Sam Johnson	Director of Arts, Media and Education	Departmental participation
John Blower	Director of Bolton Business School	Departmental participation
Alan Cornthwaite	Director of Built Environment and Engineering	Departmental participation
Prof. Elias Siores	Head of Centre Materials, Research and Innovation	Departmental participation
Dr. Margaret Boneham	Director of Health and Social Sciences	Departmental participation
Stan Oliver		

Part of the project work is to identify and build relationships with external partners who would benefit from association with the research and development and the ongoing course(s).

Some of the target organisations and existing discussions are summarised here:

Who	Interest/concern
Higher Education Funding Council	Innovation / employer engagement
Higher Education Academy	Innovation / online learning / inquiry based learning / assessment
Joint Information Systems Committee	Innovation / standards / infrastructure
Other Higher Education institutions	Innovation / partnership
Royal Society of Arts	New qualification / course to suit membership and development of 'pro-social action'
Macmillan Cancer Care	New qualification / course to suit Macmillan professionals
National Skills Academy for Manufacturing	New qualification / course to suit constituency
UNESCO	New global qualification / course
Naace / DfES / Partnership for Schools / GTCE	Continuing professional development for teachers in schools

8. Budget

In the year 2007-2008, the IDIBL project is centrally funded to the tune of 1.9 FTE staff on PL pay scale. To be added...

9. Accountabilities and reporting

The table below identifies project team responsibilities for particular aspects of the overall IDIBL project plan. As part of the work involved, individuals are responsible for formulating a plan that includes identified deliverables in line with the project objectives and managing the their own workload and others involved in the IDIBL project to achieve them. Although responsible for a particular aspect of the project, it is envisaged that there will be a high degree of co-operation and support between the

project team members and others in the IEC encouraged and supported by Oleg.

Monthly meetings on the first Monday of the month will be help between the project team either remote or f2f when the opportunity arises. This will offer a formal opportunity for the team to review progress against each of the areas 1-6 of the project plan and to take any steps that are necessary to keep the project on track.

Who	Accountabilities
Mark Johnson	14.1 Communication and Liaison
	14.2 Risk Assessment
Stephen Powell	
	14.3 Pathway Development
	14.4 Research
Richard Millwood	14.5 Project evaluation
	14.6 Partnerships
Oleg Liber	Synergies with IEC
	Sponsorship and championing within the University of Bolton

10. Project steering

A group comprising both internal and external stakeholders will meet three times yearly to review the overall progress of the IBIDL project and offer advice at a strategic level about how the project might best progress. In particular, they will bring to bear knowledge and expertise about the University of Bolton, e-learning developments, national policy relating to workplace learning and the needs of the workplace in terms of HE provision.

The composition of this group is yet to be decided.

11. Implementation Strategy

The sections below outline the content and purpose of separate documents that give detail about how the different aspects of the project will be implemented.

11.1 Communication and Liaison

This document will detail the development of the communication and liaison within Bolton University

including:

1. List-serve
2. Use of weekly bulletin
3. Teaching and learning conferences
4. SIG meetings
5. Workshops
6. Project website
7. Connect with professional development initiatives (teaching an learning fellows, etc...)

11.2 Risk Assessment

This document will detail the development of a risk assessment plan including:

1. challenges associated with such radical new degree programme and its implementation within a risk-averse and culturally conservative HE sector;
2. the need for negotiation around organisational improvement rather than subject discipline;
3. the level to which there is Bolton University department buy-in;
4. the infrastructure to carry out HE business fully online;
5. the marketing of a degree which does not match the current image of HE as a source of subject disciplinary authority;
6. the organisation, management and identity of HE staff delivering such a programme, however counterbalanced by experience in developing MA programme at Bournemouth University...
7. find appropriate mechanisms for marketing and sales of the new Masters course provision

11.3 Pathway Development

This document will detail the development of the generic pathway including:

1. Academic Development Approvals (ADA) process;
2. Academic validation as outlined by the "Guide to Policy and Procedures Relating to the Assurance and Enhancement of the Academic Standards and Quality of Taught Programmes of Study (the 'red book')":

   (i) Title Page (ADA3 form) (Annex I)
   (ii) Rationale, aims, intended learning outcomes
   (iii) Entry
   (iv) Curriculum structure and content
   (v) Learning and Teaching
   (vi) Assessment

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(vii)   Student guidance and support

(viii)   Management and organisation

(ix)   Resources

(x)   Maintenance and enhancement of standards and

3. development of a programme Handbook:

(i)   Brief welcoming statements

(ii)   General information on relevant personnel

(iii)   Opening hours of relevant offices

(iv)   Reference to (or inclusion of) policies and procedures

(v)   Communication systems

(vi)   Pastoral support and guidance

(vii)   Academic support and guidance

(viii)   Assessment procedures

(ix)   Attendance and withdrawal

(x)   Programme aims and objectives*

(xi)   Professional body or professional/subject association

(xii)   accreditation

(xiii)   Programme structure and content*, including all module

(xiv)   specifications

(xv)   Teaching and learning*

(xvi)   Assessment*

(xvii) Programme management and organisation

(xviii) Student representation and feedback

(xix)   Teaching rooms and learning resources

(xx)   Further information

4. Market research including competition and prospective students

5. Pathway budget

11.4   Research

This document will detail the development of a research plan that will:

1.   identifies foci for project research;

2.   identifies key conferences to attend;

3.   speaks to key communities of practitioners

4.   identifies outputs with time-frame;

5.   identifies relevant associations;

6.   disseminates through a project website;

7.   identifies SIG;

11.5   Project evaluation

This document will detail the development of a project evaluation plan that will:

1.   set realistic project targets;
2.   evaluate the performance of the project against the targets;
3.   report on findings;

11.6   Partnerships

This document will detail the development of a project partnership plan that will:

1.   identify potential partnerships;
2.   identify sources of funding or offers in kind

Meeting with Alan Cornthwaite

22nd January 2008

With Mark Johnson, Stephen Powell and Richard Millwood

1 The case for the Regeneration theme

a) Partners identified throught successful meetings with Bolton at Home, Oldham, New East Manchester

b) Toe in the water - Margaret Nelson's module designed to use the inquiry -based approach

c) Potential for GMSA student numbers and support

2 Finances

See spreadsheet attached.

3 Offer from IDIBL team

IDIBL team and Margaret will support the Built Environment team in validation, preparation, professional development and support, in essence supporting the costs of innovation

4 Ideas about delivery team in Built environment

The proposal needs someone to champion and lead the degree in preparation, recruitment, admissions and delivery.

This could be in the range of:

a) a part-timer from within the department

b) a full-time person from within

c) a new recruit as full-time senior lecturer

Our advice is that b or c is best.

IDIBL team will support member of staff.

5 Next steps

a) Formal market research with employers/potential students through Bolton at Home, Oldham and New East Manchester

b) Promotional event to run on 13th March

b) Formulate ADA1

c) Recruit students

Developing technology-enhanced, work-focussed learning: a Pattern Language approach

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Abstract: This paper identifies issues in developing a three-year duration, work-focussed undergraduate degree programme with a model of inquiry-based learning supported through online communities of inquiry. On the course, students examine their current work-practice to identify issues and then plan, implement and evaluate an improvement strategy. Negotiated learning activities and facilitated networking environments are key to providing students with a highly personalised and relevant learning experience.

Students were surveyed and interviewed through questionnaire, telephone and face-to-face meeting. Staff were asked to produce accounts identifying major issues within their particular role, describing and evaluating steps taken to mitigate them. In both cases, transcripts were examined using interpretive phenomenological analysis and this grounded approach was used to identify key issues.

The findings show that challenges for the improvement of the learning experience included a range of issues unified by concerns regarding diversity of approach and complexity. It is proposed that this was partly due to knowledge held tacitly but unarticulated. To improve practice, a Pattern Language approach is proposed. In order to articulate values and ideas, a Pattern Language category of Online Community of Inquiry is outlined.

These patterns are framed as instructions to inform an approach to new working practices, technologies and systems local to the context in which they were found. It is suggested that this approach helps teaching staff, developers, administrators, and students working together to understand and overcome problems in their own contexts, by adapting these and other patterns.

Keywords: work-based, inquiry-led, e-learning, action research, learning technology

1 Introduction

The four-year Ultraversity project ran between January 2003 and December 2006, it was devised to research new approaches to learning in Higher Education Institutions (HEIs) and to address the government priority for HEIs of widening participation and fair access (Higher Education Funding Council for England (HEFCE) Strategic Plan, 2005) based upon both national economic arguments as well as social justice values. The need to identify new ways for students to access higher education was given further prominence by Leitch (2006) who identified the need to increase opportunities for those in work to be skilled to graduate level and above through work-based routes. The authors would argue that to achieve this outcome, HEIs must explore approaches where technology is central to new models for learning.

The thinking behind the Ultraversity Programme design is briefly outlined. This paper is informed by the reported experiences of course staff and students on the degree programme using interpretive phenomenological analysis as a methodology. The findings show that challenges for the improvement of the learning experience included a range of issues unified by concerns regarding diversity of approach and complexity. The authors sought to develop an approach that made explicit the tacit knowledge and practices to address this issue.

A pattern language was developed to communicate the practices and processes of the online community of inquiry. Conclusions identify possible avenues for future research in both the development of patterns and their validation as a viable approach to progressing research into the use of learning technologies for self-organised learning.The methodology of interpretive phenomenological analysis is briefly explained. Findings are then presented as a Pattern Language. Conclusions identify possible avenues for future research in both the development of patterns and their validation as a viable approach to progressing research into the use of learning technologies for self-organised learning.

2 Ultraversity Programme Design

In the 1990s, Ultralab developed a series of action research projects to investigate online learning including addressing a wide range of constituencies including primary & secondary school pupils, teachers, business people, head teachers and trainee medical officers. The design of these projects was informed by concepts of action research and a common thread was the involvement of participants as co-researchers. The

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methodology for reporting outcomes was ethnographic and private, respecting the interests of participants whose detailed individual data was analysed and reported anonymously to the project's sponsors.
The overall effect was to create extensive tacit knowledge amongst Ultralab personnel that was both consensual and coherent (Millwood & Terrell 2005). This knowledge was developed within its own online community of practice through the very medium used in the projects listed. In this way shared values, effective ideas and well-developed debate informed the development of the Ultraversity course. A post-hoc summary of the ideas and values are presented below.

Ultralab's tacit ideas and values

1. People of a wide range of ages & backgrounds have the **capacity** and can build the **confidence** to operate & appropriate digital creativity tools & online communication environments
2. Online community requires **active facilitation** to develop thriving discourse and effective learning
3. Online community can operate at **large scale**
4. Participants can **co-research** (participants can share and form project goals, and undertake research)
5. The Hawthorn Effect can be used to r**aise self-confidence and achievement** (naming participants as researchers, mutual respect)
6. **Delight in learning** can be achieved through combinations of appreciation, interest, zest, conviviality, recognition and dissent.
7. Online community **learning depth** arises alongside **community strength**
8. Online community can provide a context for **practitioner knowledge** to partner academic knowledge
9. Learner activity in the form of **action research** with the intention to take action for improvements

The Ultraversity project developed a model that was a fully online, three-year-duration, undergraduate, work-place degree with students using inquiry-led approaches to learning. The experience was highly personalised and collaborative in nature, with students learning together as a cohort while studying in their own work context. This supporting network encompassed learners, course staff, as well as guest experts who

joined the community for a specific purpose and time. Facilitators helped students to engage in purposeful conversations and share resources with each other. For a full discussion of this project see Millwood, Powell, and Tindal (2008).

3 Pattern Languages

3.1 Introduction to Pattern Languages

The Pattern Language approach has been identified as one that enables discussion between all stakeholder groups with an interest in improving learning with technologies. The 'father' of Pattern Languages is the architect Christopher Alexander. In the 1970's he became concerned about the way in which the design process of living spaces had changed from one whereby those who live and use the buildings, streets, parks, etc. were primarily responsible for their design to one dominated by architects, town planners, and other professionals. He developed the idea of a structured template where

> "Each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice."
>
> *(Alexander et al., 1977)*

Taken as a whole, the individual patterns describe a Pattern Language of inter-related patterns with different hierarchical relationships to each other.

The Pattern 'formula' developed by Alexander:

a. Picture: showing archetypal example of that pattern
b. Introductory paragraph: sets the pattern in context with other larger patterns
c. Headline: giving the essence of the problem in 1/2 sentences
d. Body of the problem: "describes the empirical background of the pattern, the evidence for its validity, the range of different ways the pattern can be manifested in a building, and so on."

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    e. The solution: "...the heart of the pattern - which describes the field of physical and social relationships which are required to solve the stated problem, in the stated context. This solution is always stated in the form of an instruction - so that you know exactly what you need to do, to build the pattern".

    f. Diagram: "which shows the solution in the form of a diagram, with labels to indicate its main components."

    g. Related patterns: a paragraph linking to smaller patterns that complement this pattern

3.2 Why a Pattern Language Approach?

It is important to identify the relevance of pattern languages to the work we are undertaking although a detailed discussion is beyond the scope of this paper.

As observed by Alexander (1999), the element first and most enthusiastically grasped by developers and programmers is that "It allows you to write down good ideas about software design in a way that can be discussed, shared, modified, and so forth. So, it is a really useful vehicle of communication." However, there are other dimensions to a pattern. These include: a moral component; the aim of creating a coherence between things; and thirdly the generativity of the pattern - that is does it enable people who live in the spaces to be the creative force of "morally sound objects".

Patterns are contextual and intended to be adapted and applied by those who use them. Collections of patterns combine to give a pattern language and through a process of following the 'instructions' within the patterns a 'nourishing' living space can be designed.

The patterns will address human behaviours and organisational issues. In our context of online communities of inquiry, stakeholders include programme designers, technical developers, learning facilitators, student researchers, and administrators who all need to be able to engage with the implementation and adaption of the patterns.

> "So, one of the efforts of the pattern language was not
> merely to try and identify structural features which would
> make the environment positive or nurturing, but also to
> do it in a fashion which could be in everybody's hands, so
> that the whole thing would effectively then generate
> itself."
>
> *(Alexander, 1999)*

This pattern language should provide enough detail to be useful, but not so much that it becomes too complex for it to be understood and implemented.

3.3 Example Pattern Languages

For Goodyear and McAndrew (2007) the use of Pattern Language is seen as an alternative approach "to capture knowledge from designers and share them with practitioners." This desire to find new ways of describing learning activities is fuelled by the problem of developers engaging with practitioners around the concept of Learning Design, which is an attempt to capture a formal description of learning with technologies that can then be shared and modified by different users using different tools.

From their perspective, "attempts to engage practitioners in the learning design approach have met with only partial success. This is a reflection on learning design being a developing area, but also could be an indication of more fundamental difficulties with the transfer of vocabularies and methods from an expert group to wider use." For Goodyear and McAndrew, a strength of a patterns approach is the ability to co-construct patters collaboratively to create a pattern that "is not intended to supply a complete solution but rather to give enough guidance to support human intervention and variation in each reuse." Their patterns are categorised into tasks to be set for students, ways of organising students or roles of students and the tools required in the networked learning space to enable the interactions to occur. The categories and identified patterns indicate a top down and 'teacher led' approach.

Wilson (2008), in developing Patterns of Personal Learning Environments recognises the need for user lead generative opportunities "people construct the environment for themselves: the tools they choose, the communities they start and join, the resources they assemble, the things they write." Wilson proposes two pattern categories: patterns of personal tools and patterns of the learning networks with which such tools interact in both informal and the formal institutional context.

The e-Len project (2005) that was a large EU funded project has attempted to author design patterns. In this example, special interest groups (SIG) were established around the categories: Learning resources and LMS (9 patterns); Lifelong Learning (24 patterns); Collaborative Learning (5 patterns); and Adaptive Learning (6 patters). In the most part, the patterns are immature, of varying quality and without a clear context for their empirical background of the problem. Arguably, this may be a result of the construction methodology around SIG that required compromise in their construction. None-the-less, they are of use to anyone wishing to understand some of the issues and opportunities that may arise in developing programmes of online learning.

In discussing the development of their pattern language for computer mediated interaction, Schuumer and Lukosch (2007) identify three distinct layers that address different user groups as an attempt to bridge the gap between users and developers. The highest level of abstraction "Community Support" are primarily aimed at end users and their behaviours, the middle level of abstraction "Groups Support" address the design of particular aspects of the human-computer interaction, and the low level abstraction "Base Technology" which addresses the tools and consequently is aimed primarily at developers. Within these layers patterns are clustered into topics and relationships with other topic clusters identified giving a comprehensive set of sevent-one patterns.

Of particular relevance to this paper are the highest and middle levels as they address human behaviours and organisational issues that are of central importance to developing the Ultraversity online communities of inquiry.

4 Methodology

4.1 Approach

The findings in this paper are based upon research using an adapted form of Interpretive Phenomenological Analysis (IPA). IPA was developed in the mid 1990s by Jonathan Smith (Smith 1999) and is itself a hybrid of systematic and naturalistic inquiry. In this approach, data collection and analysis goes through a number of detailed stages in order derive meaning

from the text. The approach is informed by the philosophical stance of phenomenology and focuses on how an individual makes sense of experience. Interpretation is the key concept, both by 'subject' and researcher. Smith sums it up as:

> "An attempt to unravel the meanings contained in accounts through a process of interpretative engagement with the text and transcripts." *(ibid)*

4.2 Data collection

The authors are aware of the issues around taking a top-down approach and the implications this has for validity consequently a wide range of stakeholders were consulted; the authors' experience, as practitioner researchers directing, developing and facilitating the course, was augmented by data from students and course staff. An online questionnaire presented in July 2006 to students was completed by some 65 of a potential 142 respondents in July. Follow-up semi-structured interviews of 15 students carried out in September 2006 developed a richer understanding. These interviews were conducted using Skype and WireTap Pro software for recording; the recordings were then transcribed. This data was further augmented by semi-structured interviews with 19 graduates of the programme; these were carried out at the graduation ceremony on 26 November 2006 and were recorded on video then transcribed. Except for the initial online questionnaire, in each case, the questions were designed according to IPA methodology to be open-ended and expansive in their opportunity for subjects to comment on the course freely. Course staff, including the authors of this paper, were asked to complete a semi-structured written response; of a potential 21 respondents 10 were completed.

4.3 Analysis

The authors already subscribed to the research strategy for the Ultraversity project and this directed the research assumptions. These centred on the question, 'Is our model of collaborative learning supported through communities of inquiry an effective interpretation of personalised learning?' Two assumptions that are focused on here are that we had developed an appropriate technical and organisational infrastructure for undergraduate study and that we had designed the course to enable effective integration with students' work through personalisation. The

three authors met and discussed these assumptions in order to ensure these were articulated before analysis.

Discussions were carried out using Skype as the medium for synchronous verbal discussion, Google Docs and Spreadsheets were used collaboratively to discuss and consolidate concepts, analyses and conclusions. The authors transcribed the data pasting each whole conversation into a Google spreadsheet. In this first stage analysis each author individually noted emerging themes. Second stage analysis was carried out using Skype to discuss key titles emerging from our thematic notes in the spreadsheets - such titles were characterised by the team as 'floating to the top', capturing the essence of the transcript's meaning. Our goal was to find titles that were high-level enough to allow theoretical connections, but that were still grounded within the data. Finally the titles were discussed and the authors undertook a process of developing 'super-ordinate concepts' to organise all the themes. These were then re-checked against the raw data in transcripts to ensure they were accurate and grounded.

The super-ordinate concepts allowed the authors to identify pattern titles that were then used as the basis for the construction of a high level Pattern Language.

4.4 Limitations

In undertaking this approach and employing the IPA methods, the authors were conscious of a number of limitations inherent in the approach itself and in this particular exercise as outlined below.

a) The selection of student interviewees was based on volunteer students rather than a random sample; we did not seek students who had dropped out. Some justification for this can be found in our intention to conduct an Appreciative Inquiry, looking for what works rather than uncovering failure.

> "The traditional approach to change is to look for the problem, do a diagnosis, and find a solution. The primary focus is on what is wrong or broken; since we look for

> problems, we find them. By paying attention to problems,
> we emphasize and amplify them. …Appreciative Inquiry
> suggests that we look for what works in an organization.
> The tangible result of the inquiry process is a series of
> statements that describe where the organization wants to
> be, based on the high moments of where they have been.
> Because the statements are grounded in real experience
> and history, people know how to repeat their success."
>
> *(Hammond, 1998)*

b) The authors maintained a theoretical stance on the language analysed as being fair representation of 'inner states' - this view may be challenged particularly as the students were discussing issues with their tutors, and thus may have been anxious to please.

c) IPA can be critiqued in that the subjects' accounts rely on detailed experiences of participants, which in turn depend on the subjects' memory, ability to communicate and use of language. The students and staff in this study were highly competent and articulate and the authors felt that their accounts were likely to be valid for these reasons.

4.5   Approach to Pattern development

The development of the pattern language was based on both the authors experience gained in over a decade of Ultralab work and from the data gathered from staff reflecting on their recent practice working in the Ultraversity online community of inquiry. The authors were variously involved in the Ultraversity project providing perspectives from a number of roles; director of research, project director, technical development, and learning facilitators.

The methodological approaches for the construction of pattern languages are varied. Either constructed from an empirical base or invented and then tested for validity at a later date. In this case, the approach was that of a 'bricoler', using empirical data that was interpreted by the experience of those working the Ultraversity project in different capacities as well as taking inspiration from other related pattern languages identified in section 3.3 Example Pattern Languages.

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5 Findings

In a prior study of student experiences on the same course, Millwood, Powell and Tindal (2008) identified eleven overarching themes from an analysis of student interviews. Analysis of the data in the study based on staff interviews evidenced clear alignment with the earlier study based on student interviews. This alignment was seen both in the issues identified and the reflections on those issues. The predominant issues arose from complexity rather than from failure, i.e. the course was considered to be following an appropriate direction but systems put in place were perceived, by a significant proportion of staff and students, as too complex. There were also significant issues raised relating to the implementation of innovation in the face of institutional restrictions. Many students identified issues relating to complexity as barriers to their learning and staff as barriers to the efficacy of their teaching.

5.1 Evolution in use of Virtual Learning Environments and other software frustrated pedagogical aims

As the course evolved through the use of alternative Virtual Learning Environments (VLEs), the issue of moving from one set of rules, tools and affordances to another was embraced and celebrated but also seen as a source of great frustration for staff and students. The data indicates that as we progressed through VLEs there was some polarisation around favoured systems consequently some felt resentment and others relief when faced with change.

"I believe I am fairly technically competent, but I found it difficult to keep switching platforms, particularly with regard to resource creation and retrieval, and being clear about which tool was most appropriate to each particular purpose......Change is always hard and seems to polarize views - so students became fierce advocates of their chosen platform and closed to the benefits of the alternative system. This is a difficult one to deal with but definitely seemed to stifle thriving communities because the change in medium seem to kill the message."

(Facilitator, 2007)

5.2 Developing a common pedagogy in a team teaching approach was challenging but fruitful

From inception we acknowledged there would be a range of pedagogical approaches favoured by individual team members; we saw this as a potential strength bringing richness and diversity to the student experience. We were aware of the potential weakness as far as parity and a risk of non-parallel student experiences. A coherent team teaching approach was invoked with the intention of reducing the risks and of maximising richness. The data indicates that this approach worked well although there were issues ...

"I had to learn to teach wholly in the textual medium (I never experimented with podcasting which on reflection was short-sighted of me). I was a teacher used to relying on my personality and although this transferred into online contexts also, it was different – I had to be careful of joking or being irreverent about authority. It is easy to do that in a conversation but harder when all you say is recorded in black and white for all to see for all time."
(Facilitator, 2007)

5.3 The flexibility of learning asynchronously conflicts with the inflexibility demanded by fair assessment

On the inflexibility of institutional needs:
"The Quality Assurance procedures in relation to submitting work for assessment were relatively inflexible and for many good reasons, such as the need to be sure that work submitted was done so on time and was not subsequently altered. Clearly, for students wishing to work using Web 2.0 technologies this proved difficult with work either having to be rendered into a format that could be submitted or the extra work of creating zip files of offline web site submissions"
(Facilitator, 2007)

5.4 Students valued 'patchwork' assessment, but this challenged markers

On the patchwork text assessment:
"Many students found value in devising alternate genre pieces and presenting them using rich media. Presentation of sections of work as videos, magazine articles or news bulletins demands precision and required students to reduce complex situations to their key elements. The activities highlighted the value of being concise and precise and of examining situations for alternative perspectives. The issues we faced as

assessors were objectivity and equivalence; how many words is an animation worth?"
(Facilitator, 2007)

5.5 Facilitators recommend measures to increase coherence and consensus

This is a summary of the recommendations made by facilitators from the data collected.

1.   Staff induction mechanisms - clarify expected approach, ensure adequate buy-in to new approaches and ensure they are co-owned by the team.
2.   Team teaching approach - negotiate agreement of pedagogical approach; leaving room for individual personality/skills to be deployed, carry out parity check through regular monitoring.
3.   Put a clear system in place - define parameters of freedom and control, establish clear roles and expectations, team teaching, QA /alignment and monitoring.
4.   Organise an aligned team with an adequate scope of skills and specialisms, ensure these are visible, available and effective.
5.   Inspire collaboration and trust at the heart of the team to ensure viable team teaching
6.   Facilitate community learning through clear and consistent modelling of behaviour, coherent and consistent pedagogy, one to many communications, many to many communications, expertise in VLE technology, protection and support of staff, systematic framework.

6 Conclusions

Most dominant in the findings was the issue of diversity in staff expectations on the themes identified above in the Findings, such as induction, team teaching, assessment, facilitation of online community. The diversity in expectations was clearly also driven by complexity in our approach. Informally, the project could be accused of changing too many variables at once. Although Ultralab had established a coherent set of values and ideas for online learning, these were held tacitly by individuals and needed further clarification and most importantly, articulation. In practice such ideas also required consistent modelling by team leaders and

reference to formally articulated procedures. Argyris, Putnam & McLain Smith (1985) explained this phenomena as two different "theories of action": espoused theory as an articulation of the values that they believe their behaviour is based on; and theory-in-use which are the values that their behaviour implies. To the individual, there is no contradiction as discovered in the research reported below. In order to articulate practice these values and ideas more clearly for subsequent development, the idea of patterns has been adopted and a Pattern Language for Online Community was developed. The patterns we propose fall into an identified category of Online Community of Inquiry. They have the specific purpose of informing the organisation of formal collaborative learning within a facilitated and structured online space with clearly defined intentions. The diagram below provides an overview of the pattern 'Nurture Online Community'. Further detail of a selection of the patterns can be found in the appendices.

Nurture Online Community of Inquiry
Deep learning arises alongside strong community

1.1 Work Together
Collaboration of staff, team teaching, cooperation amongst students.

1.2 Actively Facilitate.
Establish shared goals and expectations inspiring mutual respect and valuing others.

1.7 Model the Reflective practitioner. Outward self critique, critiquing others and taking responsibility to be a reflective action researcher.

1.3 Organise Community.
Many to many communication, confidence and competence in using technologies.

1.6 Value Practitioner Knowledge alongside academic knowledge.
Peer learning, expert input and applying theory in practice.

1.4 Create motivation and Perseverance. Acting to improve retention, providing moral support, creating delight.

Fig. 2 Diagram of top-level patterns to Nurture Online Community of Inquiry

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The first three patterns – '1. Nurture Online Community of Inquiry', '1.1 Working Together' and '1.5.1 Learning Sets' are included below together with an overview of the set of patterns.

The next steps in this research are to refine the patterns through evaluation with the Ultraversity staff team as well as students of the online community of inquiry. The refined results should provide a clear set of practices and processes for an approach to online learning in HE. Ongoing work will be to implement the patterns in the communities to assess their effectiveness in attenuating the complexities that arose from the Ultraversity model.

7 Appendix 1: Patterns

	Pattern 1. Nurture Online Community of Inquiry
a. Picture	There is no picture - this an abstract organisational pattern.
b. Introduction	This pattern is located under the Online Communities of Inquiry category. It is the only pattern at this level.
c. The Essence of the Problem	Learning can be ineffective and marginal when it is individual, competitive and isolated. The challenge is to create a social and interpersonal activity of regular dialogue, reflective practice and moral support.
d. The Problem in Detail	Learning organisation is traditionally designed to highlight individual endeavour, define a common curriculum and ensure achievement is assessed reliably through controlled conditions. Schools, colleges and universities achieve this in face-to-face contexts by timetabling, identifying class sets of similar capability and examinations. The problem is that this does not suit all learners' learning style, contextual needs or personal circumstances. This is evidenced in the difficulties faced by learners who are not taking opportunities in statutory or further and higher education. In particular, this pattern addresses the needs and opportunities of higher education, which can address social challenge in a context-based, action-research and online environment. This pattern defines a different view, that learning should be idiosyncratic, tuned to practitioners in context, placing responsibility on learners to negotiate process, content and award to fit their needs.
e. The Solution	This pattern proposes to nurture online community of inquiry. Use online technology to permit rich dialogue and many-to-many discussion and also to free individuals from travel and timetables. Create community to make effective use of peers, both for moral support, cooperation and as sources of experience and expertise. Establish community and learning organisation, which facilitates the negotiation of individual inquiry, the sharing of intermediate activity and the exhibition of results.
f. Diagram	Refer to the diagram that relates all the patterns to this pattern see Fig 2
g. Related patterns	1.1 Work together 1.2 Actively Facilitate 1.3 Organise Community

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	1.4 Create Motivation and Perseverance 1.5 Organise learning 1.6 Value Practitioner knowledge alongside academic knowledge 1.7 Model the reflective practitioner

	Pattern 1.1 Working together
a. Picture	There is no picture - this an abstract organisational pattern.
b. Introduction	This pattern is a sub-pattern of the Nurture Online Communities of Inquiry pattern. Other patterns at this level include: 1.2 Actively Facilitate 1.3 Organise Community 1.4 Create Motivation and Perseverance 1.5 Organise learning 1.6 Value Practitioner knowledge alongside academic knowledge 1.7 Model the reflective practitioner
c. The Essence of the Problem	Cooperation between students and collaboration between staff is not normally achieved and is reported to be particularly difficult in online learning contexts.
d. The Problem in Detail	Teaching is usually organised to meet the needs of timetabling, to deliver lectures or lessons and to offer limited personal support in individual tutorials. Preparation and marking is also undertaken individually and this can be difficult. Learners are normally expected to work as individuals, but on the same content at the same time - this can lead to temptation to plagiarise and disaffection through irrelevance to individual interest. Workers in the field of online learning report cooperation and collaboration to be difficult to achieve in asynchronous remote learning.
e. The Solution	This pattern proposes that staff should collaborate closely. This entails treating teaching acts as joint objectives that require ongoing monitoring together in a team. Such acts include admissions, planning, preparation of materials, facilitation, organising, formative assessment, and marking. Responsibility should also be placed on students to cooperate in their learning acts. These include moral support, critical dialogue, sharing resources and ideas and celebration of success. Learners should be required to evidence their cooperation and

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	participation as part of the learning outcomes of the course. Staff performance review should include specific criteria related to teamwork.
f. Diagram	Refer to the diagram that relates all the patterns to this pattern see Fig 2 above
g. Related patterns	There are no smaller patterns defined in relation to this category.

	1.5.1 Learning Sets
a. Picture	There is no picture - this is an abstract organisational pattern.
b. Introduction	This pattern is a sub-pattern of 1.5 Organise learning
c. The Essence of the Problem	High quality, constructive, critical feedback is essential for an online community of inquiry. Without challenge from different perspectives the work produced will be of a lower standard.
d. The Problem in Detail	There are many facets to undertaking an inquiry, and at each stage critically reflective evaluation is an essential component. Feedback from several perspectives, from community members with different expertise and experience, is the most valuable. Both giving and receiving of feedback are valuable mechanisms for developing criticality in students. Audience size and trust are factors that impact on learner's willingness to feedback. If the feedback process is to be effective critique must be given in a safe environment; one where those giving and receiving trust each other to be supportive; consequently locating the feedback in a community space with a large membership is likely to lead to selective and possibly limited engagement with the process.
e. The Solution	Establish learning sets with 5 members. Contract the members to support each other for a defined minimum level of commitment and with a group ethos of critical friendship. This should include offering as well as receiving critically constructive feedback. This activity should initially ? be supported by someone with expertise in the process who can model the behavior required as well as explain the process and why it is valuable. Feedback should be targeted on particular aspects of the work as required by module tasks or as identified by those receiving the feedback. All feedback must have the aim of creating the maximum possible positive impact. In giving support: - identify strong aspects of work - suggest alternative approaches based on experience - identify inconsistencies - challenge unfounded assumptions - offer supportive critique rather than aggressive criticism In receiving support: Accept that feedback is offered in the spirit of critical friendship, it is what is said that is being criticized rather than who said it.

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f. Diagram	Refer to the diagram that relates all the patterns to this pattern see Fig XX
g. Related patterns	1.3.1 The 'Hotseat' expert guest
	1.3.2 Asynchronous Conversations
	1.3.3 Online Identity
	1.5.2 Workplace advocate
	1.5.3 Module design
	1.5.4 Summative Assessment
	1.5.5 Awards and Recognition

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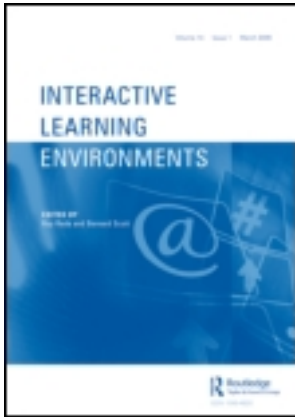
Interactive Learning Environments

Personalized learning and the Ultraversity experience

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Personalized learning and the Ultraversity experience

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This paper describes a model of personalized work-integrated learning that is collaborative in nature, uses emerging Internet technologies and is accessed fully online. The Ultraversity project was set up by Ultralab at Anglia Ruskin University to develop a fully online, 3-year duration, undergraduate degree programme with an emphasis on action inquiry in the workplace. The course design aimed to provide a highly personalized and collaborative experience. Students engage in the processes of inquiry together as a cohort, making it possible to collaborate and support each other in the online communities. The focus of this paper is on three aspects of personalization: students' use of technological infrastructure to develop online communities; integration of study in the workplace; and the work–study–life balance. Students were surveyed and interviewed after completion through questionnaire, telephone and face-to-face meeting. Transcripts were analysed using interpretive phenomenological analysis. This grounded approach provided evidence of impact of the design on personalized learning. The course design made the assumption that blended learning was not necessary to ensure a rich learning experience and would be a barrier to those who could not attend, and this decision is vindicated by the accounts of participants. It was also confirmed that facilitated online communities can be used to support deep learning that is focussed on action inquiry in diverse and individual workplaces. The course was designed to impact on both the work practices of the individual and the wider institution. Participants reported this as a strength. Overall, the evidence presented shows that a course design that emphasizes a high degree of trust in students' ability to self-manage learning can lead to a challenging, personalized and rewarding online student experience. Students demonstrated high levels of competence in managing work, study and life. This assertion is further borne out by the high degree of success achieved in terms of outcomes, judged by the degree results obtained by the cohort studied.

Keywords: e-learning; community of practice; community of inquiry; personalization; online learning; action research

Introduction and background

The 4-year Ultraversity project started in January 2003, was devised to research new approaches to learning in Higher Education Institutions (HEIs) and to address the government priority for HEIs of widening participation and fair access (Higher Education Funding Council for England (HEFCE) Strategic Plan, 2005) based upon both national economic arguments as well as social justice values. The project was based upon the premise that conventional models of study at university fail to meet the needs of a significant number of potential students and their employers.

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This view is supported by a 2006 publication by the Department for Education and Skills (DfES) on widening participation in higher education (HE) that identifies "gradual progress has been made in broadening the socio-economic make-up of the student population, but progress has been too slow and may be levelling off". Amongst other suggestions, the same report also encourages educational institutions and employers to "explore new 'Earn to Learn' models whereby employees' higher-level skills needs can be met through combinations of earning and learning". In short, not enough progress is being made towards widening participation and achieving fair access to HE. If long-term goals are to be met; different approaches to HE will be required.

The authors of this paper would argue that for a significant group of students face-to-face (f2f) attendance can be perceived as too expensive and the removal of employees from the workplace for up to 3 years can be problematic. Alternatively, choosing to study part time whilst remaining at work is perceived by many as being too long term. In both cases study foci on many courses is often theoretical with little authentic practice based learning.

We believe that meeting the demands of these students requires approaches that are personalized. For Ultraversity this means giving students choices about what, how, and where they study. The design anticipated that there were students who needed to continue earning whilst learning and that the inability to do so had prevented them from realizing their ambitions.

The traditional subject disciplinary approach to HE learning prepared students well for specific futures in an era where "a job for life" or a career in academia was a common expectation of HE learners. A growing requirement is the ability to remain in the workplace whilst studying, to earn a living, and keep up-to-date with fast changing professional contexts.

Employers are becoming increasingly sophisticated in their expectation of training, Charles Jennings (2006), Global Head of Learning Reuters identifies an evolving need:

> What is in fact required in organisations is a change from training for skills to 'learning for performance'.

Barnett (2005), argues in his conceptualizing of today's university that "The knowledges to be found in the university may be growing at a rapid rate but they will—we now have to recognise—always fall short of mirroring all of the knowledges in modern society." When discussing teaching, he describes a significant change in the mindset required from "knowledge about the world" to "being-in-the-world" has to take primary place in the conceptualizations that inform university teaching.

Middlehurst and Woodfield (2007) report "Responding to the Internationalization Agenda: Implications for Institutional Strategy" identifies changes in the international environment for HE in the UK. Key points identified are the increasing demand from students for international HE and the competition between institutions for this business. These are increasingly sophisticated students who are demanding modes of delivery more accessible than the traditional travel to study in another country model.

Emerging communications technologies and the changing demands of students are shaping a global learning landscape for the twenty-first century. If UK HEIs are to continue to meet the needs of today's learners as well as the challenge set out by the Leitch

report (2006) to secure the "economic and social health of the UK" they must explore approaches where technology is central to new models for learning.

It is against this background that the Ultraversity project was conceived, its overarching ethos was to offer a university experience to some of those for whom current university provision did not fit. In this respect it subscribed to the values and ideals of the Ultralab research team (Millwood & Terrell, 2005).

The project was set up by Ultralab at Anglia Ruskin University to explore the development of a fully online, 3-year duration, undergraduate, work-integrated degree with students using action research methodology. The experience was designed to be highly personalized and collaborative in nature rather than individualized and isolated. Students engage in the processes of inquiry together as a cohort collaborating and supporting each other while studying their own work context.

Review

Harvey and Norman (2005) use the term "Work-Integrated Learning" (work-based learning) when describing the Open University's development of a generic learning framework that has the potential to be adapted to a wide range of subject specialisms. As its starting point, this approach has much in common with the Ultraversity model with the emphasis on the motivational imperative of self-direction, learning from experience, and problem or task-focused orientation for the adult learner, drawing on Knowles' (1984) theory of Andragogy.

By developing a generic framework for work-integrated learning, it is possible to use a wide variety of settings to enable the student to gain HE credits through their work experience.

Treating the undergraduate as a "student researcher" takes the earlier idea one step further in that it allows the learner a high level of discretion in identifying relevant theories and models and applying them to authentic learning opportunities in their workplace. The emphasis of this approach is on the students' ability to critically evaluate their activities in the work environment.

Another active area of research into personalization of the learning experience is through computer-interpreted behaviour and includes work on IMS Learning Design and a long tradition of approaches under the term Adaptive Hypermedia.

Burgos, Tattersall, and Koper (2006) discusses personalization in terms of adaptation identifying three agents in this process including the learner, the teacher, and the set of rules derived from other stakeholders. For them this approach to personalization is seen as problematic from a resource and time standpoint as mediation between agents would necessarily be complex. IMS Learning Design offers the possibility of a technological solution to adapt the learning experience offered.

There is a clear attraction in this approach for a programme of learning based around a subject-discipline with content that is predetermined and where student study contexts are closely aligned. The complexity of research-driven learning makes it more difficult to design adaptive systems. The Ultraversity project has chosen not to pursue this route, instead achieving personalization through a process of dialogue-based negotiation between learner and teacher.

Coats and Stevenson (2006) explain this as a process whereby "both teacher and student play an interactive role, in which teaching and learning are seen as complex and socially mediated". In the online context, Stephenson (2001) identified the particular challenge of aligning the expectations of learners with those of the teachers in terms of

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approaches to teaching, learning, and assessment to be taken when student and teacher do not meet f2f but communicate via the Internet.

Model of personalized work-integrated learning

Overview

The model adopted by the Ultraversity project has combined and extended tried-and-tested methods found elsewhere in HE as well as developing new approaches in teaching, learning, and assessment. There is an emphasis on the social, interactive and conversational nature of emerging web-based services and tools, sometimes collectively referred to as "e-learning 2.0" (Downes, 2006).

Negative publicity surrounding the failure of the UK e-University discouraged many UK institutions from seeking to deliver wholly on-line based courses (Middlehurst & Woodfield, 2007). As a result, blended learning with mixed modes of delivery became the safer option and has gained a high level of currency in many institutions. From the outset, the Ultraversity project made the deliberate choice to develop a fully online programme in order to reach an audience of students for whom blended and f2f approaches did not fit (Figure 1).

These approaches are explained in more detail in the following sections.

Personalized learning

The Ultraversity model for curriculum design consists of a series of "open" module frameworks with generic outcomes. Learners identify subject knowledge that is relevant to
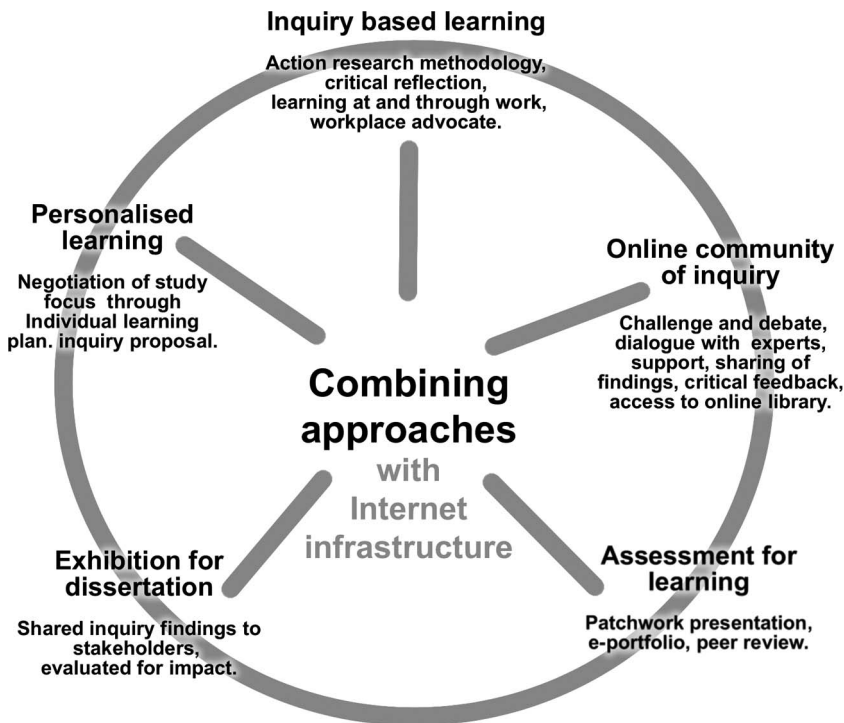
Figure 1.   Model supporting work-integrated learning.

their own context and needs. Through a process of negotiation with teaching staff they develop a set of learning activities recorded as Individual Learning Plans (ILPs) or inquiry proposals.

The processes of "learning" and "inquiry" define the content of the degree with a focus on a practical understanding or "knowing why and how to" in their chosen discipline. Inquiries are authentic and embedded in the daily work of the learner and enable them to meet the requirements of the modules and assessment criteria.

The exit survey of the first cohort indicated that 86% of the students surveyed believed personalization was a significant feature of their experience and 77% that their study was relevant to their needs.

> I felt that the Ultraversity programme was ideally suited to me because I run my own business and therefore I was able to tailor the work to not only benefit myself but also to target specific areas of my organisation.

> The plans made it possible to tailor to my own needs. The title "Work Place" degree says it all really, in every module we were encouraged to make it relevant to our situation and the Individual Learning Modules were constructed around this ideal. This made the tasks more relevant; I could see that the results would really make an impact, so I put even more effort into them. It didn't seem selfish to study. The Learning Facilitators offered great support and encouragement, they allowed the researchers to learn from each other, and discuss difficult issues, in my opinion this was the best possible help. I learned a great deal from researchers in the online community, deep issues were discussed.

Harvey and Norman (2005) report similar findings "Students have described how they were highly motivated by the fact that their learning in the workplace was valued and could be used within their higher education award."

Inquiry-based learning

This is based upon Action Research methodology that has an emphasis on critical reflection on an individual's work practices and inquiry into their work context. This leads to action that is planned, implemented and evaluated with the intention of making a positive impact on their work—learning for performance. John Dewey, in declaring his pedagogic creed in 1897, made it clear how vital it is to take such a learner-centred view:

> In sum, I believe that the individual who is to be educated is a social individual and that society is an organic union of individuals. If we eliminate the social factor from the child we are left only with an abstraction; if we eliminate the individual factor from society, we are left only with an inert and lifeless mass. Education, therefore, must begin with a psychological insight into the child's capacities, interests, and habits. (Dewey, 1897)

This approach is also designed to enable students to effectively integrate study and work-place activities with the support of a "workplace advocate" who is identified by the learner as someone who can help them with work place practicalities rather than as a mentor.

Online community

Garrison (2006) summarizes the characteristics of a Community of Inquiry (CoI) as:

> A community of inquiry needs to have clear expectations as to the nature of critical discourse and their postings. Participants need to be aware of the academic objectives, the phases of

inquiry, and the level of discourse. These educational challenges raise the importance and role of teaching presence. The distinction between facilitation and direction must also be clear from a design perspective. Teaching presence must consider the dual role of both moderating and shaping the direction of the discourse. Both are essential for a successful community of inquiry.

Wenger (2007) explains Community of Practice (CoP) as "The basic idea is that human knowing is fundamentally a social act". More specifically, "Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly". A process of negotiation and resultant "meaning making" defines the community. This ongoing interaction changes the identity of the individual and their relationship to the group as a whole and its other members.

Drawing on the CoP model, Ultraversity developed a CoI that placed less emphasis on the directional aspects of the instructional role and instead focuses on the importance of modelling desired behaviours such as critically reflecting on their own experiences. Labels for individuals such as teacher and student diminish in significance as all community members adopt different roles according to their knowledge, experience and changing identity. Individual's membership of different online and f2f communities allow for the opportunity of cross pollination of ideas and experiences.

The Ultraversity model provides access to module learning resources and participation in the online communities 365 days a year enabling students to have a high degree of control over the management of their learning both as individuals and collaboratively. This is in contrast to the restrictions typically enforced by Virtual Learning Environments (VLEs) that enrol users onto a particular unit of learning and allow access to resources and activities over a limited period of time corresponding to the delivery pattern of a programme.

The facilitation team intentionally created an environment where trust and critical friendship could grow and contribute to the development of the community, anticipating a successful environment for deep learning based on work undertaken in the Talking Heads Project (Chapman & Ramondt, 2005). Researchers (students and facilitators) work and learn together in an online community environment where social construction of knowledge is realized through collaboration and critical friendship between learners.

The course designers valued unstructured or "chance dialogue" (Powell, 2004) where learners initiated their own conversations, but also designed an experience that had opportunities for purposeful conversations initiated by teachers (Laurillard, 2002). This was achieved through the development of a facilitated online "community of inquiry" where a rich experience of challenge and debate, support, sharing findings, critical feedback, access to online library, and conversations with invited experts could take place. The exit survey indicated that 62% believed that the level of collaboration was significant and some 35% that there was some collaboration with 3% believing there was no collaboration at all.

Experts join the communities to "host" focused conversations that engage learners in critical dialogue. This is not a "lecture" by an expert broadcasting their predetermined content to a captive audience, but an opportunity for learners to direct the conversation to meet their own needs:

> I found them quite helpful, I would look through the questions and answers and posed some myself, it was good to talk to an expert.

Assessment for learning

The project required the development of an assessment regime that supports the aim to widen access to HE on a national and international basis. Part of this approach was to attract students whose attitude to examination was negative, possibly because of experiences in previous periods of study. There are no timed examinations; students were encouraged to express themselves using an e-portfolio approach making use of alternate genre, rich media and technology such as video, audio, websites and weblogs. These multimedia supported their own choice of preferred modalities of expression supporting an assumption that this was a key personalization issue. The online technology-rich model was evolved from the idea of Patchwork Text (Winter, Parker, & Ovens, 2003), with its emphasis on a reflexive approach and the use of creative imagination, peer review and discussion.

> It's time we found an alternative to the student essay. For tutors across the country, it's marking time again and, reading essays, we realize that many of our students have yet again taken refuge in "surface learning". (Winter, Parker, & Ovens, 2003)

Student researchers assemble pieces of work for each module in their assessment e-portfolio with a "retrospective commentary", which "stitches" their artefacts together synthesizing ideas and forming conclusions. This concluding activity should provide an honest view of the learning journey including learning from failures, celebration of success and identifying new questions for future inquiries. The exit survey indicated that 88% of students believed that they had developed critical thinking skills that were transferable to different contexts. Students are encouraged and credited for experimenting with Internet technologies that support their inquiries and creative expression.

Exhibition for dissertation

Towards the end of the programme, learners are required to construct an exhibition of their findings primarily based upon the final year of their studies but drawing on the whole 3-year experience. The exhibition is given to an informed audience identified by the learner, wherever possible in their place of work. Critical evaluation of the exhibition by the audience helps validate their findings.

Through this process learners demonstrate to themselves and stakeholders the progress they have made in terms of personal growth, and in their ability to perform in their work role. Initial findings indicate that students are engaging with the notion of being a lifetime learner. The exit survey indicates that 72% believe that study has had a positive impact on their career development with 49% reporting a positive impact on their salary already—that is before their degree was awarded. The exit survey indicated that 70% believed that impact on the workplace was significant.

> The module requirements were generic, but the personal application of those requirements meant that I could tailor them to suit my needs and those of others in my school.

The focus of the individual students exhibition is analysed later and indicates the breadth of themes and workplace contexts in which the model developed can be applied to workplace learning. Students selected the topic for their inquiries based upon their self-identification of real workplace issues. A process of negotiation with learning facilitators then honed the focus on the inquiry and the activities to be undertaken (Table 1).

Table 1.   What action did student researchers take?

What did they study?		Action enquiry titles analysed by principal theme and workforce for 148 researchers in their final year, 2006 total in each workforce							
		1	2	10	1	13	3	1	117
Total in each theme	Workforces themes	Care	Charity	Early years	HE	Health	LEA	Research	School
4	Assessment					1			3
3	Behaviour								3
17	Communication			3		1	3		10
2	Community				1			1	
2	CPD								2
8	Environment	1							7
6	Inclusion					1			5
28	Learning			3		4			21
19	Literacy								19
13	Management					5			8
1	Multicultural								1
2	Numeracy			1					1
9	Parents			3		1			5
17	Pastoral		1						16
5	Resources		1						4
7	Special needs								7
5	Teaching								5

The analysis also underlines the relevance of the topics they negotiated to their workplace.

Internet infrastructure

The Nesta Futurelab publication on Personalization and Digital Technologies (Green, Facer, & Rudd, 2005), argues that ''The logic of education systems should be reversed so that it is the system that conforms to the learner, rather than the learner to the system'', and that in the formal context this is still largely unrecognized.

There is already a high degree of personalization in the experience of ''lifewide learners'', as Downes (2006) observes; despite the rapid increase in educational institutions adoption of Internet technologies, most people who inhabit the online world are in fact choosing to use a myriad of Web 2.0 technologies. These spaces enable them to generate and share their own content in ways that they chose to amongst their own ''learning networks''.

The trends and tensions outlined earlier can be seen playing out in the Ultraversity project since 2003 as displayed in Figure 2.

Initially there was a reliance upon in-house purpose built tools and proprietary software. Although with the benefit of allowing for a high degree of control over the development of tools, the resource requirements were significant higher for the in-house purpose built tools making this an unviable approach.

It was apparent that the next step was to harness the considerable potential resource savings offered by tailoring open source solutions (OSS) to our needs. An evaluation of options based upon technological, pedagogical and operational considerations identified

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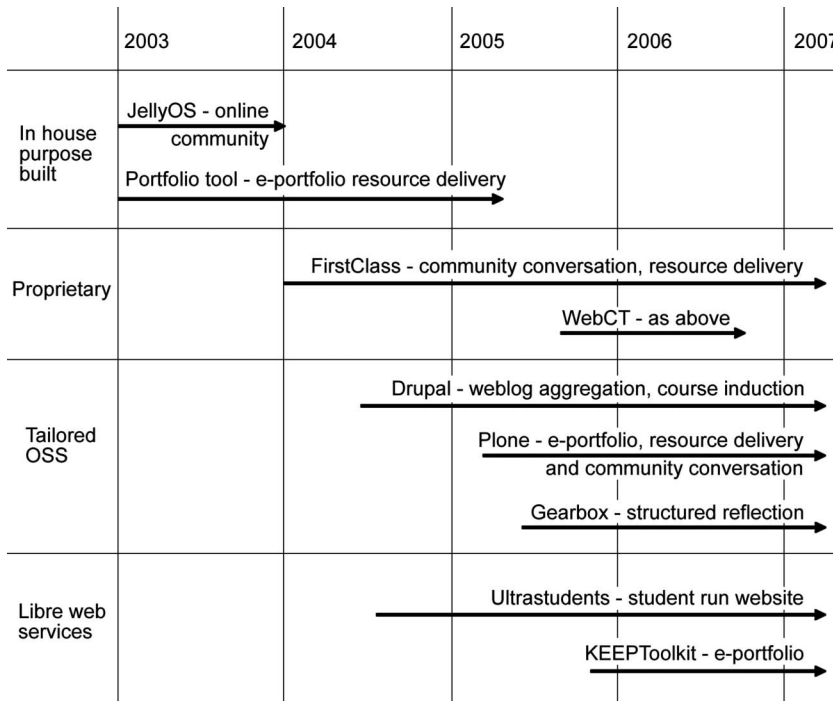
Figure 2.   Evolution of internet technology use in Ultraversity.

Drupal as a web aggregator and as a vehicle for induction activities and the Plone content management platform for the realization of our vision of a VLE.

Plone was selected as "multi-layered" technology providing a user interface with "low threshold and high ceiling" (Papert, 1980) and symmetry of use in the tools available to all user groups. Individuals with relatively low levels of technological ability have the ability to easily master a rich set of creative online tools and to develop "virtual spaces". Plone is supported by a strong open source community, which should ensure that it is a robust and long-lived platform.

With the increasing availability of "libre" web services students developed their own community (www.ultrastudents.co.uk) where they could communicate outside of the institution's provision. More recently, the Ultraversity project has itself adopted these libre web services such as KEEP Toolkit, building their use into module activities as a formal part of the Ultraversity programme.

Clearly there are advantages in terms of resource savings in using software developed and hosted by someone else. However there are also issues to overcome such as those posed by quality assurance (QA) and software interoperability. For example, it is essential that work submitted for assessment is in a format that is easily accessible to assessors and external examiners. It is a requirement that assessment products such as websites are not worked on after the deadline. If these processes cannot be automated through software interoperability, there is a significant amount of additional work to be undertaken.

An overarching consideration was the responsibility these tools placed on the student researchers to develop Web 2.0 technology skills and prepared them for a future of

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autonomy, continuing development and "mash-up"—the combination of online tools to produce a coherent and linked set of information or functionality.

Methodology

Approach

The findings in this paper are based upon research using an adapted form of Interpretive Phenomenological Analysis (IPA). IPA was developed in the mid-1990s by Jonathan Smith (Smith, Jarman, & Osborn, 1999) and is itself a hybrid of systematic and naturalistic inquiry. In this approach, data collection and analysis goes through a number of detailed stages in order to derive meaning from the text. The approach is informed by the philosophical stance of phenomenology and focuses on how an individual makes sense of experience. Interpretation is the key concept, both by "subject" and researcher. Smith sums it up as:

> An attempt to unravel the meanings contained in accounts through a process of interpretative engagement with the text and transcripts. (Smith et al., 1999, p. 189)

Data collection

The authors' experience as practitioner researchers developing and facilitating the course, was augmented by data drawn from an online questionnaire presented in July 2006. The questionnaire was completed by some 65 of a potential 142 respondents in July. Follow-up semi-structured interviews of 15 students carried out in September 2006 developed a richer understanding. These interviews were conducted using Skype and WireTap Pro software for recording, the recordings were then transcribed. This data was further augmented by semi-structured interviews with 19 graduates of the programme, these were carried out at the graduation ceremony in 26 November 2006 which were recorded on video and transcribed. Except for the initial online questionnaire, in each case, the questions were designed according to IPA methodology to be open-ended and expansive in their opportunity for subjects to comment on the course freely.

Analysis

The authors already subscribed to the research strategy for the Ultraversity project and this directed the research assumptions. These centred on the question, "is our course design, as described in more depth earlier in this paper, effective in meeting the needs of the population of students we had targeted?" Two assumptions which are focussed on here are that we had developed an appropriate technical and organizational infrastructure for undergraduate study and that we had designed the course to enable effective integration with students' work through personalization.

Discussions were carried out using Skype as medium for synchronous, verbal discussion and Google Docs and Spreadsheets to share concepts, analyses and conclusions.

The three authors met and discussed these assumptions in order to ensure these were articulated before analysis.

The authors then transcribed the data pasting each whole conversation into a Google spreadsheet. In this first stage analysis each author noted emerging themes as an individual.

Second stage analysis was carried out using Skype to discuss key titles emerging from our thematic notes in the spreadsheets—such titles were characterized by the team as "floating to the top", capturing the essence of the transcript's meaning. Our goal was to find titles that were high-level enough to allow theoretical connections, but that were still grounded within the data.

Finally the titles were discussed and the authors undertook a process of developing "superordinate concepts" to organize all the themes, using the raw data in transcripts to check back that the essence of these was accurate and grounded.

Limitations

In undertaking this approach and employing the IPA methods, the authors were conscious of a number of limitations inherent in the approach itself and in this particular exercise as outlined later.

(a) The selection of interviewees was based on volunteer students rather than a random sample, we did not seek students who had dropped out. Some justification for this can be found in our intention to conduct an Appreciative Inquiry, looking for what works rather than uncovering failure.

> The traditional approach to change is to look for the problem, do a diagnosis, and find a solution. The primary focus is on what is wrong or broken; since we look for problems, we find them. By paying attention to problems, we emphasize and amplify them. . . . Appreciative Inquiry suggests that we look for what works in an organization. The tangible result of the inquiry process is a series of statements that describe where the organization wants to be, based on the high moments of where they have been. Because the statements are grounded in real experience and history, people know how to repeat their success. (Hammond, 1998)

(b) The authors maintained a theoretical stance on the language analysed as being fair representation of "inner states"—this view may be challenged particularly as the students were discussing issues with their tutors, and thus may have been anxious to please.

(c) IPA can be critiqued in that the subjects' accounts rely on detailed experiences of participants, which in turn depend on the subjects' memory, ability to communicate and use of language. The students in this study were highly competent and articulate and the authors felt that their accounts were likely to be valid for these reasons.

Overarching themes

Analysis of the data collected reveals 14 overarching themes, these are outlined in Table 2 that encapsulate the student experience of the course. The themes that emerged are described, it will be clear to the reader that there are a complex set of interrelationships between them. Broadly, the themes have been ordered to reflect a move from the personal to the interpersonal (themes 1 to 6). Then from social in the private online community and workplace (themes 7 to 10), to public in the sense of wider recognition (theme 11). The authors believe that the analysis of data presented is significant in that it reports the students' experience of e-learning in the course, confirming the value of some elements of the design but also challenging the authors assumptions and extending their thinking.

Table 2.   Overarching themes emerging from analysis.

Overarching themes	Description
1. Personal affective drivers	Feelings and attitudes reported by students to explain the way in which they had made their personal learning journey.
2. Access through choice and opportunity	Choice to study at a time, at a pace and in a place that suited the student and the opportunity to fit this with the need to work.
3. Managing work–study–life balance	Managing the competing demands of work, study, and family commitments.
4. Quality of learning	The development of critical thinking skills, reflective practice and the ability to both receive and offer challenging feedback to peers.
5. Individual support from family, workplace and students	Support directed at an individual level from family, friends and workplace colleagues including material support from the employer. Individual support from another student on the course.
6. Individually negotiated study relevant to work	Module design to ensure negotiated and agreed learning activities would support and be integrated with normal work duties.
7. Online community	Diverse group of individuals were facilitated to create and sustain an online community to support each other towards their shared objective using a range of online and communication tools.
8. Sharing knowledge about practices and domains	Shared work practices and module requirements promote a rich dialogue and exchange of ideas and experiences leading to theoretical understanding about practice and study.
9. Affirmation by voice of authority	Desire for affirmation through the authoritative voice of Ultraversity staff and consultation with outside expertise.
10. Framing of expectations	Clearly presented and highly visible expectations of what is required of the students and for students to address these expectations explicitly in negotiations around study, in rounding up assessment, and in behaviour protocols in the online community.
11. Recognition by self, family, the workplace and academia.	Throughout the Ultraversity experience, students grow in their recognition in relation to: Self—personal fulfilment, self esteem and greater confidence; Family—graduation marks the crowning moment; Workplace—elevated status and career progression; Academia—graduateness and validation as an action researcher.

Discussion of selected themes from the table of overarching themes

A detailed explanation and discussion of all of the themes is beyond the scope of this paper and they will be reported on at a later date. The focus of this paper is on two sets of personalization related themes:

- the integration of study in the workplace and the work–study–life balance (themes 2, 3, 5 and 6);

- the students' use of technological infrastructure to develop the online community (themes 7, 8, 9 and 10).

The discussion later does not set out to quantify the strength of the findings. However, research by Ormand Simpson (2006) at the Open University indicates that external sources of support are an important factor in students study and in descending order of importance students at the Open University value support from families and friends; from tutors; from other students; from employers; and finally from the institution directly.

Integration of study in the workplace and the work–study–life balance

Themes 2, 3, 5 and 6 are strongly related to the way in which the course and the students' behaviour could offer a way to study when f2f university attendance had been ruled out. Even when learning is designed to integrate with work there are significant challenges—this section discusses how they have been met.

Theme 2. Access through choice and opportunity

Some students reported that the opportunity to integrate work and study, to continue to earn while they learn was a key factor in their access to HE.

> It was a long-term aim of mine to achieve a degree but there was no way I could afford to give up my job and go and study for 3 years full time. So when the flyer fell on the staff-room table, it was really you know the answer for me. It was the right route.

Theme 3. Managing work–study–life balance

Once the student had made the decision to embark on this kind of learning journey they needed to achieve a satisfactory integration of work, study and life. Evidence from the data indicated that the course design offered a means of resolving this equation. Students identified the importance of support from their family and time management strategies:

> Get the family on your side—you need their support first and foremost—however do not neglect the family. Keep a strict Ultraversity working time table—that way the family gets to spend some guaranteed time with you.

Students appreciated the move away from traditional system of time bound taught sessions towards facilitated online community based learning where interactions are predominantly asynchronous. This enabled them to interact at times that fit with their work and life commitments. An effective integration of work, study and life was possible for most students; the data indicates that strong commitment from all stakeholders is influential in the successful management of the competing demands of work, study, and family.

Theme 5. Personal support from family, workplace and students

Students found support received from family and workplace helped manage their learning journey. Factors mentioned that relate to workplace commitment included the permission

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to carry out research in the workplace, time to study, understanding and engagement from colleagues and financial support from the institution:

> It was a difficult journey really, but but manageable due, thanks to the support of my family and also my work colleagues. I was very well supported by the Head of the Centre throughout my degree and she actually paid for the training completely and was very supportive in any research I needed to carry out during the degree.

Asynchronous online community based learning was an important factor in enabling them to devise study patterns that fitted with family life. We found evidence that sharing and caring was a successful mechanism for social support with students empathizing with each other, developing a sense of fellowship and deriving momentum from this.

> I also found out the online community was very good because it meant that we could find out we are all there together there are other people like myself who had children, who were out at work and they pushed me on.

Deep and trusting relationships developed between students, this level of bonding enabled challenging discussions and arguments; students found this application of critical thinking skills to be a valuable study support mechanism.

> Support from fellow researchers was really important, in my case there were a few of us ploughing our own furrow. We formed really close working relationships, we challenged each other, without those relationships I think the outcome of my degree might have been different. I needed the sharp questioning.

Theme 6. Personally negotiated study relevant to work

Individual students say they appreciated the opportunity to negotiate their approach to learning for each module and so tailor their study to fit their work context, they also discuss the importance of having a degree of choice over when to study. Students reported their studies were directly relevant to their workplace and had significant impact.

> I felt that the Ultraversity programme was ideally suited to me because I run my own business and therefore I was able to tailor the work to not only benefit myself but also to target specific areas of my organisation. The combination of having key submission dates for modules together with setting my own intermediate milestones worked well since I was able to flex my research around my work and family commitments whilst still ensuring that I achieved the module deadlines. The need to look closely at my strengths and weaknesses helped determine my learning requirements.

Students' use of technological infrastructure to develop the online community

Themes 7, 8, 9 and 10 illustrate the way in which the openness of the organizational and technological design permitted outcomes that were determined by the choices made by the students.

Theme 7. Online community

The Ultraversity online community comprised a diverse group of individuals who worked in different enterprises, with different roles, and individually selected focus of study. The envisaged role of the facilitator was to create and sustain an online community where all

participants, students, facilitators and expert witnesses, would support each other towards the shared objective of creating a vibrant and effective online community of learners using a range of online and communications tools available to them. Active facilitation was a key element of effective online community.

> Learning facilitator support was excellent, from our designated learning facilitator and those in other cohorts, I would use mailboxes and just thought someone was there all the time. I thought it was really good.

As discussed earlier, technologies were chosen that would enable a high level of student control over the shape and nature of the learning environment. In addition, other technologies outside of the project offering were also encouraged.

Strong friendships and trust developed between community members through both informal social interactions and study related discussions between students and learning facilitators.

> I personally got a lot out of it. I mean, I like speaking to people in an online community and I like being able to help people. I chatted a lot online to people and emailed people and I felt I was able to support other people who perhaps were less confident in an online communities and I think, they appreciated that. I got a lot of positive feedback of that and we all learnt from each other and by opening up discussions in FirstClass, we got to know one another on a personal level.

> Oh yes, yes. We had lots of laughs, I mean, we shared sort of funny emails and we talked [about] what we did at work and the silly things the staff did at school to annoy us. We brought our own personal experiences in to it and all of that helped us to develop that deeper relationship which I felt, personally helped my learning experience but I think also helped other people who were perhaps less confident.

> I meant, I could see over the three years how peoples' confidence grew because we were such a friendly bunch of people and we got on so well together, we trusted each other. I definitely think that the interaction between all the members in our learning set was beneficial it was useful to bounce different ideas of people, it was useful to have some feedback from other students about the work we were doing and I don't think, I think without that interaction we would have found it very difficult to continue through to the end and to succeed as we have. I think the online community, it helped you, you didn't feel so isolated.

Ways of participation were multi-faceted. Some students preferred to make their presence in communities with large memberships, whilst others preferred small learning sets where a deep level of trust between members was reported.

> I think there were many people online who ... last year, if I hadn't had people in my learning set questioning what I xxx and giving me the opportunity to answer their criticisms with my own thoughts and feelings humm and in that way I think my overall performance improved because of it.

The technologies used enable students to create their own spaces for interactions and both friendship and study groupings also develop on their own reflecting student preferences for the nature of interaction. Some prefer high levels of participation, others to focus purely on course related discussions.

> I found collaboration with other researchers a great strain and avoided it most of year 1 and 2. Fortunately in year 3 I got on well within my learning set so I was able to relax a bit and be more participative.

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A few chose to arrange private f2f meetings with fellow students who they were working with online. Most exciting was the development of student-led online community using publicly available software creating their own "mash-up". This came about as a reaction to some students dissatisfaction with the management of the Ultraversity communities. Students created their own supplementary community "Ultrastudents" using Yahoo groups and also including other technology such as blogs and wikis.

Theme 8. Sharing knowledge about practices and domains

For others, the expectation of collaboration through course requirements unlocked the value of online community learning and sharing knowledge about practices and domains of interest drawn from their work activities bringing theory to life when applied to the workplace.

The level 3 exhibitions provided a mechanism for students to explain to their workplace, what they had been studying and to engage their colleagues in challenging professional discussions. Organizational impact was reported with policies or strategies developed by students being adopted across their organizations.

> the great thing is learning from experience and taking that experience into ...

> ... from everybody elses' views, when you go online and you gain gain experience from everybody elses' views that is that is

> and work experience as well. You know, going to work and sharing your experience with colleagues as well. Did you find that that helped?

> I did, yeah. To be able to compare my experiences with theirs and researchers online it really helped me to relearn what I already known, if you like, to confirm what I have already known and then cascade that information back down to other work colleagues as well to help them in their role

> Initially, I felt strange putting questions and participating in the online community with virtual strangers and also sharing what was sometimes sensitive work related information. The main strengths are being able to compare different viewpoints especially with fellow researchers working in a similar environment.

Theme 9. Affirmation by voice of authority. Theme 10. Framing expectations

Garrison, Anderson and Archer's CoI and Lave and Wenger's CoP discussed earlier provide valuable points of reference. Arguably, the Ultraversity community exhibits the characteristics of both types. For example, it is clear from this evidence that in terms of teaching presence students' desire clearly presented and highly visible expectations of what is required (Theme 10. Framing expectations) as identified by Garrison et al. In addition, there was evidence that students welcomed the hotseat expert witnesses bringing authority to discourse (Theme 9. Affirmation by voice of authority).

Learning facilitators provide formative feedback instilling confidence to the student that they are meeting the requirements of the modules.

> This [hotseat] was a wonderful way to obtain valuable experience from someone who had been there and done that—the contributions were so worthwhile and fears and problems with the particular subjects were alleviated.

> I used them [hotseats] for different reasons. I used them to gain insight from an expert and hear what they have to say. I remember the one on Action Research, because I had read all of

these books and using that and listening to him and how he saw it just made that a lot cleared and I found it really useful, it developed my ideas by running them by an expert, I found that really useful. Discussing the ideas and listening to other people, gave me other ideas to consider that I hadn't thought of before. A bit scary to start with but I got over that as I needed them answering. The one about the Exhibition was extremely useful.

However the role of the facilitator as a moderator and shaper of the direction of the discourse identified by Garrison; a teacher centric approach, does not accord with either the model developed for Ultraversity nor the reported student experience.

Conclusions

The evidence from our analysis and findings from the Ultraversity project is that a powerful motivational and creative force is there to be unlocked by creating a degree organization and design that emancipates learners and permits a high level of personalization. With this freedom comes responsibility and challenge to the student that was met in most cases with adaptability and positive action, supported by all the actors surrounding them.

The programme design enabled students from a wide variety of workplace contexts and work roles to study together as a part of an online community. A range of software was deployed to support this community. With explicit focus on this software as part of the course design, students proved capable of adapting and adopting this range of infrastructures and collectively implementing their own community spaces using publicly available online tools.

The evidence confirms that students can "learn while they earn", that is studying full-time and working full-time and that it is effective to negotiate study to fit work. The precept that such learning could take place substantially in the workplace was supported; the extent of the integration with, and impact on, work practice was greater than anticipated.

Evidence from student researchers showed that it is possible to study fully online and manage the work–study–life balance. Multiple supporting roles were identified as essential components of this learning approach. These roles were fulfilled by those at home including family and friends, fellow students engaging in social discourse and critical review, online community facilitators and external experts.

The development team felt that the Ultraversity project was an important but potentially high risk exploration and they did not anticipate the amount of self-organization and hard work exhibited by student researchers. The high levels of achievement in terms of degree results and career progression confirmed that the model is a potent source for innovation in higher education.

Further research

The data generated by this study deserves further analysis, and in particular the authors anticipate further findings in the themes not discussed here: theme 4—Quality of learning; theme 11—Recognition by self, family, the workplace and academia.

Suggested foci for future action research include:

- develop the Ultraversity model to other contexts including study below undergraduate level and to MA and doctoral level;
- approaches to non-accredited organizational learning and development.

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Acknowledgements

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The student as researcher - action for improvement in the workplace

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INNOVATORS WANTED
to improve practice in learning with technology

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Background

1. A research & development project from 2003-2007
2. Successfully developed & delivered **work-focussed** degree
3. Focus on learners' **action to improve** 'work' context
4. Located in the **discipline of action research**
5. **Self-organised** learning at work and home
6. Collaboration in an **online community of inquiry**
7. 3 years **full-time**

The Ultraversity Project identified a need for higher education for working people, who could not afford to be at university due to financial , family or access issues.

The development began in earnest in January 2003, accelerated to recruit before July 2003 in order to satisfy the university's need to fulfil HEFCE targets.

The major work of the project has been the development of the BA (Hons) Learning Technology Research. The motivation to improve the 'work' context is the students' driver and the degree is intended to equip students to do this whilst learning and throughout life.No subject is specified, but action research is the core discipline in this fully online course. The first face-to-face meeting for many is the graduation ceremony - 120 of 140 turned up for the first major ceremony in November 2006. The degree was first validated in May 2003 and then a second time in 2005, due to the university deciding to re-validate all programmes.

In July 2006, the first cohort of 148 student researchers graduated, as a part of a pathway of around 300.

This first product was the BA programme, but in 2005/6 Ultralab acted as consultants to Bournemouth University in the development of an MA in Creative Media Practice, intended for professionals in the broadcast, film and other entertainment industries, whose workplace was the essential place to learn and for whom attendance could be difficult.

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Which students?

1. Need to continue in full-time paid employment

2. Wish to make their study directly relevant to work

3. Campus attendance difficult; family commitments, etc

4. Develop further their communicative creativity & technological understanding as a complete professional

5. Traditional examinations and academic essay writing are either intimidating or uninviting

6. Seeking the company, support and intellectual challenge of fellow students and the possibility to study collaboratively

Flexibility in:	Benefits for:		
	Student	**University**	**Employer**
Time	Full time work, family, best time for learning	Timetable, staffing flexibility	No release needed
Place	As above and best place to study	No rooms, no car parking	As above
Assessment	Finding voice, creativity, technology	Retention, graduate competencies	Communicative employees
Negotiated curriculum	Motivation, perseverance, meaningfulness.	Retention, focus on process quality, relevance to society.	Relevance
Action Inquiry	Basis in 'delight' - zest and interest	Practitioner data eg collection of case studies	Effective improvement

Programme aims

1. Subject their practice to **self-examination**, as well as the **examination of peers**

2. Develop the ability, and confidence to **influence and improve practice within their work setting**

3. Become **articulate, critically reflective problem solvers** within their work context

4. Be an **active member of a lively online learning community**, with collaborative learning through reflective dialogue with peers and affective / social support

5. Become **autonomous, self-directed, critical, and reflective individuals**

6. Analyses the values, and moral and **ethical dilemmas** surrounding work-place practice.

The learning facilitator engages in a process of negotiation and contract setting to identify the focus of an inquiry around the students' 'work' and the opportunity to improve some aspect.

Students are required to justify data collection methods, use relevant literature, employ best practice and engage with theoretical concepts & analysis informed by critical reflection, based on their and found evidence.

The course is founded on a purposeful online community with the inclusion of experts to offer knowledge & peer review and facilitators modelling criticality & assuring 'graduateness'.

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Action inquiry-based learning
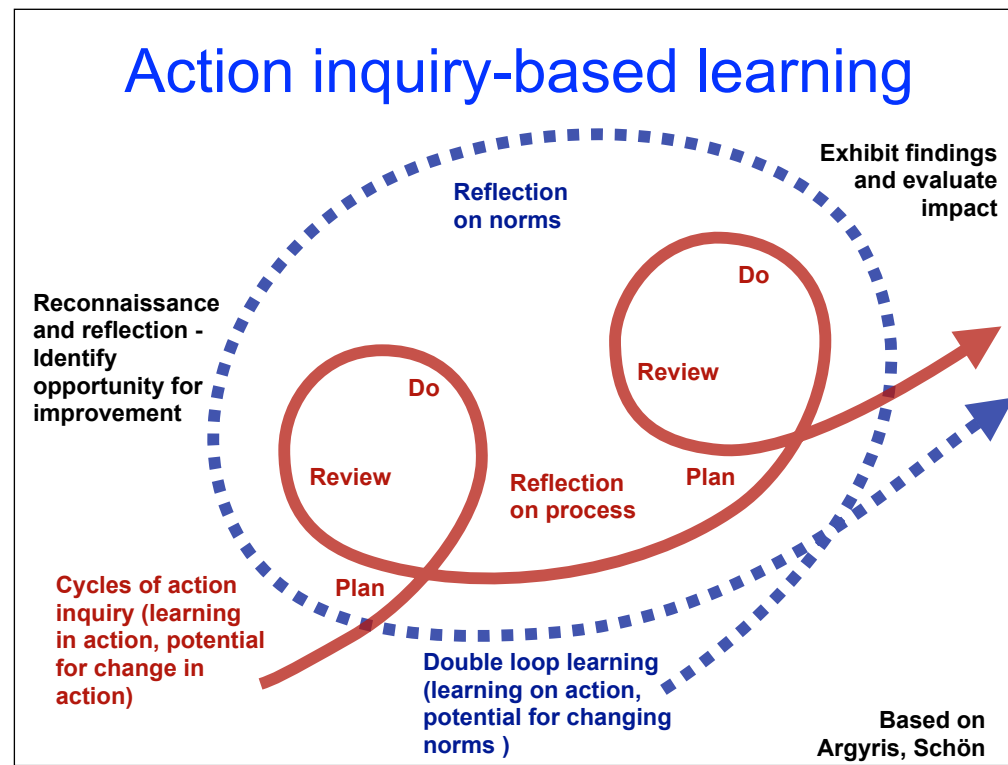
An Action Research model is the basis for this version of Inquiry Based Learning.

Initially student researchers identify where improvement can be made in their workplace.

After checking what is known about the potential, they plan action, do it and review, reviewing their process as the cycle is repeated to improve.

Student researchers are guided to a double loop of reflection, looking outside the action's scope to the surrounding organisation and questioning its norms as part of the context for action.

Inquiry Process

Reconnaissance and reflection - identify an opportunity for improvement

1. Identifying inquiry focus and research questions
2. Identify learning/research activities that lead to the development, implementation, and evaluation of an action for improvement
3. Implement the plan and take action
4. Share selected parts of the inquiry with fellow learners for critical feedback
5. Construct a final account that identifies learning in relation to module intended learning outcomes

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Eve Thirkle's Learning Contract for module UNB2602 'Investigating the Work Setting'

Activity	Learning Contract
3	Our school is one of the pilot schools for the Government initiative "Remodelling the Workforce", regarding the change to be introduced to school assistants' roles to relieve the teaching staff workloads. I will attend the meeting to introduce it to the school on 20th October. There will be a School Change Team (SCT) set up consisting of staff from various disciplines. I hope to become a member of this team. The SCT will be looking at the way the school is set up at present, the job roles and possible changes in working patterns. I hope to be able to identify the way the school is organised and illustrate on a JellyOS page. I have arranged to attend a First Aid course via INSET training in November.

'Work' in its broadest definition

'Work' is defined broadly and includes voluntary and domestic activity. The activity needs to be capable of improvement and research.

An interesting example from Ultraversity was Eve Thirkle who started the degree as a Teaching Assistant, but her son was diagnosed with autism three months later. Eve switched to studying his development needs and her role in as a parent raising him.

Eve graduated with a First Class honours degree in July 2006.

From her local newspaper, Doncaster Today:

"It gave me a focus at a time when it was very easy to get depressed," said Eve, who recently became chair of the Doncaster Autistic Society.

In this cohort of Ultraversity, the average age of students was 40 and 80% were women. The age and gender profile matches teaching assistants, but there are significant 'outliers' aged as young as 18 and as old as 60.

One student researcher, aged 18, left school with three A-levels to take up a post as a Teaching Assistant. He subsequently signed up for the degree and graduated in July 2006, having studied full-time and worked full-time in the job he loved.

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Some researchers voices

total in each theme	workforces themes	Action Enquiry titles analysed by principal theme and workforce for 148 researchers in their final year, 2006							
		total in each workforce							
		1	2	10	1	13	3	1	117
		care	charity	early years	HE	health	LEA	research	school
4	assessment					1			3
3	behaviour								3
17	communication			3		1	3		10
2	community				1			1	
2	CPD								2
8	environment	1							7
6	inclusion					1			5
28	learning			3		4			21
19	literacy								19
13	management					5			8
1	multicultural								1
2	numeracy			1					1
9	parents			3		1			5
17	pastoral		1						16
5	resources		1						4
7	special needs								7
5	teaching								5

Data from the Ultraversity Project.
The school workforce (final column, numbering 117) dominates in the first cohort, but in subsequent cohorts the diversity has increased.
The majority of actions (highlighted in red) were on themes of learning, literacy, pastoral care and communication.
I believe this reassures employers that left to their own devices, together with a commitment to improve the workplace, students will research the issues that are current and relevant.

Vignettes

Context

A mixed comprehensive secondary school with approximately 960 pupils in a affluent area in outer London. Year 9 class with pupils aged between 13 and 14.

1. Reconnaissance and reflection

The reason for this chosen area of research was that my classes are frequently disrupted by low level poor behaviour, such as: talking during registration and teacher led part of lessons, spontaneous calling out, pupils wandering around in the classroom, and pupils not staying focused on task.

Vignettes

2. Identifying an inquiry focus and research questions

A theme for action is focused by a specific research question... to implement a variety of classroom management strategies to find out what effect they have on classroom behaviour.

To what extent does a structured approach to behavioural issues improve the outcomes of my lessons?

3. Identify learning/research activities that lead to the development, implementation, and evaluation of an action for improvement

I used Action Research as the research methodology, based on the theory by Stephen Kemmis. My chosen methods for collecting the data were observation by a colleague, who filled in a questionnaire, with a number of pre defined questions that focused on behaviour...A qualitative and quantitative analysis of the data took place after each cycle.

Vignettes

4. Implement the plan and take action

The first cycle started by implementing a set of classroom expectations which set out a scheme of rewards and sanctions according to how the pupils behaved during the lesson. The rules had been based on William Glasser's Reality Theory (1984).

Observations during that cycle led to a change in the way in which I support the pupils this change had been informed by observations during the first cycle.

5. Share selected parts of the inquiry with fellow learners for critical feedback

Students voice video....

Online community of inquiry

In Pursuit of Change and Understanding

Bob Dick is an Australian academic who has done pioneering work in both action research and developing 'learning' websites. Born a Presbyterian, and by nature rational and skeptical, he has come to value metaphor and story. He feels the later complements the former, or is it the other way around? As an action researcher, coming from a scientific background, Bob is well placed to lead this dialogue on action research and other methods.

This is just one example of the rich learning experience for students in the online community of inquiry. Hotseat guests provide both process and subject expertise to push forward students thinking and research abilities exposing them to expert practitioners and leading edge thinking in a particular field.

Organisational improvement

Higher Education funding body

inter-disciplinary inquiry-based learning

idibl
Improvement assured

Traditional work-based learning

Negotiation about student numbers

University

Learning individually & frequently re-negotiated to meet needs of student **and** employer

Learning 'diet' delivered

One-size-fits-all content curriculum agreed

Process curriculum designed

Student

Student

Personal development planning

Personal development planning **and** organisational improvement planning

Employer organisation

A caricature of the development of Foundation Degrees would suggest that it is a 'stitch-up' between employer and university, which is slow to develop and is then applied to the 'patient' after a protracted development. The curriculum suffers from being difficult to up-date and inflexible if oriented towards content in fast-moving professional contexts.

IDIBL has developed a process curriculum, which does not define any detailed content, focussing instead on the disciplines of action enquiry, organisational change, digital creativity and exhibition.

It is contended that these disciplines, when linked to the twin drivers of personal fulfilment and organisational improvement set up the learner for lifelong learning and the organisation for considerable assurance of improvement.

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Market research

A questionnaire completed by 39 students indicated that some of the reasons for choosing this course are:

Additional data supports the view that students undertook this degree because they wanted to develop themselves in their current profession and job, rather than primarily as a as a means of 'escaping' somewhere else!

Enabled me to change my career direction (%):
Very important   - 7 (18)
Important   - 12 (31)
Not that important   - 13 (33)
Not important at all - 6 (15)

Help me find the specific job I wanted (%):
Very important   - 8 (21)
Important   - 13 (33)
Not that important   - 13 (33)
Not important at all - 5 (13)

The way the course is work-based and flexible (%):
Very important   - 28 (72)
Important   - 10 (26)
Not that important   - 1 (3)
Not important at all - 0 (0)
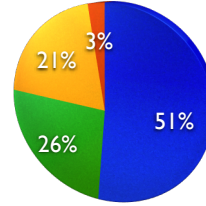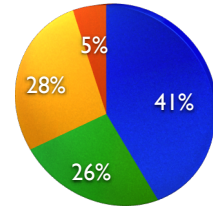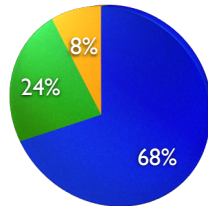
The ability to work and study (%):
Very important   - 32 (82)
Important   - 7 (18)
Not that important   - 0 (3)
Not important at all - 0 (0)

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Abstract

This paper describes and evaluates an approach to online supported, work-focused learning where undergraduate students operate as action-researchers; planning and implementing action for improvement in their workplace as a basis for award-bearing credit in higher education. A model is proposed for a meaningful, ongoing tripartite relationship between the Higher Education Institution, learner and small and medium enterprises that is viable. The way the design enables the learner to develop their "higher level skills that embody the essence of higher education" (Willis, 2008) is an important issue if the ideas and approach are to be widely adopted. The paper outlines the curriculum design and the nature of the students work-focused inquiries. Data from final year research reports was analysed to identify the characteristics of the projects undertaken by students uncovering 'who they have become'. Challenges and issues of the approach are discussed.

Introduction & background

This paper draws upon the authors' experience of the Ultraversity Project (Millwood, Powell and Tindal, 2008) at Anglia Ruskin University where an approach for undergraduate studies was developed that operates at the nexus of models of work-based learning and student as researcher or critical inquirer (Stenhouse 1981). The approach in place is distance-learning supported through online communities of inquiry and produced 325 honours graduates between 2006-2008.

For many years HEIs have attempted to become more agile at providing work-based learning and the Leitch Report (2006) has contributed to the development of a rhetoric around employer-led learning and increasingly employer funding of the cost of Higher Education for students in the workforce.

General criticisms of work-based learning include the complexity of demands placed on university systems and the labour intensive nature of support required; these issues can be seen as resulting in a model for provision of HE that is not cost effective, although in identifying these criticisms, Costley and Armsby (2008) call on universities to think again about the way they do things. A significant challenge experienced by the authors is how to develop programmes that engage with employers and at the same time are cost effective to initiate and deliver meeting the needs of the learner and the employer. The model of undergraduate student as action-researcher is presented as a viable contribution to meeting this challenge particularly for HEIs seeking to increase their engagement with Small and Medium Enterprises (SMEs).

The Willis (2008) report into Workforce Development highlights a potential difficulty for higher educational institutions (HEIs) when working on employer-led learning initiatives by drawing a distinction between professional training and professional education where*:*

> *"There will be an emphasis upon higher level skills that embody the essence of higher education - for example, reflection, analysis, problem solving, creativity, evaluation, and an open-endedness about what emerges from the learning"* (HEA, 2008).

The authors propose that the undergraduate student as action-researcher encapsulates this ideal. Individuals are required to negotiate their curriculum in response to issues and opportunities in the work-place. This approach is designed to develop 'critical thinking skills' unlike professional training where the emphasis is on functional skills and learning information.

The authors present a report of the approach developed ,explaining the curriculum design, identifying the characteristics of the projects undertaken by students uncovering 'who they have become' and the nature of the contributions they have made to their workplaces. Challenges and issues of the approach are discussed.

Work-focused learning

Action-research is based upon the central tenet of making an intervention in a situation to improve it. Described by Kurt Lewin (1946) and subsequently revised and adapted many times over in different contexts, action-research can be characterised as a cyclical process (Figure 1) of informed and intentional actions designed to address an identified issue or opportunity.

Figure 1: The Action Research Process (after Lewin 1946)
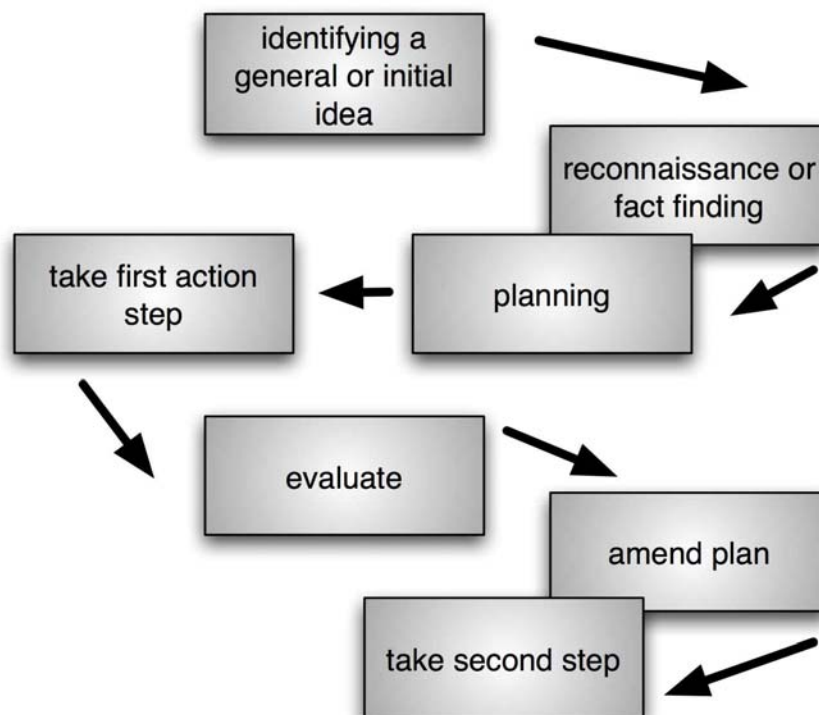
The many traditions of action-research hold different assumptions about the nature of inquiry (Denzin and Lincoln, 2005). For example, approaches may emphasise the practice of the individual or collaborative acts of inquiry. Some action-researchers chose a critical stance encompassing the power and organisational relationships of a particular context, whilst others align themselves with the organisational goals with the aim of removing barriers to help better achieve them; other interpretations are also made.

For our purpose, the emphasis is on the development of the individual as described by Kemmis and McTaggart (2005):

"The criterion of success is not whether participants have followed the stages faithfully but rather whether they have strong and authentic sense of development and evolution in their practices, and the situations in which they practice."

Learners undertake systematic inquiries with the explicit intention to improve their work-practice as a "practitioner-researcher" (Robson, 2002). To draw a distinction between this and other approaches to work-based learning, we have chosen to use the term work-focused learning.

The potential of the action-research approach for learners in the workplace is supported by the observation from Brew (2007):

"For the students who are the professionals of the future, developing the ability to investigate problems, make judgments on the basis of sound evidence, take decisions on a rational basis, and understand what they are doing and why is vital. Research and inquiry is not just for those who choose to pursue an academic career. It is central to professional life in the twenty-first century."

In the context of work-focused learning many learners are already relatively mature in the way that they make sense of the world. The interdisciplinary nature of their inquiries exposes them to different epistemological viewpoints as they mature as learners. The desire of learners undertaking inquiry based courses to have a 'supportive framework' for their independent study is reported by Millwood, Powell and Tindal (2008) and described as "bounded independence" by Levy (2008).

Methodology

The approach taken is one of case study. The authors have drawn upon their experience of developing the model of learning for the Ultraversity project to provide an interpretative evaluation of the work undertaken. A qualitative data analysis provided further evidence of the learners' experiences of the implementation of the model. The central data for this study was a random selection of 20 submissions created by successful final year students to complete their major project. The authors examined 'statements' within the work to identify the characteristics of the inquiries undertaken by learners. This approach was intended to seek theoretical ideas arising from using the data together to test the premise of undergraduate student as action-researcher. At this stage there was a transition from theory-seeking through theory-creation to theory-testing, as described by Bassey:

"Theory-seeking and theory-testing case studies: particular studies of general issues - [aim] to lead to fuzzy propositions (more tentative) or fuzzy generalisations (less tentative) and conveying these, their context and the evidence leading to them, to interested audiences."
(Bassey 1999).

Curriculum design

Module learning outcomes, learning activities and assessment criteria were designed to enable the concept of student as action-researcher to be applied to, and achieved in, diverse work contexts where there is an opportunity for undertaking inquiries of substance. Learners are required to act together to support each other in an online community of inquiry exhibiting the characteristics of a Community of Practice (Wenger, 1999) in that they share a common set of research practices, form groups with common research themes or domains and are bound together in a community with the purpose of studying for a degree.

High level aims

The programme aims describe a coherent set of intended outcomes for the learner as a critically reflective problem solver who is able to take effective action for improvement within their work-context as a part of their ongoing studies:

Table 1: Module Outline: Analysing the Professional Context (HE Level 7)

Description and Purpose of Module
In this module you will critically examine your work-role within the wider context of your organisation, the professions that impact on your work and the subject disciplines that provide conceptual understanding. You will identify significant incidents of change that have contributed to the current position of your chosen field of practice within your organisation. This approach to learning also has collaboration at its heart. To his end, you will be required to actively participate in an online community of inquiry where you will be required to regularly share plans, ideas and findings for receiving and offering critical feedback. You will develop a historical perspective of your chosen field of practice and 'future gaze' to identify how new and emerging ideas will affect your organisation and work-role and articulate this perspective in debate. You will reflect upon and evaluate your own professional practice to identify current opportunities for innovation around professional or technical issues and develop a professional development plan.

Intended Learning Outcomes. When you have successfully completed this module you will:	**Assessment criteria**. To demonstrate that you have achieved the learning outcome you will:
Locate your chosen field of practice relative to professional domains, specialisms, subject disciplines	Show the inter-professional and inter-disciplinary connections of your work and identify bodies of knowledge that extend these and contribute to your professional development
Analyse key issues of professional argument, debate or controversy within your chosen field of practice in debate with other student researchers with historical perspective and foresight	Produce a critical account of consensual and competing ideas in your professional context using illustrative examples to support your interpretation, drawing from your contributions to debate with other student researchers
Critically evaluate professional requirements for your chosen field of practice in relation to your skills set and experience and your organisation's priorities for development	Synthesise different sources of information and carry out a gap analysis to identify in systematic way foci for your professional development
Identify and critically evaluate opportunities for professional development within your work-context. Recommend future action informed by findings and conclusions.	Produce a personal development plan that integrates work-based opportunities for learning with future module requirements.

Learning outcomes, assessment criteria and the individual learning plan

The concept of variety used in Cybernetics analysis is useful in illuminating the challenge of responding to curriculum design for different contexts. In writing about organisational structure, Beer (1979) describes variety as "the total number of possible states of a system, and offers a useful tool for dealing with variety in this short phrase "Variety absorbs variety". One interpretation of the mainstream approaches to work based learning is that variety of students and work-contexts is being 'absorbed' by increases in the numbers of courses, modules and routes being developed and offered.

The approach developed by the authors seeks to absorb variety through a limited number of generic modules where learning outcomes and assessment criteria enable learners in different work-places and contexts to personalise their learning through negotiation within each module. Rather than specifying a syllabus of discipline knowledge the curriculum describes processes that lead to the development of student capabilities.

The modules offer a high degree of flexibility enabling the individual to direct their studies within the workplace. Two approaches are used to support this, the agreement of an individual learning plan, or in some cases research proposal, these are working documents that set out what the student-researcher intends to do for a learning activity against each learning outcome and is agreed as a 'contract' between the university and the learner. This process is supported through the online community with discussions between students and in individual negotiations and final sign-off by the learning facilitator. This 'flexibility through negotiation' is a viable and valuable component of our personalised learning pedagogy.

Assessment is based on a development of Winter's (2003) Patchwork Text. For each learning outcome students design a learning activity and produce a 'patch'. These accumulate, building an ongoing collection that forms an overall inquiry as specified by the module learning outcomes. Individual patches may be authored in different styles including the creative, imaginative and academic. For final submission, they stitch their patches together to create a retrospective commentary on their own learning in relation to intended learning outcomes forming an holistic approach to learning, teaching, and assessment Bigg's (2003) "Constructive Alignment".

Figure 2: Patchwork Text Process

5
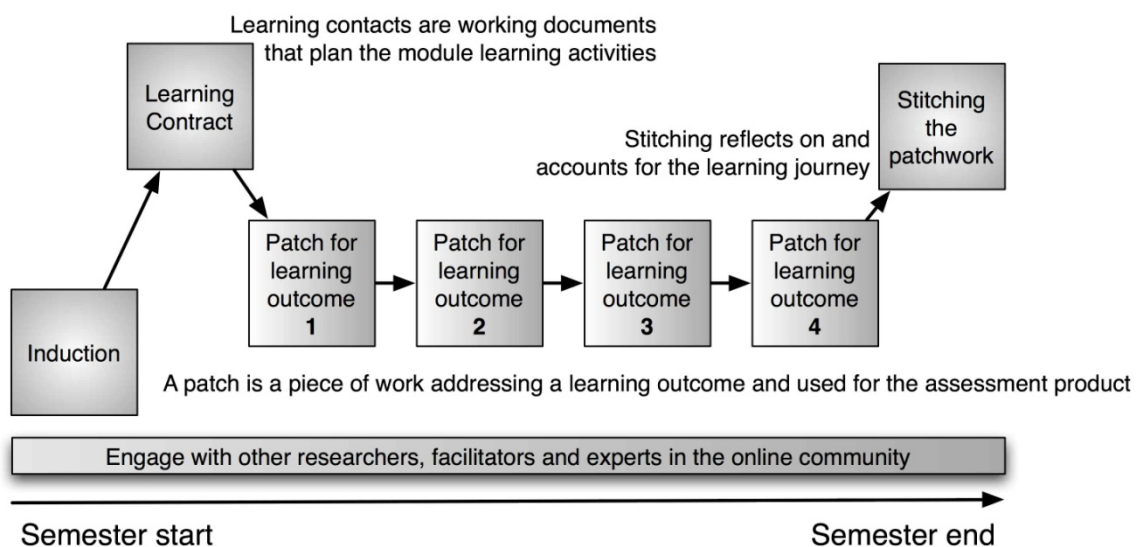
Stakeholder relationships

The work-focused approach has significant implications for the expectations, roles and responsibilities of the stakeholders involved; it offers an alternative model for arranging the tripartite relationships between employer, learner, and the educational institution. This new relationship is illustrated by Figure 3 below.

Figure 3: Contextualising the work-focused approach
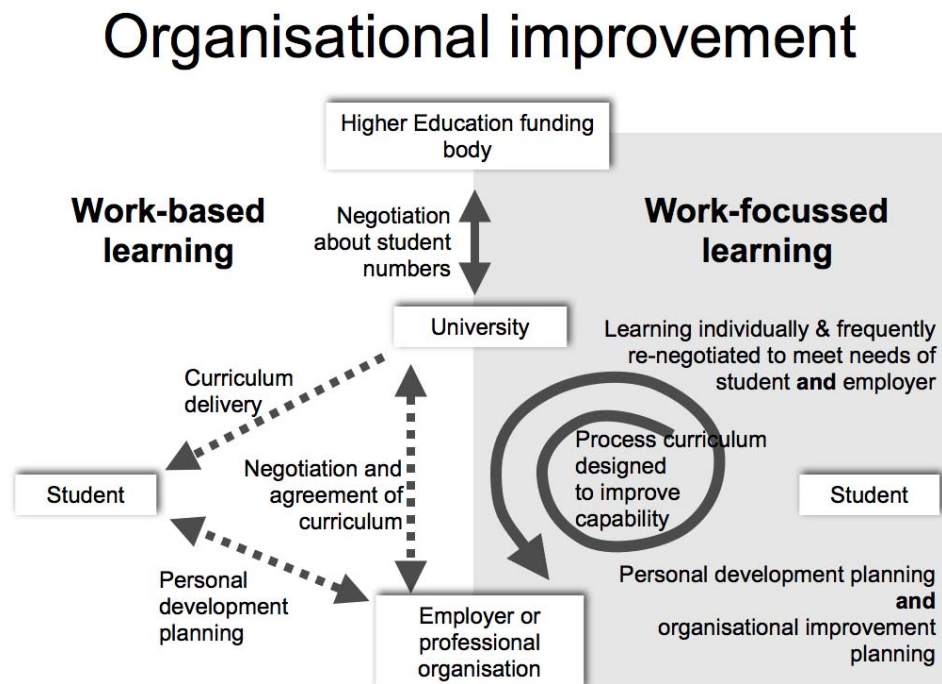
Work-based learning curricula are commonly developed through a negotiation between the university and the employer and then delivered to the learner as shown on the left hand side of the diagram. In the work-focused learning approach a process of needs analysis defines the focus of the inquiry. This process is led by the the learner and requires them to identify relevant standards, professional and other requirements pertinent to their workplace and role within it. This identification process is facilitated by the university but also requires the learner to identify a workplace advocate who will offer support and guidance. Rather than a contractual agreement between the employer and the university on the precise nature of a syllabus that will be delivered, there is the need to trust that the facilitators of the learning process can guide the learners in selecting, planning, and executing their inquiries and that this approach will have the dual purpose of improving the 'business' of the employer as well as developing the learner in line with the learning outcomes described by the programme.

Characteristics of projects undertaken

Table 2 illustrates some typical contexts and foci of action-research projects undertaken.

Table 2: Student researcher inquiry foci

Workplace and role	Action-research focus in the words of the student researcher
Third sector – Project leader in New Media Design and Development Unit	I wanted to carry out an enquiry that would have some impact and benefit on the work that I do, and also involve my blind and partially sighted colleagues...it was designed to investigate how I could improve the product evaluation process for blind and partially sighted colleagues.
Nursery School - Manager	My aim was to look into how I could implement a better system of working with parents, using accessible homemade activities, which would not only help and reinforce their role as the baby's prime educator but also create working links between home and Nursery
FE College - Teacher	My research utilised action research methods, through which three phases in the development of a learning object were examined using three data collection methods.
School - Office Manager	The aim of the project centred on finding out whether the process of two-way communication flow between classroom-based staff and office staff is efficient, and if not, to investigate ways and means to effect an improvement.
Primary School - Administrator	...existing culture in school for Teaching Assistants seemed to me to be that of the underdog... there was an underlying theme of being undervalued. As a consequence morale was low... from previous research I found that Teaching Assistants on the whole felt undervalued and not part of the 'team'. Lack of communication seemed to be a recurring gripe, almost a feeling of being excluded.

Analysis of assessment products led the authors to draw distinctions and identify four characteristics of the action-research undertaken:

1. Application of action research methodology and research methods - students were able to design and apply a rigorous approach to their inquiries.

> *"I used the cyclical process of action research (Kemmis and Wilkinson 1998) plan – do – review. This provided me with scope to conduct my research over 3 cycles…Improvement and involvement are central to action research. Collaboration between researchers and those who*

are the focus of the research, and their participation in the process, are seen as central to action research. This relationship fits well with the approach of flexible, qualitative design.

"The data acquired was then analysed to examine changes in the effectiveness of the (Digital Learning Object) DLO. The formal defence of my research will address the critique given by a number of parties (exhibition audience, fellow students, learning facilitators and myself the researcher) resulting in a validation of my research showing evidence of both its short and long term impact upon the main stakeholders. The methodological approach used in my research was designed to produce data that could undergo a trend analysis of the perceived improvement in the effectiveness of the DLO."

2. Improvement to personal practice - students demonstrated critical awareness and ability to improve their working practices:

"Improvements to working practice as a direct result of Action Inquiries undertaken throughout the three years of study continue to benefit my reputation as a innovative and creative practitioner. Adoption of episodic lesson planning that allows for the non-linear progression of SEN Students is one example of the application of Action Research to improve practice.

"My efforts so far have changed procedures, developed communication, raised morale and formed a cohesive group which offers support to each other. My research area has developed my school role beyond what was first perceived as my role as school administrator. The research activity has also resulted in new responsibilities being offered and professional recognition by the workplace."

3. Significant contribution to relevant professional knowledge - students develop new contextual understanding contributing to the overall understanding of the business of the enterprise as a learning organisation:

"As a consequence of my research the headteacher has asked me to look into co-ordinating the Investors in People project for our school this year. He has seen the value of my research and how successfully and professionally I have approached it and I think that this has had an impact on him in that he feels I will be able to successfully steer the school through the Investors in People programme.

"I honestly do contribute this success down to what I learnt during my degree programme. I led some whole school action research on the implementation of the VLE and recently on a programme called PASS which evaluates pupils attitudes towards themselves and school.... Our authority really bought into the SIG school improvement Model, which is effectively Action Research based, and what I learnt from this degree really put me at the front in my school for leading whole school change..."

4. Wider impact across the work-place - organisations recognise and value the growing capability of students to provoke others in the workplace to improve their practice:

"Disseminating the exhibition to an audience of teachers and Governors has opened up the possibility of developing AR for staff development and made other people in the school community more aware of the potential of the VLE. As the VLE coordinator I can now speak from first hand knowledge about study via a VLE.

"An action inquiry into personal safety in the workplace made people more aware of the dangers of lone working. I am now regularly consulted and also remind people of issues surrounding this. I am still issuing personal alarms to members of staff in my department and have been called on outside of my department to issue alarms and demonstrate their use.

"To top it all off, I was on secondment to my HR department as staffside lead for the KSF, following major changes in the Health and Social Care in Northern Ireland. , I under went a 40 minute interview and was given a HR post in Learning and Development with responsibility for widening participation across the whole of the South Eastern Health and Social Care Trust covering over 10,000 staff; working with local further education providers with the result that I have doubled my pay from what I had earned as a nursing auxiliary."

Discussion

Levy (2008) identifies two broad 'conceptual frames' in seeking to better understand undergraduates' experience of 'inquiry and research' based upon a study of first year undergraduates from the Faculties of Arts and Social Sciences at Sheffield University. Based upon these students' accounts, Levy identified the frames "exploring and acquiring existing disciplinary knowledge" and "participating in building disciplinary knowledge" that offered characterisations of their experiences.

Levy's frames focus on contribution to "disciplinary knowledge" this is a term that does not sit easily with work-focused learning. Professional development in the workplace can often be inter-disciplinary. Authentic learning of this nature often draws on a range of disciplines, the learning is highly contextualised, inquiries are small scale. Our analysis shows that in the context of work-focused learning there are significant differences to the conceptual framework developed by Levy. For example; rather than contributing to disciplinary knowledge, work-focused learners contribute to 'relevant professional knowledge'; the authors believe this contribution to be of significant value and indicates that undergraduates following this kind of curriculum are able to operate as effective researchers.

Demonstrating the real benefits of SMEs funding students through higher education is a significant challenge for HEI. For larger employers, developing bespoke courses by negotiating and agreeing a syllabus in collaboration with HEI providers is a practical and viable approach as the initial resource required to set-up a course can be justified by the numbers of students. For SMEs this may not be a financially viable approach; the development of the student as researcher approach is one solution to providing courses that are suited to diverse employment contexts and accessible to SMEs without large resource requirements at set-up. It is likely that engaging with employers will continue to be a significant challenge for employer-facing institutions as government priorities increasingly encourage this approach. The recent merging of the Department for Innovation, Universities and Skills with the business department being an example of this.

Since the inception of the degree, engagement with public sector institutions has been significant and feedback from these organisations has indicated that the approach is valued as a viable means of improving staff effectiveness and disseminating improved practice across the workplace and beyond. Although we have had some take-up from SMEs in the private sector, it has proved much harder to recruit students. The authors suggest that work-place cultures, budget constraints, and perceived value of developing an existing workforce towards a graduate one may not be seen as a priority. Alternatively, it may simply be a reflection of the orientation of marketting.

Another set of practical challenges revolve around making a success of 'mainstreaming' innovations in higher education. As outlined by Costley and Armsby (2008) if HEIs are to develop new ways of

delivering provision then their processes and systems will need to change to reflect a diverse student body, not simply based around a model that serves UCAS recruited undergraduates. The curriculum design described is significantly different from that which most potential students, university teaching staff, and employers are familiar with and as a result a significant effort is required to explain and 'justify' it in terms of being a valid approach to gain a higher qualification. Practices, processes and systems can be inflexible in accommodating approaches that are unfamiliar and not designed to align with the requirements of traditional undergraduate students who study full-time at university from 18 years of age. The challenge of 'normalisation' of new approaches and initiatives is an ever present one.

Conclusions

The tripartite model proposed provides an effective approach for addressing the needs of the learner and employers and has delivered work-focused learning that has lead to improvement in the workplace. Arguably the real value is not what the undergraduate students operating as action-researchers learn or contribute to their workplace whilst studying but rather it is 'who they have become' and what they are able to offer their workplaces as graduate level employees with a potential lifelong habit of action for improvement. Graduates who have experienced this approach acquire research and inquiry skills that provokes significant recognition by the workplace, positioning them with the capability to be at the front line of leading improvement initiatives in their organisations.

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Coeducate Project
Dissemination of findings of the Jisc Coeducate project

P24

Coordination of Re-validation through Moodle

Posted on April 25, 2012 | Leave a comment

Far from rocket science, but really useful! The use of Moodle for Coordinating the re-validation activities across the University has proved to be a significant benefit for staff in This space is open to all University of Bolton staff in providing the definitive documents and guidance for the re-validation process and is the first place to seek clarification from the team responsible for the implementation of the re-validation activities.

With 179 participants and many accesses per day, these statistics are supported by anecdotal evidence from teaching staff and senior management.

When faced with decisions about the deployment and rollout of new software to support the validation process and implications of sustainability and cost, the appropriation of existing tools looks very attractive.

A screen grab of the Revalidation site.

Posted in Uncategorized   → **Leave a comment**

Evaluation of re-validation support activities

Posted on April 25, 2012 | Leave a comment

Summary report of the Professional Development for Staff (PDS) programme sessions to support the University Academic Review process 2011. The sessions provided development activities for all staff at the University of Bolton and were a significant part of the project capacity raising activities in 2011.

Read about the academic review support evaluation.

Posted in Uncategorized   → **Leave a comment**

Widget Beta (8LEM/Viewpoints & Learning Design)

Posted on March 24, 2012 | 3 Comments

P24

Brian has been working hard and making good progress with our lightweight widget toolsets to support the pedagogic design processes associated with course development:

> *A web application designed to aid the development of course / lesson planning. With the goal of supporting as broad a range of tasks as possible the application tries to strike a good balance between prescriptive and open-ended use-cases.*

Our ultimate ambition is to have a flexible tool that can be adapted to many different planning activities, this includes those directly aligned with the Coeducate project aims but also other activities that would benefit from a structured process supported with guidance. Key to this will be the use of the Wookie server for collaborative work and the ability to customise the tool – we are aiming at the 'average' teacher/lecturer rather than developing something that requires a learning technologist or programmer to make changes.

For now, we have two examples, one based on the work undertaken by the Ulster Viewpoints programme and another developed at Bolton. In each case, a deck of cards are used as prompts and sources of information to help practitioners plan modules.

A mechanism is in place to allow for a collection of cards to be handled as an atomic 'deck', with more than one deck usable simultaneously. Conversely the canvas on which they are placed allows for cards to be placed in any desired configuration, contains a simple text label that allows entry of a custom title for that period and a button to create a new entry (as many entries as desired can be created and stored).
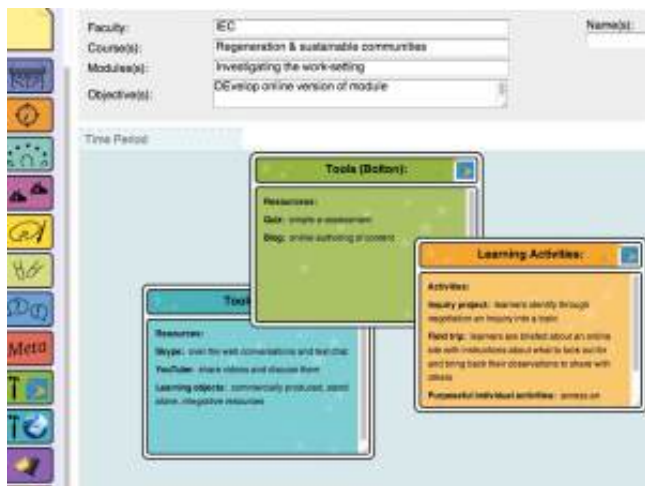
The widget can be fond HERE, and currently the top deck uses the Viewpoints cards inspired by 8LEM and the second deck starts below the Meta 'card' and is inspired by the IMS Learning Design concepts of role, activity and environments (resources) and designed to get staff to think about taking face-2-face modules online. For a Viewpoints workshop approach, it might be that the tool is used to record face-2-face sessions and allowing participants to take away their design at the end of the day and export the text generated into a usable format.

We have undertaken one evaluation session with PGCHE students and will undertake a series of of events throughout 2012 with the dual purpose of refining the generic tool, but also developing card sets.

Read below for technical details and our current development priorities, comments welcome!

Technical Description:

Implemented using contemporary web standards such as HTML5, DOM storage and JavaScript, the application can be run in any browser that supports the relevant standards (including Firefox, Chrome, Opera and Safari amongst others).

The resources used can be packaged as a w3 widget (http://www.w3.org/TR/widgets/) and hosted in any environment that supports the widgets specification; in particular we're aiming at deploying the completed widget on a wookie server (http://getwookie.org/) which enables embedding in arbitrary applications (e.g. connectors are available for moodle, WordPress and others).

In addition to providing an application-agnostic hosting platform, wookie supports the google Wave API which will in the future enable real-time collaborative use of the application.

The current prototype supports the following features:

* Drag-and-drop interface for placing and removing cards from the canvas.
* Support for any number of time periods
* Support for the University of Ulster's Hybrid Learning Model cards.
* Support for internally-created learning design cards.
* Support for 'special' cards, currently limited to a sticky note.
* Local persistence (the current browser) of card data.
* Can be packaged as a w3 widget and hosted on a wookie server and embedded in moodle.

The following features are partially implemented and will be ready in the next prototype:
* The names and roles entry should allow for the creation of as many inputs as people involved.
* Sticky notes should be available in other colours.
* Card movement – cards should be droppable the top of a container between the time period entry and the cross.

New features in the next prototype:
* Better print support: transform the data in the cards in a way that allows the results of a planning session to be printed in a more appropriate layout.

* Collaborative use of the application: Using the Wave API offered by the wookie server, a version of the tool will be created that supports real-time collaborative editing of cards from within moodle.

* Duplication of completed cards & entered data.

Future features (time-permitting):

* Export (save to disk) capability; allow for offline sharing of application data.
* Search feature?
* In-application Card and deck creation / customization: much of the code is ready to support this feature, the difficult part is UI design.

* Sharing of customised card decks.

* Customisation of time-period background (images, HTML5 canvas element for dynamic backdrops such as time-scales)
* Creation of backdrops; titled frames, graphics.
* Cards that allow for a 'link' to another web resource (for example YouTube, Flickr etc).
* Scalable / resizeable cards: user-testing suggests that this dimension can be used to indicate the

importance of a card relative to others, indicate the duration of an activity etc.; by being non-prescriptive the hope is that we can support as many different uses as possible.

P24

Posted in Uncategorized   ➞ 3 Comments

Planning and Developing Open Learning Courses: output & outcome

Posted on December 5, 2011 | Leave a comment

One of the approaches to building capacity at Bolton that we trialled in the second year of the project was to develop and run a module for staff to help them think through issues around curriculum development and come up with solutions to problems.

We had mixed results overall, possibly we had too high expectations around the short term impact that could arise. However, this report explains an approach developed for Integrating Personal Tutoring and ePersonal Development Planning. As the new Curriculum Framework comes into being, these ideas are receiving wider attention and stand a good chance of University wide adoption.

Posted in Uncategorized   ➞ Leave a comment

Revalidation of the IDIBL Framework including Learning with Technologies and Regeneration and Sustainable Communities

Posted on November 22, 2011 | Leave a comment

The IDIBL framework, validated as a key component of the Coeducate project, is like all provision at the University being re-validated and this must be done by March 2012.

The ADA(R) IDIBL 22_Nov_2011_final is part business case, part evaluation of current provision, and part demonstrating how we will meet the requirements of the new Undergraduate Curriculum.

We are requesting:

> The IDIBL framework and the programmes in Learning with Technologies and Regeneration and Sustainable Communities have been grouped together for revalidation as they share modules, and are currently being delivered jointly by IEC and AES. We are requesting

for revalidation of Foundation, Bachelor and Masters level courses, as it is important for the IDIBL and JISC funded Co-educate projects to continue with their strategic research for theUniversity.

P24

Posted in <u>Uncategorized</u>   ➜ **Leave a comment**

Innovation Support Networks

Posted on <u>November 21, 2011</u> | <u>Leave a comment</u>

In support of the re-validation process at the UoB, the Coeducate project has been proactive in identifying needs and implementing support activities.

It was apparent early on that there was the need to develop an online repository and information sharing portal as current practice was to use email to distribute documentations and ensuing discussion for clarification. To this end, the simplest approach was to <u>create a site</u> (pdf) in Moodle:

> 'This space is open to all University of Bolton staff. It contains the definitive documents and guidance for the re-validation process and is the first place to seek clarification from the team responsible for the implementation of the re-validation activities.'

In addition, we have also developed a frequently asked questions in an attempt to reduce the workload on senior staff responsible for the validation, but also to have a common message.

Lastly, to run in parallel with the programme the Coeducate project has put in place a series of Innovation Support Networks with the aim of supporting colleagues to take advantage of the Undergraduate Curriculum Framework to improve their curriculum offerings rather than simply treating it as a tick-box exercise – that is something just to get through:

- 9th November 12 – 2 Rethinking your Curriculum (Bill Oliver, Stephen Powell and Tracy Ellis)
- 11th November 12 – 2 Module Specifications and Programme Design (Jane Lovatt/Stephen Powell)
- 23rd November 12 – 2 Innovating around Employability (Julie Bateman/Mike Lomas)
- 25th November 12 – 2 D1-006 Innovating around Environmental Sustainability (Ann Kolodziejski)
- 30th November 12 – 2 Innovating around Professionals in Practice (Rob Campbell)
- 2nd December 12 – 2 Module Specifications and Programme Design (Jane Lovatt/Stephen Powell)
- 7th December 12 – 2 Innovating around Internationalisation (Kasey Carver/Sue Burkinshaw)
- 9th December 12 – 2 Module Specifications and Programme Design (Jane Lovatt/ Stephen Powell)

Posted in <u>Uncategorized</u>   ➜ **Leave a comment**

Re-validation @ UoB

Posted on November 21, 2011 | 1 Comment

Much of the work of the Coeducate project since September has focussed on supporting the re-validation that is currently underway (all to be finished by March 2012) for all of our Undergraduate provision inline with a new 'Under Graduate Curriculum Framework'. In common with many institutions, we are seeking to simplify and rationalise our portfolio of courses and the complexity of delivery options within them.

As a project, we have had input into the decision making process, but as would be expected are one of many 'competing' voices although we believe that we have made a valuable contribution. Common themes that can be identified across the sector through conversations at Curriculum programme meetings and other fora include:

1. limiting the number of learning outcomes (UoB, no more than 5)
    reducing optionality (UoB, only core modules at level 4-5 with limited optionality at level 6 & very limited use of co and pre requisites)
2. development of cross faculty/department shared modules (UoB, typically 1 per level plus shared research methods)
3. reduce the amount of summative assessment (UoB, no learning outcome assessed more than one and a maximum of 2 summative assessments)
4. increase opportunities for formative assessment (UoB, new module specification requires specitivity in this respect)
5. inclusion of core themes embedded in the curriculum (UoB, employability, internationalism, sustainability, ethical responsibility)

Against this backdrop, the Coeducate project has sought to support staff in implementing the framework, the details of which will be covered in the next post.

Posted in Uncategorized   → 1 Comment

Archi meets Business Model Canvas

Posted on November 18, 2011 | Leave a comment

One of the key aims of the Coeducate project is to develop tools that can support staff in the development of new courses through the Validation Process.

One approach that we identified some time ago is the Business Model Canvas (BMC) which as its name suggests is designed to support thinking around business models, something that we are not particularly

good at when we develop new programmes.

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We have done some work with colleagues using the BMC ([see earlier post](#)) and through this identified the need for a tool to capture the outputs of the planning activity.

In discussion with Phil Beauvoir, the developer of [Archi](#) open source Archimate modelling tool, the idea was arrived at to build a 'blank canvas' feature into Archi that would enable anyone to create a template for approaches such as the BMC. The Blank canvi are fully editable and lockable / un-lockable making them very powerful and flexible tools. In addition, and particularly useful for the BMC, is that it is easy to export and print as an A0 PDF to use in workshop sessions.
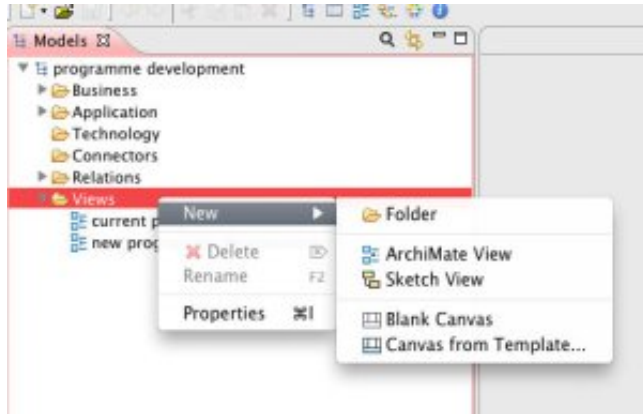
Rather than simply building a 'hard wired' representation of the BMC into Archi, we hope that we have added a whole new dimension for people who wish to try and tie together different approaches and techniques with the practice of [Enterprise Architecture](#) using Archimate modelling language. The important point to understand, is that this isn't just a visual representation, but the tool captures relationships between objects with associated properties so that more can be done with the data in an automated way.

One possible example is the JISC work on Student Life Cycle Management [Service Design in Higher and Further Education](#) which has an approach of Blueprinting and in particular the Front Stage / Back Stage identification of fail points – those who know about will hopefully see the connection!

We think this is a cool bit of work and expect to see the commercial vendors following suit:^) Phil's work will ship with the next release of Archi in early December 2011.
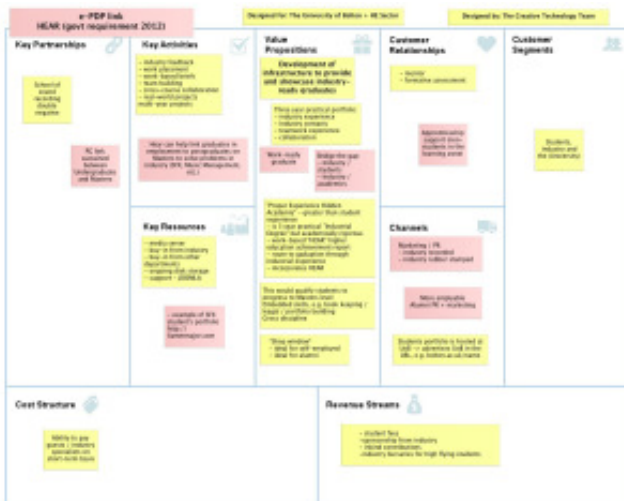
An early example of the tool in use…

Posted in [Uncategorized](#)   ➙ **Leave a comment**

Learning Design Support Environment

Posted on September 26, 2011 | Leave a comment

The observations below are from a Coeducate project team member. We hope to conduct a fuller evaluation of the tool in October with about 20 University staff and will share our findings then.

——————————

In July I sat in on an evaluation day for the Learning Design Support Environment (LDSE) tool[1]. The emphasis of the evaluation process was to obtain user feedback about the tool with particular attention paid to participants' existing work and requirements. The participants seemed to be engaged with the evaluation process and generally enthusiastic towards the LDSE tool. There seemed to be several key factors in the design of both the evaluation process and the LDSE tools which contributed to this positivity.

Relevancy to Participants

Each participant was asked to bring along details of a module that they were currently redesigning or needed to redesign. This seemed to have two benefits. Firstly the participants were already in an open frame of mind towards the design of the module and therefore might be more receptive to new ideas and thought processes. Secondly, as opposed to working through a pre-created scenario, the subject matter was of interest and relevance to each participant because it was their own choice. As well as encouraging participants to engage with the design process their knowledge of the module content and context seemed to allow them to interact more deeply with the process than might have been the case with a sterile pre-created scenario.

User Involvement in Tool Design

Discussing the LDSE tool's development with members of the evaluation team it became apparent that user input had been key to the design process. From what I was told the first evaluation sessions involved paper–based exercises to map out the functionality of the tool. This means that before coding of the tool had begun the team could be reasonably confident that it was at least starting off in the right direction to meet users' needs. The value of this approach seemed to be confirmed by seeing how quickly participants were able to make meaningful progress with the tool. There may have been minor quirks and issues with the user interface but the participants seemed happy to work through these because of what they were able to achieve with the tool.

Activity Palette

The evaluation participants seemed to appreciate the balance of freedom and guidance provided by the LDSE tool. The timeline on to which Teaching and Learning Activities (TLA) are added is a blank canvas. However this is balanced by an on-screen palette of pre-defined TLAs that users can choose from if they do not need to create their own. This seemed to be well received in terms of showcasing activities that users might not have otherwise thought to use.

These positive aspects of the evaluation process and the LDSE tool do need to be balanced by some other observations.

Added Value and Use in Isolation

At least one participant suggested that the LDSE tool would be more useful and therefore more appealing to them if it could feed into other systems and in particular the course content and time breakdown statistics required for their University's administrative processes. Maybe for other users it could be the ability to generate the outline of a LAMS file or the basic structure of an IMS LD Unit of Learning which would provide the "pay off" for the effort involved in the LDSE design process.

Providing this added value from the user's perspective helps to address the question of "what's in it for me?" when faced with a new process or tool. The LDSE tool exports to XML and so there is the potential for data translation and re-use. Without this potential to interact with other systems is there seems to be the risk that using the LDSE tool becomes an isolated exercise. If this is the case then could some of the benefits, for example the palette of TLAs outlined earlier, be just as easily provided by a reference list or a set of 8LEM[2]/HLM style reference cards[3]?

Hijacking for Box Ticking Purposes

The LDSE is intended to "support teachers in designing effective technology-enhanced learning"[1]. One of its key features is to provide a graphical breakdown of the learning experience in terms of how time is used (for example the percentage of time learners spend acquiring knowledge versus discussion and practice). This could be used by teachers to reflect on their module designs. However there does also seem to be the potential for these percentages to be the driving force behind module design, especially if targets are set by higher academic powers. Would this alter the use of LDSE or reduce the quality of experience from a teacher's perspective?

[1] https://sites.google.com/a/lkl.ac.uk/ldse/in-depth-information

[2] www.labset.net/media/prod/8LEM.pdf

[3] http://cetl.ulster.ac.uk/elearning/documents/HLM-Cards.pdf

Posted in Uncategorized

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8LEM Wookie Widget

Posted on June 7, 2011 | 1 Comment

Just before our full-time developer was poached by a mobile phone app developer, we started work on Wookie Widgets to support curriculum development activities. This beta beta version demonstrates the concept I think, we will return to this as soon as we appoint a new developer but in the meantime if anyone wants to take it forward please do.
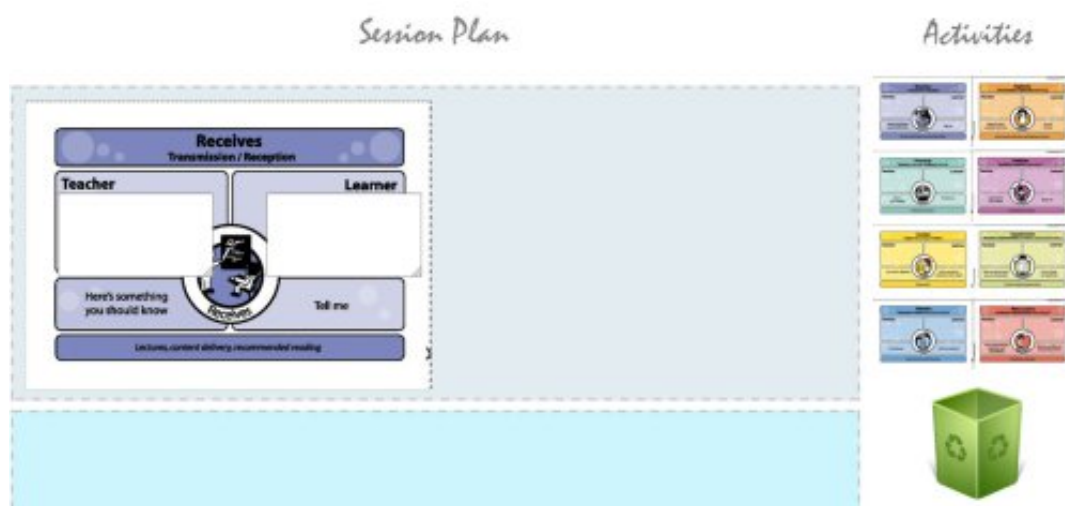
Posted in Uncategorized

→ **1 Comment**

Seeking Internal Longer Term Institutional Commitment for IT Process Support

Posted on June 6, 2011 | Leave a comment

Background

For any software development carried out by the project, its longer term sustainability is an issue that needs to be resolved before the end of the project.

In proposing software to support the validation process, polite resistance was expressed by the head of IT services, as his staff had been cut and the team was finding it difficult to support existing software let alone take on any new software, especially if it had the potential to proliferate many copycat bespoke software solutions in other process improvement projects.

The initial response was to look for generic workflow software that could be used to support any process improvement project.

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Strengthening this, was a circular from the VC stating that he would drive forward improvement in seven areas, including: "improvements in efficiency and effectiveness, reviewing all operating units and services." As workflow support would be involved in almost any efficiency and effectiveness improvements of operating units and services, a paper was prepared for the Technology and Infrastructures Committee (which is evolving into an EA governance group) to the effect that processes and resources would be needed to evaluate workflow software, prioritise improvement projects, and develop, implement and sustain them.

The meeting did not come to a conclusion on the paper (it will be raised again at the next), but in discussing support for validation, a Dean strongly recommended that the existing process was itself too heavyweight and should be revised before any attempt be made to support it with software. The project put this to the Pro-VC who immediately accepted the proposal to review that validation process and set up a group for the purpose in which the project now participates.

Currently, for process support, rather than looking for software to be brought in, we are exploring the possibility of cloud-based solutions, removing the necessity for local support. In particular, we propose to evaluate an online service, BaseCamp. Although this is project management software we wish to see whether it can be used for process support, particularly where the main task is one of providing transparency as to the current stage any course has reached. BaseCamp provides a relatively cheap start up cost model ($99/month) and is easy to set up. Initially it is proposed to use it to support a lightweight revalidation process which using existing processes would be an enormous task.

We may also evaluate Salesforce.com's cloud based workflow service.

Posted in Uncategorized   → **Leave a comment**

Innovation Support Network

Posted on June 6, 2011 | Leave a comment

Background

Working with staff who had been innovating new courses to learn what they wanted by way of supporting ICT, it emerged that more than online tools, what they would most value was a group (like the present one!) where they could share, and strengthen their ideas before it was submitted to the rigours of the validation process and the work it demanded.

At the Summer 2010 Co-Educate SG meeting chaired by our previous Pro-VC, it was proposed and agreed that the Coeducate project should set up an Innovation Support Network (ISN) that would work with staff (and students to encourage a co-creation approach) wanting to participate.

Development

In planning the Innovation Support Network, two categories of course developers were envisaged:

- those who wanted to think outside the box, i.e. those who wanted to innovate
  - those who's courses that, for whatever reason, had too few participants, had high dropout rates or whose enrolments were declining and who would therefore like to rethink their offering, i.e. those who needed to innovate.

A further issue that had repeatedly arisen both with the innovation group and with earlier baseline work, was the lack of support for gaining market intelligence for the business plan that is required as a part of the validation process.

The changing climate for higher education has resulted in changed circumstances in the university, at least temporarily, requiring the Coeducate project to re-focus somewhat.

All course were in the process of being reviewed, with those judged to be non-viable being withdrawn and the remaining courses required to comply with a new Core Curriculum Framework, resulting in all of them needing to be revalidated.

At the next Co-Educate SG meeting, the new Pro-VC and chair asked if the ISN could initially focus on the task supporting courses comply with the Curriculum Framework and assisting with the streamlining the revalidation process.

Activity

To this end, the ISN has begun engaging at three levels:

1. Deans of School
2. Principal Lectures, Quality
3. Lecturers piloting courses through the Curriculum Framework

Initial engagement has been with the School of Business and Creative Technology. The Dean welcomed the project's involvement and saw it as an opportunity to maintain innovation whilst conforming to the Curriculum Framework. Two subsequent meetings were held with School staff., the first group being Business, Law and Accountancy staff, the second creative technologies. Both identified areas where they felt innovation is needed and the ISN will hold further meetings with each group, focussed on these.

The meetings also introduced the Business Model Canvas, discussing how it to adapt and use it.

The Business team thought it would probably be too difficult for other staff to use so they would need expert assistance, but agreed it might be useful in helping establish dialogue between staff and a business model expert.

The Creative Technologies team took to it rapidly and produced a model for a platform to support students developing a realistic ePortfolio that could be used to record and then present their work to employers.

Posted in Uncategorized   → **Leave a comment**

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Business Model Canvas – Support for Programme Development

Posted on <u>June 6, 2011</u> | <u>1 Comment</u>

In our work with staff developing new programmes, a common comment is the difficulty of creating a business model that is required for validation and in particular the difficulty in obtaining reliable market intelligence for expected student numbers. This more innovative a course is, the less it is possible to rely on data from other courses and sources, either internally or externally.

UoB has recently gone through an Academic Review which examined all courses with respect to a number of viability criteria and a significant number of courses will be discontinued.

These considerations make it clear that, going forward, it will be necessary to put more weight on the viability of new courses while they are being developed. This in turn will require a change in approach on the part of those developing courses, so we were seeking an approach to business modelling that would be easy for staff to adopt. To this end we have been trialling the <u>Business Model Canvas</u> which has been released under a Creative Commons license with a view to adapting it for the purpose of developing business models for new courses.

This has been presented for comment to staff from the Business School and used in a workshop by staff from the Creative Technologies team with a positive outcome, sufficient to encourage a further workshop with them to develop their ideas further.
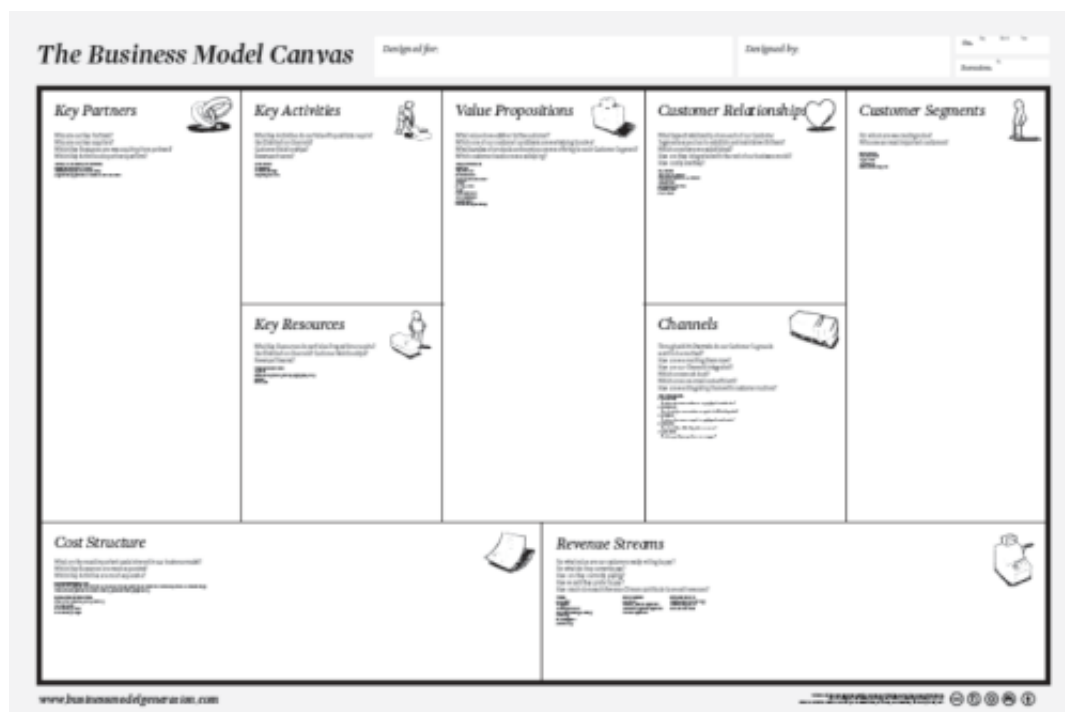
This encourages us to work further on adapting the wording and trialling it further. In a separate development, Phil Beauvoir, the Archi developer has prototyped an implementation of the Canvas as an add on to Archi. We have discussed the changes that would be needed for our purposes.

Should the canvas trials continue to prove positive, the work needed to implement it as a tool, adapted for our purposes, could be funded at relatively low cost from the Coeducate budget.

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Posted in Uncategorized

→ **1 Comment**

WRITERS' LAB @BOLTON 2010

Posted on June 6, 2011 | Leave a comment

An output from the 'Planning and Developing Open Learning Courses' module run by the project was this resource created by Anna Zaluczkowska and colleagues which was used to present the model she developed at a departmental meeting – this is exactly the kind of outcome we had hoped for.

The writers lab developed and delivered a masters course designed to explicitly align teaching and learning with employers and students needs so that as students demonstrated their capability employers would recruit those that best met their needs.

In carrying out this work, Anna initially sought to use the IDIBL framework as it offered the flexibility that she required to develop a student teaching, learning experience that closely mirrored that of the workplace including an approach to assessment that didn't distort the experience by requiring a 'false' set of outputs for assessment purposes.

She found, however, that the terminology used by the framework encountered resistance from employers and some colleagues as she sought to move away from a content based curriculum. Wrestling with these issues lead Anna to the conclusion that she had to wrap the course in familiar terminology so that it was acceptable but to continue to innovate in practice with the learning experience the students had.

Posted in Uncategorized

→ **Leave a comment**

Planning and Developing Open Learning Courses

Posted on June 6, 2011 | Leave a comment

One of the capability raising activities of the project last year was to run a 'module' for 6 staff called 'Planning and Developing Open Learning Courses'. The idea behind this was to stimulate some creative thinking around the development of new pedagogical and business models taking and inquiry-based learning approach and then presenting back to an appropriate departmental forum to try and stimulate further thinking.

As a project activity it was partially successful in that it did develop two resources that provide models for further course development but it was little staff apatite to purse the level 7 credit that was on offer. Of equal value was the understanding that it brought to the curriculum development problem which lead drectly to the development of the innovation support network idea.

This is the 'module description' (purpose, learning outcomes, assessment criteria, etc.) and this is the programme of study developed for the module.

Posted in Uncategorized   → **Leave a comment**

Developing a sustainable business model for open learning

Posted on June 2, 2011 | Leave a comment

As part of the project work looking into new business models, the project made this presentation at the OER11 conference in Manchester, May 2011.

From a curriculum development perspective, the conference highlighted how the OER discussions have yet to address sustainability in a meaningful way with emphasis still on creating and making available OER without much thought given to their re-purposing and re-use.

Our presentation of a small-scale case study developing a course that created, used and re-used OER felt a little bit lonely in the sea of phase 2 Jisc OER funded initiatives and the mountains of money thrown at the Open University by the Hewlett foundation.

However, we believe that we are on the right track in trying to develop new business models and ways of using OER in the curriculum.

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disruptive innovation

Clayton Christenson
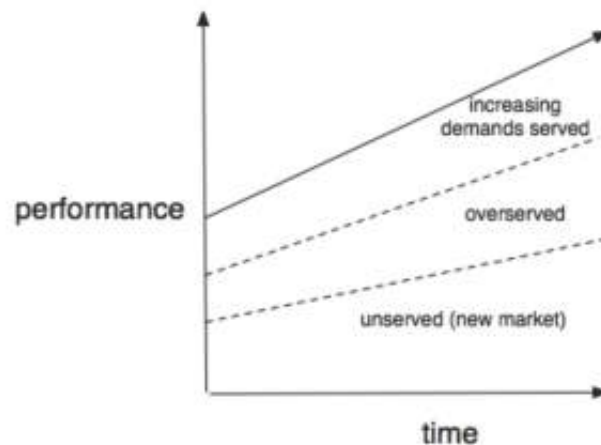
Abstract

———————————————————————————————————–

The changing financial climate for higher education teaching provision in England is leading many institutions to explore the development of new business models. Open educational resources (OER) appear to offer an opportunity for institutions to improve the quality of the resources they provide to learners and at the same time cut costs by sharing with other institutions. For institutions with a widening participation remit, there is a further driver to continue to develop provision for learners to access higher education at an affordable price and approaches around open learning (OL) is one such possibility.

In this paper we will present a case study of the development and implementation of an open learning course 'Designing learning for the 21st century', between partner institutions in the UK and China. The course was at postgraduate level and was delivered to 12 Chinese-speaking students as a part of their Masters in Educational Technology. Data was collected through the development teams reflective logs, and interviews with course participants and teaching staff.

The motivation for developing the partnership was different for the two institutions. For the Chinese partner, the attraction was to give their students the experience of studying in English some key developments in learning technology internationally. For the UK partner, the attraction was in developing new working practices and pedagogical approaches to inform the development of business models for OL that allow for differential pricing for support and accreditation options open to students.

This paper will explore the cultural and linguistic challenges faced when developing and delivering the course and provide the solutions developed. It will evaluate the course and its delivery including intended and unintended practice & pedagogic developments in relation to the aims of developing an OL course. It will discuss possible business models and ways of working between partner institutions that allows for different packages of support to be purchased by the learner or institution on their behalf.

Posted in <u>Uncategorized</u>   → **Leave a comment**

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Evaluation IDIBL Framework as a university-wide curriculum innovation

Posted on <u>May 31, 2011</u> | <u>Leave a comment</u>

This extract of conclusions and recommendations is from a published paper in <u>Campus Wide Information Systems</u>. It evaluates the <u>IDIBL framework</u> (confusing name choice, it is a model for teaching, learning, assessment and associated staff working practices) in terms of a "A cybernetic analysis of a university-wide curriculum innovation". A draft of the full paper is <u>attached</u>.

————————————————————————-

Conclusions & recommendations

Although the IDIBL framework proved useful to curriculum designers, this was not always in the way anticipated when it was created. Some staff found the framework valuable as a thinking tool to systematically critique current practices, exposing rigidity and assumptions behind curriculum design in the university's existing practice.

The framework had a particular view of how new courses could be created which worked best when staff had already identified the problem of relevance to the students' employment and were in ill-defined subjects that were newly emerging or fast changing. For these staff the framework was a valuable source of inspiration and of practical help in validating their own courses.

However, the approach does not fit well with the practice of academics developing new courses in a piecemeal way, either around an area of specific interest to them or by re-working old modules and courses. For colleagues who have a very different view of what a curriculum is and what it is to study at higher education, the framework approach can be almost meaningless.

Although validated as a framework by the University, this didn't accord it with the status of a regulation or even guideline. If the framework is to be established in the 'fabric' of the institution and to be more than an experiment to develop inquiry-based forms of learning, then more effort would be required to ensure the framework was 'officially' adopted. This highlights a gap between the university's strategy and implementation.

The framework omitted to explicitly address the organisational approach implied by the framework. For example, the notions of team teaching, online community of inquiry for teaching staff and new productivity & management arrangements, which were present in the earlier examples of the approach, were not addressed.

This suggests the following analysis:

Table 3: Proposal to match variety issues related to teaching

Aspects of organisational approach not addressed by the IDIBL framework course design:	Variety challenge: the problems presented by mismatch in states of management (staff) and operations (students)	Amplifier: increase in the number of states of the management (staff) presented to the operations (students)	Attenuator: decrease in the number of states of the operations (students) presented to the management (staff)	Self organisation variety absorbed w... the sub-system of management (staff)
teaching	how to avoid the inefficiency of asynchronous and geographically separate activity by following the expectations of the 'standard' productivity arrangement in UK higher education	opportunity to access advice from all members of the staff team

questions from individual students answered publicly

clarity about the expectations of responsiveness from staff | creation of frequently asked questions

code of conduct for online behaviour

reduced personal response, emphasis on self organisation through online community of inquiry | self-organisation & team teaching allows for new, flexible working practices such as sharing the responsibility to respond to students & modelling desired behaviours through discourse between staff |

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Cybernetic analysis is useful to course designers, in particular the notion of 'absorption' of variety, when considering the impact of choices they make on students and teachers. This involves seeking to minimise the negative impact on both groups and making better use of internal, self-organising, mechanisms for absorbing variety as well as attenuators and amplifiers.

For cross-institutional initiatives that seek to promote a particular pedagogical approach, it is vital that at an institutional level there is clarity about what is trying to be achieved. If the purpose is to better understand an organisation and stimulate new ideas and thoughts widely, the framework approach is worth replicating. If however, the immediate imperative is to recruit significant numbers of students, then such activities probably need to be located in a dedicated unit. In cybernetic terms, this unit is it own 'organisation' on a level containing the course organisation as analysed above - designed to amplify variety in the university's managerial structures ('management') and attenuate variety in the course ('operations'). This simpler environment insulates the innovation from the conservative effect of the existing university organisational design.

Finally, this paper has not explored fully the problems of explaining the approach to potential students and employers, whose preconceptions of what it is to study in higher education were found not to match the IDIBL framework as we communicated it, despite the learner-centred motivation in our design. This is a challenging problem that the success or failure of the approach ultimately rests upon.

Posted in Uncategorized   → **Leave a comment**

Technology to support IDIBL framework evaluation: AppleScript for qualitative, grounded research

Posted on March 16, 2011 | Leave a comment

As a part of our work to evaluate the IDIBL framework, we conducted a number of fairly lengthy interviews. These were then transcribed into Google docs to enable multiple users to select and code text according to an

agreed format using the highlight and insert comment feature – highlighted text, either as a source for paper 1 or 2 , keywords, and who selected it (see below).

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Mark at the the time. So this idea that we could have a flexible system that could relate to the changing notions of and demands of the industry. That's where I came from I think. But I also thought it was exciting, there was something exciting about it, it saw education in a more flexible way. Putting the onus on the student and less upon this is what we are going to deliver to them. The idea that a student could move around easily and decide the focus of their study that was also attractive.

SQ. You came to Bolton with some of those deeply held beliefs I suppose?
Yes. I did used to do a lot of education related work, not as part of formal education but with

paper 1: flexibility, changing demands industry
—Stephenp.powell

paper 1: excitement, flexibility —richard.millwood

The above grounded theory approach comes in for quite a bit of criticism from some quarters. For example, detractors may criticise that it on the grounds that advocates see the researcher as a 'blank slate', or that the approach ignores the literature – this Slideshare by Cathy Urquhart helps address these and other criticisms as well as offering an explanation of what grounded theory is.

Having got the defence of the approach out of the way, the main purpose of this post is to share an AppleScript developed by Richard Millwood. The challenge we faced was having 10, 4000 word GoogleDocs coded as described above. To make sense of this data, in a second iteration of analysis, we decided to tabulate the text with associated comments it in a spreadsheet (again in GoogleDocs) to allow multiple users to work on the text at the coded text at the same time.

You could copy and paste as a way of achieving the above, but the attached apple script automates the process and and may well be useful to other Apple researchers:^)

<——————————————>

```
tell application "Microsoft Word"
activate
copy every Word comment of active document to allComments
set theTable to make new table at active document with properties {number of rows:1, number of columns:4}
insert text "Quote" at text object of cell 1 of row 1 of theTable
insert text "Comment" at text object of cell 2 of row 1 of theTable
insert text "Paper" at text object of cell 3 of row 1 of theTable
insert text "Author" at text object of cell 4 of row 1 of theTable
repeat with theComment in allComments
set theScope to content of scope of theComment
set theCommentText to content of comment text of theComment
set thePaper to first word of theCommentText
set theAuthor to last word of theCommentText
set theCoreCommentText to text from word 2 to word -1 of theCommentText
make new row at end of theTable with properties {allow break across pages:false}
insert text theScope at text object of cell 1 of last row of theTable
insert text theCoreCommentText at text object of cell 2 of last row of theTable
insert text thePaper at text object of cell 3 of last row of theTable
insert text theAuthor at text object of cell 4 of last row of theTable
end repeat
end tell
```

Posted in Uncategorized   ➜ **Leave a comment**

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Technology to Support Validation Process

Posted on March 2, 2011 | Leave a comment

This time last year, the idea that we would implement some technology to support the validation process seemed quite a straightforward proposition, and in some ways it still is.

However, a period of investigation and reflection has lead us to some conclusions about the way that we need to go about this taking service oriented and systems thinking viewpoints.

Concerns

1.   Validation processes in universities are similar to many of the other supporting activities of a university in that involve the passing around of documents for people to comment on and then make decisions about them – document and workflows. For example: assessment; mitigating circumstances; QAE processes; tracking PhD students progress, etc. all require documents to be passed around, often by email or internal post and for some of these we already have bespoke tools.

2.   Developing and deploying a bespoke document-handling tool to support the validation process is a relatively straightforward thing to do. However, in imposing yet another ICT system (however good it may be) on the IT department with the requirement develop and maintain beyond the life of the Coeducate project it raises serious governance and sustainability questions.

3.   The Archimate model of the idealised validation process is relatively simple, but the actual process in action is full of work-rounds, fudges and 'rule' breaking.
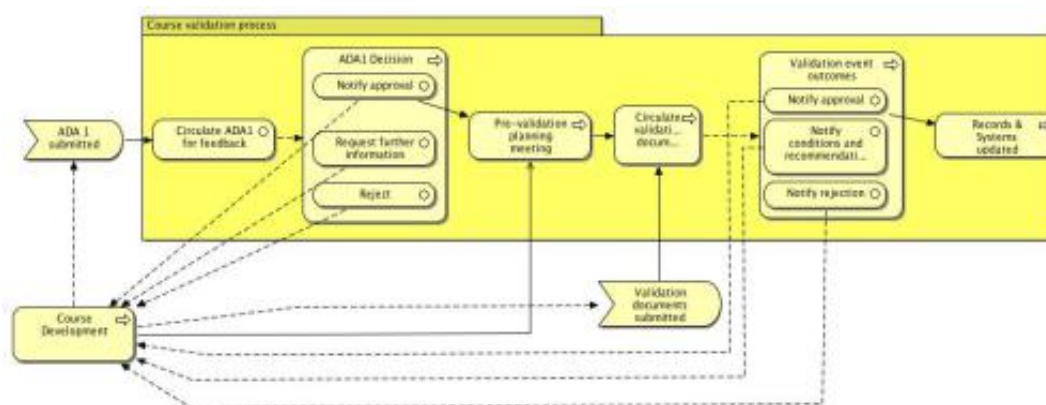
Idealised ADA process

Where we are at!

In the light of the above we have evaluated several software solutions based on Business Process Execution Language and the stacks such as WSO2 that integrate human interactions and involvement in processes (not simply automated) and even BPMN based solutions, but rejected them at this stage as too ambitious for where Bolton is at bearing in mind our relative size as an institution and likely on going resource availability.

We are now exploring two options:

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1.   JIRA – a highly customisable issues and project tracking software often used by technical development teams and being considered as a toll by our IT department. We have a build of the process using the Workflow Designer plugin that gives a nifty drag and drop interface. Once a template is designed, it can be duplicated and run for each validation instance.

2.   Moodle solution – using the considerable power of Moodle to handle groups, notifications, and conversations, document handling with the addition of a 'tracking' block to monitor progress. This is by far and away the simplest idea, but that maybe why it has a chance of actually working and being adopted and supported.

Posted in Uncategorized   → **Leave a comment**

Low Tech Data Mining for Curriculum Design

Posted on February 28, 2011 | 1 Comment

As a part of the UoB curriculum review we are seeking to reinforce the standardisation of our modules with the aim of improving the student learning experience and efficiency of our curriculum delivery.

We are in the fortunate position to already have a module database (first developed in 2003 and currently being updated with the support of Coeducate) and have exploited this by undertaking some low tech data mining.

The following charts were presented to senior managers and others responsible for the development of a 'Core Curriculum Framework' for the university to support **informed decision making** on the possible impact of choices being made.

Having access to the underlying database allowed for easier extraction of the required information, however it is envisioned that the same affect could be acheived by using an XCRI feed which exposes common module information such as learning outcomes and levels. From a technical perspective this would be a simpler solution, as all the required information is presented in a usable manner.

Some results

1. Number of learning outcomes per module: the proposal is to move to 4 or 5 per module which would require the re-writing of either **1/3** or **2/3** of the portfolio – a big difference with significant resource implications.
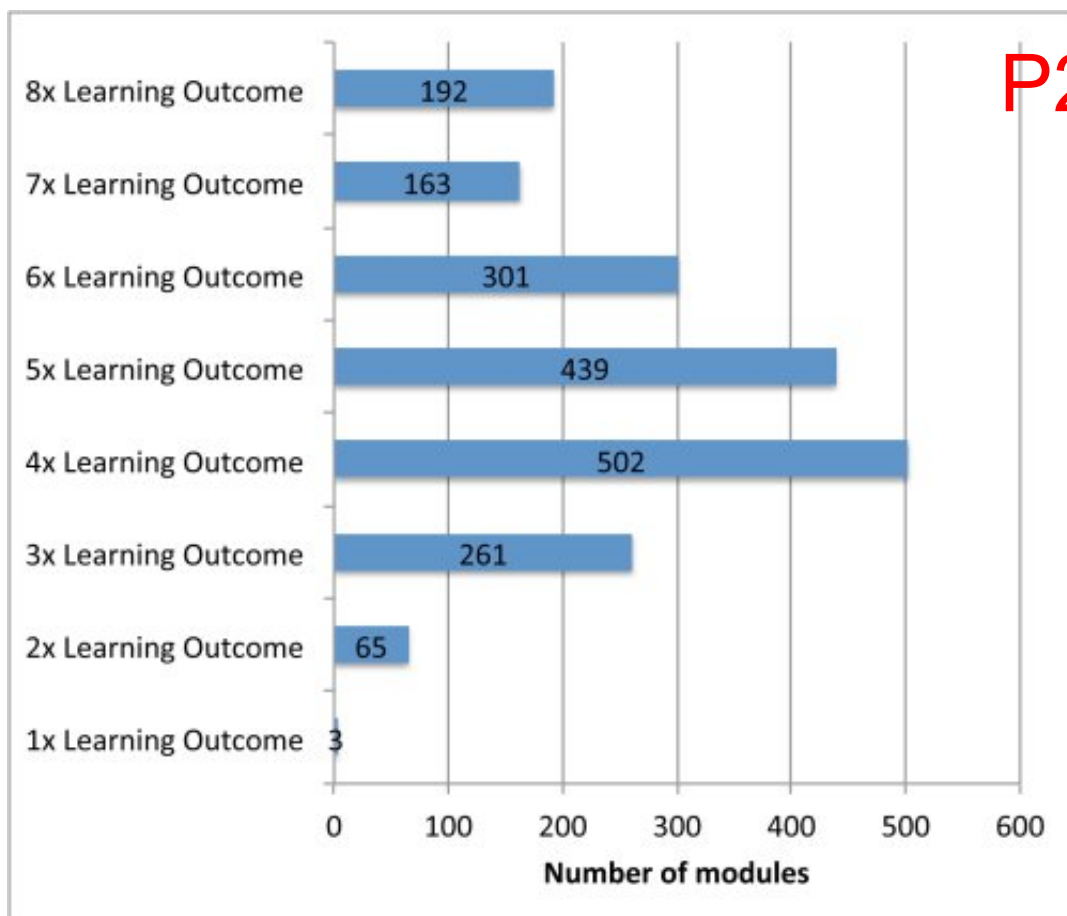
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2. Number of assessments per module: the proposal is to limit the number of assessment types to 2 per module – around 1/3 of the modules would need changing resulting in significant resource implications.
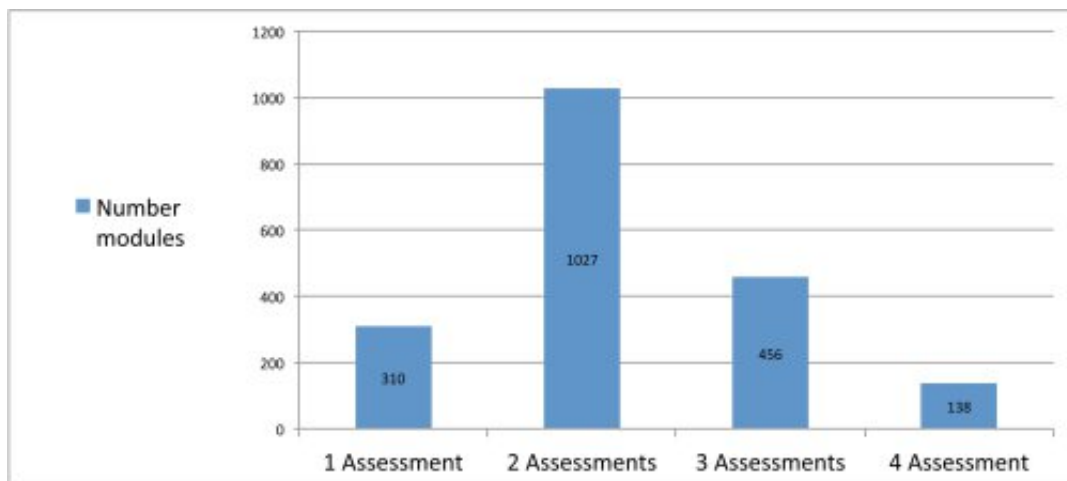
3. Duplication Factor: represents the number of times all of the learning outcomes are assessed divided by the number of assessments per module. Thus, if a module has five learning outcomes and two assessments, both of which assess each learning outcome, you have 5 learning outcomes assessed 10x, giving a duplication factor of 2 – the proposal is to assess each learning outcome only once so around 1/2 of the modules would need changing resulting in significant resource implications.
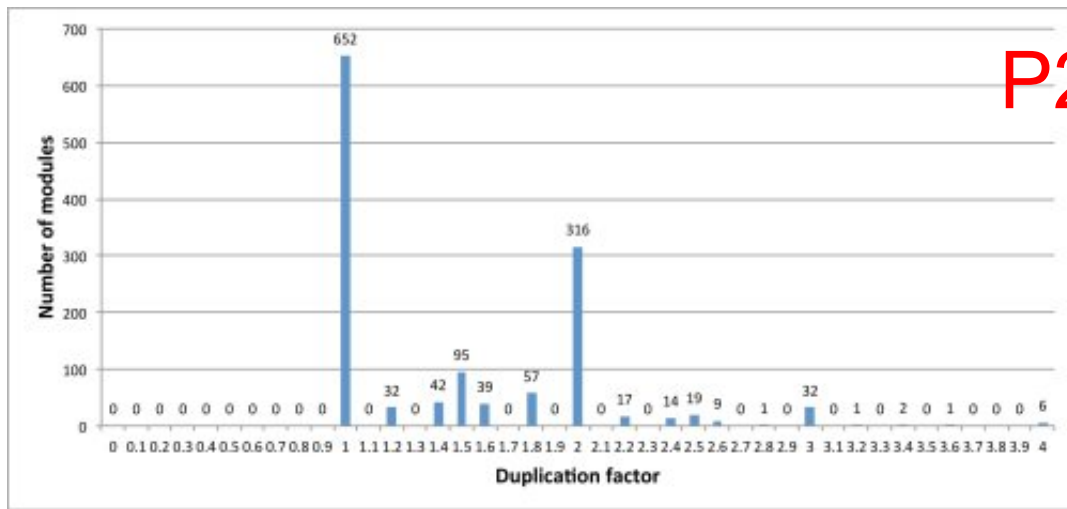
Posted in Uncategorized   **→ 1 Comment**

IDIBL project: initial evaluation

Posted on November 14, 2010 | Leave a comment

As a part of the institutional wide IDIBL curriculum development project, a degree framework was developed to support adoption of work-focused learning. This action has created a 'disturbance' in the University as staff seek to understand and identify its value, if any, to their own professional goals. The reactions by staff and their experiences in seeking to use the framework are significantly influenced by the context in which they find themselves – the institutional structure, policy, systems, processes & practices, professional identity – all have a bearing.

The attached report is the first phase in the evaluation of the IDIBL project. In further publications, using a 'realistic evaluation approach', we will seek to identify the underlying mechanisms that can impact on curriculum development across the institution seeking to find out "what work for who in what circumstances" (Pawsen & Tilley, 2000)

Posted in Uncategorized   **→ Leave a comment**

Moodle Module Authoring Block

Posted on November 14, 2010 | Leave a comment

The opportunity to improve the efficiency and quality of module authoring has been identified as an

important aim of the Coeducate project and this development work is now underway with an initial meeting of the user group supporting the agile development process.

We evaluated demonstrator technology including Phoebe & the London Pedagogical planner that had interesting features, some of which we will incorporate into our solution. However, we have decided to opt for a simpler approach by developing a module-authoring block for Moodle rather than a stand-alone' tool. This has several advantages that we believe have significant impact on the likelihood of our being able to develop a solution that will have significant staff take-up with staff and these include:

-    the UoB institutional VLE is Moodle, an open source tool that offers the opportunity for significant customisation, and staff are already familiar with its use so we anticipate less staff resistance and fewer training needs;

-    we can use the existing architecture & permissions structure within Moodle which which significantly reduces the complexity and scope of the development work;

-    linking module authoring, module database and student data systems through Moodle is will encourage a 'holistic' view of learning design from validation to delivery in the VLE;

-    the block can offer contextualised support for module authors that can be readily edited in the light of experience and as requirements change removing the need for significant, ongoing technical support;

-    the block will be readily available for the sector to take-up and use in their own context and we will design it with this potential in mind.

These simple screen shots from the early demonstrator give the flavor of what we are trying to achieve.

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The Integration of Moodle with Bolton University's Systems (part 2): Technical perspective of the Category Structure

Posted on October 24, 2010 | Leave a comment

This document further describes how Moodle has been integrated with various systems within the University of Bolton. It continues from the last document to describe the new enrolment plug-in in more depth. It also describes how Moodle Courses, which have been linked to SITS (Student record system) records, can then be moved around within the Moodle category hierarchy, so they appear under the correct category. The main difference between a default installation of Moodle being that a course creator (teacher) can do this and not

have to rely on the Moodle Administrator to do this on their behalf. This document also aims to briefly explain what the code does in order to achieve the wanted behaviour.

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Explanatory document and user guide.

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The Integration of Moodle with Bolton University's Systems (part 1): Technical Perspective

Posted on October 12, 2010 | 1 Comment

INTRODUCTION

This document describes how Moodle has been integrated with various systems within the University of Bolton. The rationale behind this work was give lecturers the opportunity to more closely tie Moodle courses with university modules and student lists which are maintained by SITs. It also makes use of the university's directory server for user information, accessed via LDAP.
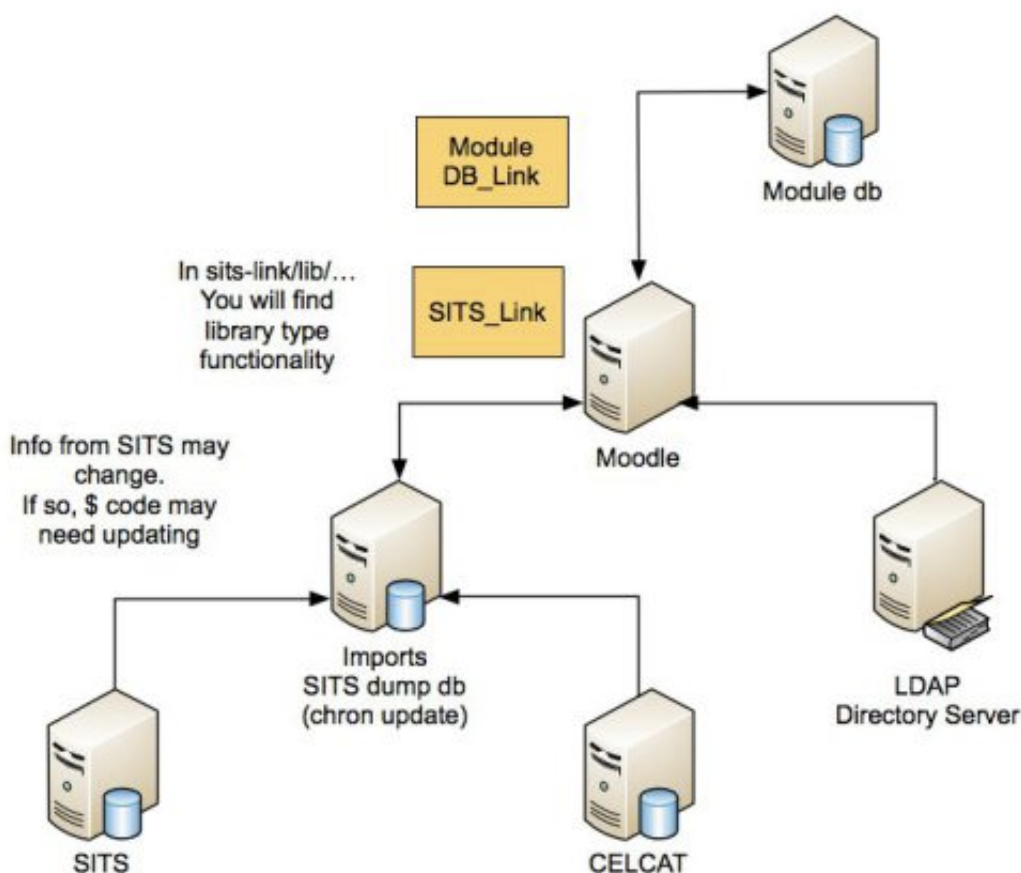
ADDITIONS TO MOODLE

A number of additions and changes were required to integrate Moodle with the university systems. These were developed for the most part as plugins utilizing Moodle in-built extensibility. However there were two small changes to Moodle's own code. The first was the addition of an extra line to the admin block. The second was an addition of some linked features to the 'my Moodle' page.

Explanatory document & code.

Posted in Uncategorized   → **1 Comment**

Technology Attitudinal Survey using Google Docs form

Posted on October 5, 2010 | Leave a comment

In July, we undertook an institutional -wide survey on 'curriculum design and affective issues related to new technology implementation' in collaboration with the Universities Work-with-IT pilot project. This coincided with our Teaching & Learning Conference and as well as gathering some data, we also anticipated that the survey would act as a gentle 'nudge' to get colleagues thinking about the use of ICT across the institution.

Although having experience of tools such as Survey Monkey, we decided to opt for Google Forms which provides a simple interface to help develop your survey and saves data back into Google docs which easily enables simple analysis via charts and tables.
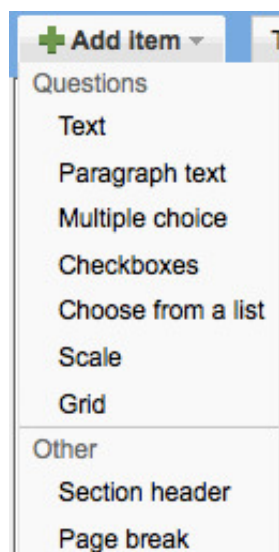
Richard was tasked with drawing up the questions, a mixture of closed and open responses (see options to left) , and instantiating the survey which is still available for anyone who wishes to try it out or simply re-use the questions developed.

An automatically generated summary of the results gives you an idea of what is possible and, at a later date, when we have had time to undertake some analysis we will post our observations.

Overall, we received 60 responses which from an overall staff head count of 6-700 is a pretty good return!

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Why is Archi significant? (Archimate Modelling Tool)

Posted on October 5, 2010 | 2 Comments

For the Coeducate project the work we are undertaking around curriculum development cuts across many of the structures, systems and the processes across the university. This complex picture is ripe for a systematic approach to help us understand how it currently operates and how proposed changes can be managed to ensure their impact is understood and the different stakeholders can take ownership of them.

Why Archimate? Archimate is an open standard modelling language for enterprise architecture. It encourages modellers to think in three dimensions, the business processes, applications that support these processes & the underlying technology that supports them (see diagram below for important concepts). Most importantly, it provides a way by which different stakeholders can communicate across organisational boundaries and think through the consequences of proposed decisions and the impact of changes.

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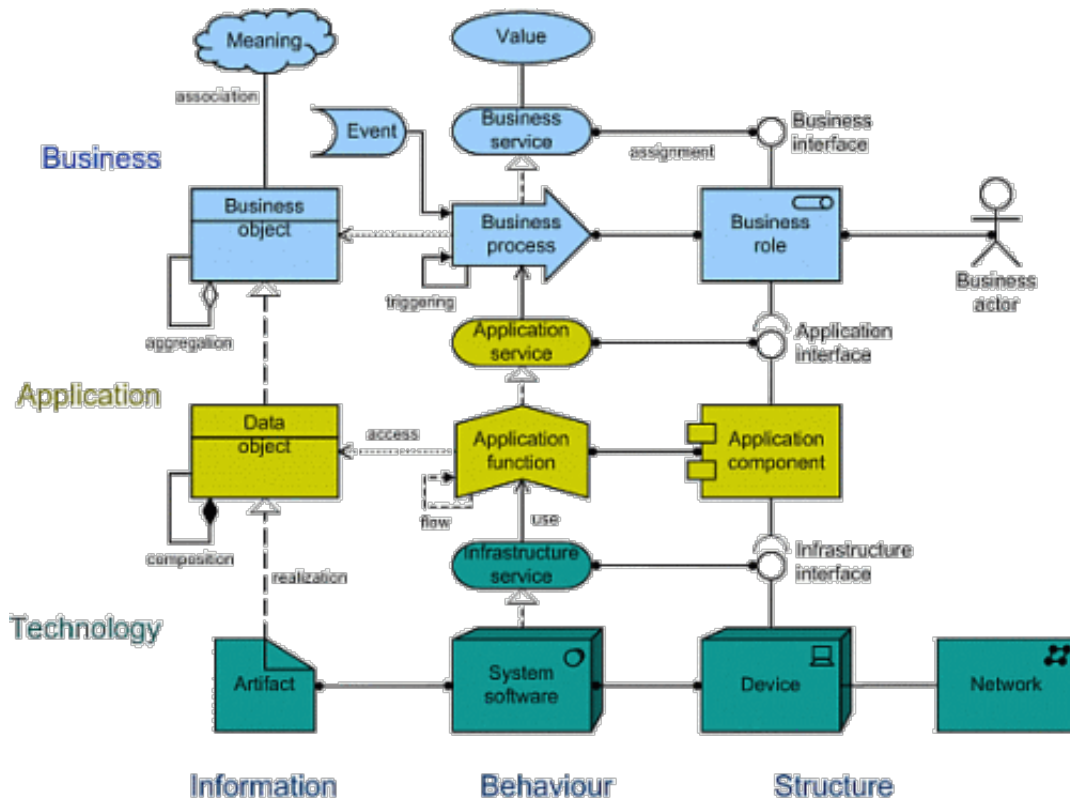
Components of Archimate langauge

There are several tools for using the Archimate language. The most simple of which is to use templates in drawing products such as OmniGraffle (for Mac) or Viseo (for PC) which is OK, but offers nothing by way of automation or supporting the logic applied by the modeller. BiZZDesign Architect is a powerful commercial option that is built on the Archimate language with sophisticated options that allow interrogation, but at several thousand pounds per seat, per year it is seen as an expensive option for HEI.

So why is Archi significant?   It is an open source tool funded by Jisc based on the Archimate lanaguage that can achieves enough of the potential of a tool like BizzDesign Architect to make it a good choice for relatively small enterprises, like the University of Bolton to develop their modelling capacity without a significant software outlay.

Currently, most of our effort in modelling is supported through Jisc funded projects, but this is not a sustainable approach. To become embedded, a wider group representing the different parts of the University need to support this approach. By lowering the barriers to entry both financially and in terms of the ease of use of the modelling tool, could be a significant factor in helping us to achieve this.

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Open Learning Model

Posted on May 25, 2010 | 1 Comment

HIGHER EDUCATION CONTEXT

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For English HEI the next few years will see a decreasing Hefce contribution with increasing student fees as the intended means of making up the shortfall (Lord Brown Review). This will impact on Universities in different ways with some being able to command a premium for courses and some struggling to recruit as the cost to students from lower socioeconomic backgrounds makes HEI study less attractive. In either case, there will be a significant squeeze on Universities budgets that are also responding to a learner agenda that is demanding more contact hours for the increasing fees being paid. The option of increasing the number of high paying international students will also prove more difficult as new Universities across the world compete for increasingly mobile and distance learners.

OUT OF ADVERSITY COMES OPPORTUNITY

It is likely that a gap will grow between what many can afford and the prices being charged, as many UK HEI are unable to constrain their costs pass them on by way of increased fees to students. It is in this dynamic that there is the potential to develop new 'products' that 'fill-the-gap' vacated by institutions who are unable to respond through new curriculum models that require different ways of working. It seems likely that there will be a growth in part-time students who seek to continue to work whilst learning and institutions that seek to develop and build on existing transnational partnerships, but deliver these courses in more cost effective ways.

AN OPEN LEARNING BUSINESS MODEL

The diagram below attempts to illustrate an open learning business model by contrasting it with other approaches. It is a relatively straight-forward concept that moves beyond Open Educational Resources by also making freely available full programmes of learning including, learning activities, automated self-assessments, ways of interacting online with other learners, and significantly a mechanism for summative assessment leading to accreditation and awards based on the self-directed learning undertaken.

The underlying proposition is that by allowing learners to choose the level of support they need or can afford, it will make access to higher education a possibility for people who would otherwise be disenfranchised by student fees. In response, capacity and capability need investing in to transform appropriate courses for open learning and develop and resource the processes that enable a 'pay-as-you-go' approach to support and assessment.

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Open learning business model
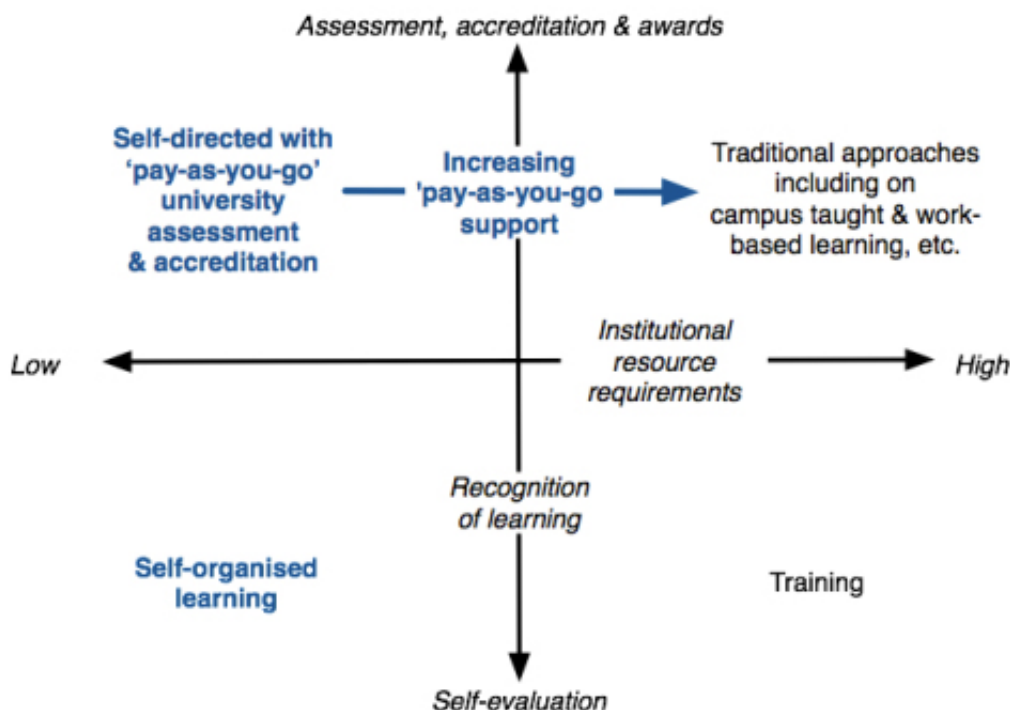
In the diagram we have identified two dimensions that are central to the model. First the extent to which there is formal recognition of learning (summative assessment, accreditation, awards) or self-evaluation by the individual concerned. Second, a continuum of institutional resource implications that has at one extreme the campus attendance supported (lectures, tutorials, seminars, etc.) through to no ongoing resource implication beyond making the open learning materials available. Between these two dimensions there are many possibilities and an individual learner would, in the open learning approach, select the appropriate option for them at a given time.

The Open Universities OpenLearn initiative is moving somewhat in this direction, although it is problematic in that it potentially undermines the current OU business model where learners are largely paying for high quality resources.

The Open Learning business model described requires awards frameworks that allow the combining of credit gained via different routes including the Accreditation of Prior Experiential Learning (APEL) procedures that enable learning to be accredited through many different types of learner experience – most UK HEI already have these in place although making them more cost effective through the use of technology is an area where more work is required.

In addition, different approaches to teaching and learning including work-focussed learning, which we are piloting at the UoB, also offer ways in which we can reach out to new groups of learners.

SOME POSSIBLE OPEN LEARNING SCENARIOS

Learner A: a well qualified a self-organised learner who has identified the need to learn about a specific business process access and uses resources independently, joining in online conversations both hosted by the university and in special interest groups when they feel the need to so do.

The University earns no money from this learner but other learner's benefit from their contributions to online activities.

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Learner B: is working full-time and has 120 L4 credit from a first year studying at a University some years ago. Confident in their ability to learn, unable to afford to pay for study, they work through open learning modules undertaking formative assessments and evaluations as they progress. When they feel confident in themselves that they are capable of passing an assessment they apply to be examined on that module paying a relatively modest fee for a portfolio of evidence to go through the APEL process or for a written examination to be sat.

The University earns income for assessment from this learner, this is significantly less than would be fees for traditional approaches but resources required is relatively low and the pricing reflects the cost to the institution and what the market will bear.

Learner C: is working full-time but in relatively low paid work. In an ideal world, they would chose to study full-time on campus but this is not a possibility. Instead they opt for a mixture of self-directed study and on topics of particular interest as, attend lecturers as their work allows.

The University earns income for assessment and for some support for this learner, this is somewhat less than would be fees for traditional approaches but resources required are determined and paid for by the student and they reflect the cost to the institution and what the market will bear.

WHY THIS IS SIGNIFICANT?

The ideas explained above are not original, others are thinking and taking action along similar lines (George Siemens and his module on Connectivism). However, what is significant is that this is that Open Learning is a vibrant topic of conversation at the University of Bolton as we seek to position ourselves in the years ahead to face what will undoubtedly be challenging times. This is not proposed as a way of replacing existing courses, but for staff are seeking new ways of generating income this might be one possible route to explore.

Posted in Uncategorized

➤ **1 Comment**

RDF and all that…

Posted on May 18, 2010 | Leave a comment

A talis workshop in Manchester offered some very interesting food for thought about how institutions might manage their data in the future. From a not very technical perspective, it works something like this…

RDF (Resource Description Framework) is a way of describing resources, that is making a statement about something in a structured way. A critical part of this statement is the Uniform Resource Identifier (URI) that identifies a resource by way of a unique string of characters. This shouldn't be confused with a URL which refers to a location where we can retrieve something – the URI simply identifies the 'thing' but doesn't tell us

where it is or how to get it.

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Now imagine a world where online objects all have an RDF description attached. This would enable us to start cross referencing by making assertions that the thing we have described is in some way like something else and we do this by including its URI in our RDF.   The BBC have started to use this approach on parts of their website. For example, on this page about a Tiger, if you scroll to the bottom of the page you will see that it links to Wikipedia and uses extracted text through DBedia where the structured data of Wikipedia is made available. This nicely illustrates how a web of interconnecting resources based on rich descriptions using URI can facilitate the transfer and combining of information from different sources around a common concept with machines processing the information – a practical implementation of the concept of the semantic web.

At Bolton we have many different databases each holding related information about courses and programmes. At the moment, we are expending a lot of effort in trying to get these systems to interoperate with each other. It doesn't take much imagination to see that if our databases used RDF it would in principle allow this to happen.

However, the real potential of RDF is that it allows us to combine data in ways that we haven't yet dreamt of, and this point was well made by presenters at the workshop. As more and more data is made available in this way, more people will make the links and connections and combine information that they find valuable.   Personally I would like my postcode connected to local information such as; library opening times; the blue, green, and black bin collection dates; and other services both private and public.

Anyone who is interested in the technical side of this needs to start thinking of databases not in terms of a collection of interlinked tables, but in terms of 'graphs' that describe things in terms of triplets (**subject** [e.g., car], **predicate** [e.g., colour] & **objects** [e.g., blue]). By creating a query (much the same way as for SQL) it is possible to identify matching patterns on the graph to pull out the data that is of interest.

Posted in Uncategorized   ➞ **Leave a comment**

Bolton Camel – Thursday 29th April

Posted on May 3, 2010 | Leave a comment

As usual, the Camel event provides an effective forum for projects to update each other, exchange ideas, and consider opportunities. On reflection, the main point that came out of the day was the unprecedented state of flux that the sector is in. Financial pressures are resulting in curriculum reviews, reorganisations, pressure for quick solutions to very complex challenges, but also opportunities as institutions seek to develop new business models and strategies for growth outside of Hefce funding.

We spent some time discussing XCRI and possibilities for its extension to richer descriptions of units of learning. This is a complex area as for one thing there is little agreement over the landscape – features,

names, characteristics, etc. However two conclusions were arrived at. The first is that currently it would be too much to expect XCRI to be the vehicle for these richer descriptions, this would overcomplicate the specification and become mired in politics. Secondly, it would be very useful if CETIS were to pull together an online resource to 'map the landscape' as a first step to getting to grips with current ideas, projects and initiatives across the UK, Europe and wider.

Lastly, despite the lack of interest in developing the XCRI specification for competencies, as an adjunct to the Coeducate project Bolton is undertaking an XCRI mini project to look at exposing common module information such as learning outcomes, level, and quantity of credit.

Posted in Uncategorized   → **Leave a comment**

Realistic design – agile software development for curriculum development

Posted on March 18, 2010 | 1 Comment

Moving into the tool development phase of the project we are now consulting with staff using Idealised
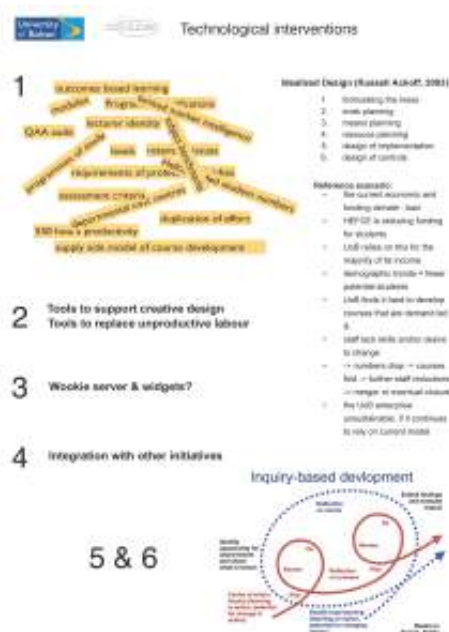
Design methodology (Russell Ackoff) to generate a specification. This approach supports an agile software design development process – developers working closely with users to iteratively build software.

We are aiming to meet two overarching needs identified from our initial inquiry:
1. tools to support creative design;
2. and tools to replace unproductive labour (validation documentation).

To achieve the above we anticipate tying in the current module database with Moodle where the design and authoring environment will be accessed by course developers.

We think that some of this will be achieved using widgets served from a [Wookie server](). On the plus side this will allow us to develop interoperable widgets (relatively easy) that can be used in other platforms and by other people, although this will present a challenge with the transfer of data into other University systems (the module databases, etc.) from the Wookie server which is well suited to allowing collaboration by different users, but not necessarily to transfer data out to other systems in an integrated way.

Posted in Uncategorized   ➙ 1 Comment

Employer Based Training Accreditation

Posted on January 19, 2010 | Leave a comment

Employer Based Training Accreditation ([EBTA]()), is a process sponsored by [fdf]() to enable employers to get accreditation for in-house training that they provide. The proposition behind the initiative has three elements:

- for HEI it s one way of accessing another revenue stream through providing an accreditation service and also and opportunity to build relationships with employers that might lead to further business;
for employees, it offers a route that might eventually lead to enough credit being accumulated to be 'cashed in' for an award;
for employers, the argument, relies on them seeing benefit of something extra that HEI can offer beyond their training provision.
An event run by FDF designed to look at how shell awards and frameworks could support this process provided some interesting examples of practice from HEI including Derby, York St Johns and The Open University, that latter being a very different model.

An overall impression was that in our desire to offer different routes in higher education we run the risk of creating unsustainable business models that are trying to bring together a complex set of regulations (quality assurance, funding, semesters & modularity), policy initiatives and working practices without addressing fundamental issues and questions. A change of policy brought about by the current economic climate or a change in government would alter the environment significantly.

Posted in Uncategorized   ➙ **Leave a comment**

Evaluation

Posted on December 21, 2009 | Leave a comment

In designing our evaluation strategy we have thought long and hard about the approach we wish to take. The Jisc 'corporate' overview on [evaluation]() is described on their website as:

Evaluation is the systematic collection and analysis of data to assess whether an activity has been effective, achieved its objectives, or had an impact. It is an important part of any project or programme because it can assess the feasibility or development of a programme of work (formative), the overall success or value of completed work (summative) and to capture the learning that has taken place during the activity.

As many people who have been involved in evaluative research would agree, the assessment of whether an activity has been effective or achieved its objectives is problematic, and in particular, when disseminating work that is useful for a wider community. Some of our thinking around this problem is influenced by the work of Bassey who in conceptualising educational cases studies identifies one approach as being "theory-seeking and theory-testing" and the work of Pawsen and Tilley on 'Realistic Evaluation' who seek to answer the question "What works for whom in what circumstances?"

In both examples there is an explicit recognition that actions taken in one set of circumstances will work differently in another context, but that there is a need to generate theories that can help policy makers and practitioners beyond the case in study. In both approaches, the systematic collection of data is an essential component but where they, arguably, differ from other approaches to evaluation is in their objective to generate theoretical understanding that has wider value and not to develop a template that can be applied again and again with predictable outcomes.

I would argue that an illustrative example of the difference between approaches and attempts to bridge the divide can be seen in the school effectiveness / improvement debate (here & here) where targets and league tables are used to judge the effectiveness of institutions. This argument rests on the emphasis placed on 'achievement oriented school effectiveness' (think Chris Woodhead)' verses 'process oriented school improvement'. Interestingly, although the school sector is rowing back somewhat from target setting with the dismantling of measures such as SATs in England and in the NHS the debate about targets is hotting up, higher education is rushing headlong into league tables for just about anything that can be measured in the belief that it will provide a stimulus for improvement in standards – HEI effectiveness approach.

The challenge for Coeducate is to move from a philosophical standpoint to a plan for a realistic evaluation!

Posted in Uncategorized   ➜ **Leave a comment**

Cluster CAMEL event 30th Nov – 1st Dec

Posted on December 8, 2009 | Leave a comment

A good event throughout that progressed two important avenues of inquiry.

1. The 'new business models' that are required for new approaches to teaching and learning which in turn demand new working practices with all this implies for middle managers seeking to coordinate staff . Encouragingly there is a lot of experience in the group, in particular work that Tony Toole (critical friend) has undertaken around activity-based costing will feed well into future events that the support project will host.

2. A concrete understanding of how the practice of 'coaching' is another role that HE teachers (not necessarily lecturer) might take. The particular question of interest for Coeducate is how this can be combined with the concept of facilitation and consultancy that are at the heart of the project IDIBL framework.

Posted in Uncategorized   ➜ Leave a comment

Workshop – Online activity design

Posted on December 2, 2009 | 2 Comments

Attached is a workshop (resources and Online activity design of keynote attached) I put together for Bolton. It tries to get staff to think about activity design for online learning. There are two activities.

One based around the Edinburgh Scenarios developed by Cross and Star in 2005. The second was based on the idea that staff need to think in three dimensions when planning online learning; roles, activities & resources/tools (IMS LD would call this last one environments).

I think the session went well, and I will be refining and running it again in a few months time.

Posted in Uncategorized   ➜ **2 Comments**

A curriculum design problem…

Posted on November 17, 2009 | Leave a comment

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Posted in Uncategorized   ➜ **Leave a comment**

Guardian Article | Universities plan job losses in response to looming public spending cuts

Posted on November 17, 2009 | Leave a comment

This Guardian Article might provide an interesting portent of things to come. I think that this example is the most interesting "London College of Communications (LCC) is closing 16 of the 19 courses offered in a single school" as it points to a re-structuring of the curriculum as a response to straightened times.

Many institutional managers would complain that there is massive duplication in courses and modules. Arguably, there is the opportunity for rationalisation of bulging portfolios with some creative thought about how variety can be achieved through an outcomes based approach (less prescriptive modules that enable different outcomes for individual students) rather than creating more and more courses to try and match the demands of the market place and desires of lecturers to teach to their passion!

Posted in Uncategorized   ➜ **Leave a comment**

eAssessment Association & JISC CETIS joint meeting

Posted on October 28, 2009 | Leave a comment

A very interesting day, but not necessarily in the way I expected it to be. My motivation for attending was to bring my knowledge up-to-date in the area of e-Assessment now covered by the newly established association.

I think it fair to say that I was shocked that e-Assessment in its various forms discussed hadn't matured much beyond the quizzes and tests I remember as a school teacher at the end of the 1990s. Clearly the technology is different including the web based nature of e-assessment, but apart from that I was struggling to see where pedagogical sophistication was being applied. If e-Assessment is to become accepted and trusted as a mainstream assessment approach, there needs to be significant developments that will give lecturers confidence in the validity and reliability of the tests within the context of 'higher education' outcomes.

An interesting Report presentation on the state of Summative E-Assessment Quality in UK HEI was presented by Lester Gilbert commissioned on the basis of the Jisc definition of e-assessment, but which I think exemplifies part of the problem:

> *"E-assessment is the end-to-end electronic assessment process where ICT is used for the presentation of assessment activity, and the recording of responses…" (Jisc 2008)*

My impression gained from the presentation was that practice across the sector was at best patchy with little attention being given to the quality of e-assessment. However, the project teams interpretation of the Jisc definition excluded approaches such as e-portfolio which have proven to be successful in numerous institutions. I wonder if this marks a line in the sand between a 'computer scientists' view of the world where there is still a belief that machine 'interpreted' tests can be developed in such a way as to be sophisticated enough to replace other forms of assessment that require human interpretation and a sceptic position that sees tests such as this having at best a small part to play in higher education assessment.

Technical point

Some developments that sounded promising included the progress of an IMS *V 2.0 Question and Test Interoperability (QTI)* standard tha offers the prospect of increased interoperability in transporting assessments although its use will be restricted by the legacy platforms that are used by Universities and the functionality offered by the Common Cartridge 1.1 (hopefully version Common Cartridge 1.2 will be a close map onto QTI 2.1).

Posted in Uncategorized   ➝ **Leave a comment**

FDF Annual Conference, October 22nd – 23rd

Posted on October 26, 2009 | Leave a comment

A useful conference that highlights a set of activities around work-based learning that offer real opportunities for institutions like Bolton. The highlights for me were:

1. discussions around the EBTA process whose models are many and varied, but all include substantial employer and employee engagement
2. employer engagement through Chambers of Commerce as anything from a broker to delivery of courses, this diagram, based on one presented, illustrates the approach

P24
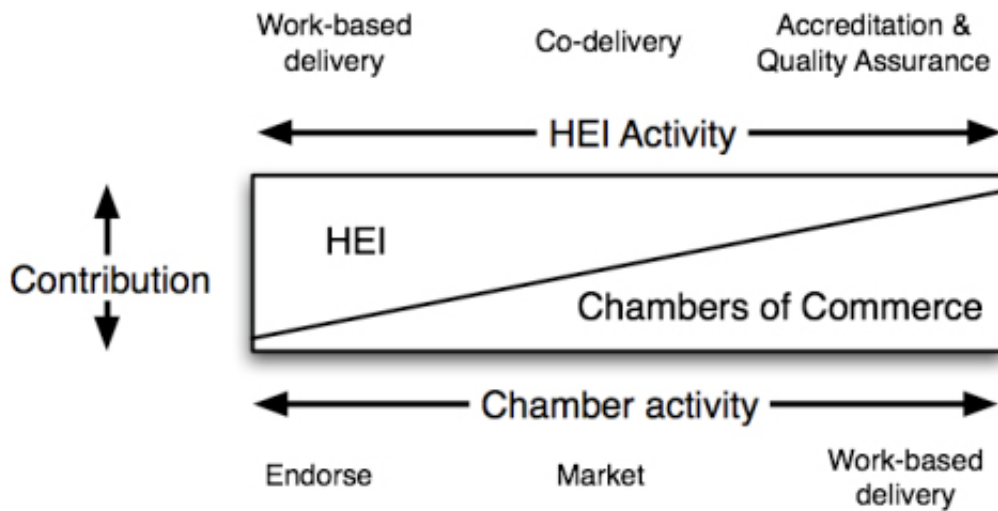
3. SME spend money on training in a 2:1 ratio of private to public delivered training and 30% care about the qualification their staff receive from that training
4. A panel discussion between three employers (Acenture, Jewsons, NHS) left me with these general impressions:

> HEI are hopelessly unresponsive (speed to market) and difficult to deal with by comparison with private trainers
>
> needs to be a change to a market driven approach understanding client issues not just selling what they have
>
> often employers want to buy a solution that is collaborative, that is would include several HEI and other partners
>
> in community provision will be increasingly important for health service
>
> credibility for HEI is in short supply with employers, so this needs gaining first and HEI vocabulary is unhelpful in all of this
>
> higher education qualifications are valued by employers and their workforce but there is an important element of training in what they want that has a ready impact on ROI

Posted in Uncategorized   → **Leave a comment**

The Net Generation Encountering eLearning at University Project

Posted on October 22, 2009 | Leave a comment

Dr Christopher Jones presenting at the At the Jisc Learning & Teaching meeting, reported on an ESRC funded project investigating the 'Net Generation'. Essentially, a project looking at the generation who have grown up with technology when they first encounter higher education. The slides will be availabale later, these are a few of the interesting points that stood out for me:

the extent to which students do NOT appear to be demanding changes in the use of technology by HEI; the extent to which technology use and adoption is a result of users need and life circumstances rather than being explained by Prensky like notions of Digital Natives and Immigrants, there was no evidence of a strong schism between cohorts of learners (already a damaged idea but with increasing evidence based research now debunking many of the ideas;

the extent to which the types of Universities students studied at (post 92, community, Russell Group, etc.) didn't appear to correlate to the way in which students use technology.

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Jones, Chris; Ramanau, Ruslan; Cross, Simon and Healing , Graham (2009). Net generation or Digital Natives: Is there a distinct new generation entering university? *Computers and Education* (In Press).

Posted in Uncategorized   → **Leave a comment**

Syllabus elaboration – why it is a problem

Posted on September 29, 2009 | Leave a comment

Back in the 1970's the CSE was developed with the aim of addressing the problem of the large numbers of school leavers who had no formal qualifications. As a part of the CSE model, Mode III delivery allowed teachers to determine both the syllabus and assessment of a course with quality assurance provided through a system of external evaluation by teachers from other schools. Supporters of this approach cited the increase in achievement made possible by the ability to develop a programme of learning that was relevant to a particular group of students. Detractors claimed that assessments lacked both validity and reliability as teachers simply taught to the assessment and in the end the new GCSE combined CSE and O Levels into one qualification.

Most universities develop courses in a way that has parallels to Mode III; lecturers determine the syllabus

and its assessments with reference to external markers such as subject benchmark statements and professional body requirements. Quality assurance is achieved through internal processes with a review by external examiners. In this 'bespoke' model of higher education, an individual lecturer 'embroiders' the syllabus including the assessment. One result of this, as Mark Johnson would say, is that it becomes as much the 'teacher' that the students are studying and their interpretation of the curriculum rather than any notion of an impartial body of knowledge. Similar arguments can be made as were put forward on both sides of the Mode III debate, but for us the major challenge that arises out of this approach is that of **scalability.**

The Coeducate project is trying to develop modes of delivery that aren't based upon face-to-face campus activities, owned by an individual lecturer, nor necessarily organised at departmental level. Rather we are trying to develop work-based courses that use flexible, process-based frameworks in conjunction with re-usable content-based modules that can be delivered at a distance and by different people. In doing this, however, we don't want to lose what we believe is one of the essential qualities of studying in higher education which is about added value of the relationships between teachers and learners.

By contrast, The Open University approach to course development has a very well elaborated syllabus supported by high quality resources, centrally developed assessments that are delivered by contract lecturers. Other examples that differ from the norm are Foundation Degrees that are often delivered by partner colleges in the work-place. In this example, a high degree of collaborative working is required between the different teachers and all of this is underpinned by tight contractual agreements. Another strategy is to change the instrument of assessment from examination to portfolios where broader based assessment criteria can be applied, rather than a 'mark sheet'. This approach allows for a wide interpretation of the syllabus by the teacher without impacting on equitability of opportunity for the learner to pass the assessment.

In the schools system a GCSE can be sat without any teaching (no attendance requirements) by simply paying a fee and turning up at the assessment centre. In higher education we generally maintain a strong link between notional study hours (volume of learning expressed as credit), level of study (NQF 4-8), and the individual teacher/lecturer who delivers a particular unit of learning. If in higher education are to develop new business models that might eventually be based around the loosely defined open education, then we will need to find ways to decouple the assessment from the teacher and at the same time maintain the valuable aspects of studying in higher education that are often more about the people than the syllabus.

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fdf Employer – Provider Partnership Tool Kit

Posted on September 14, 2009 | Leave a comment

In mid July I attended a one-day workshop run by FDF. The approach taken was formulaic as one might expect from a 'tool kit', but still worthwhile and as it is being rolled out nationally colleagues at other institutions may get the opportunity to attend.

The big issue raised for me was how do HEI in a significant way muscle into the already very crowded landscape of employer funded training?

Crowded landscape

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We were told that, as a generalisation, Universities lack credibility with employers in their ability to develop programmes of learning that 'add value' to the employers business. (employers felt lecturers needed more experience of the 'real world' of business to make their knowledge and expertise suitable for training today, – Report to Foundation Degree Forward on the impact of foundation degrees on students and the workplace). In addition, a raft of private organisations already have very strong links and a track record of providing valued training and this single 'point of contact' is a tremendous advantage from the employers perspective; why would employers want to put effort into managing multiple relationships? Even worse still, when it comes to universities it is often several individuals in the same institution they have to deal with as effective customer relationship management is a pipe dream rater than a reality.

Strategy

If the above analysis is to be believed, then it demands a strategy be developed that looks seriously at the problem and has some ways of addressing it. The strtaegy should provides a framework for decisions based on guiding principles, objectives, goals and structures to inform the operational plan that details activities and targets including periodic reviews.

One obvious approach would seem to be for HEI to build strong relationships with private providers and work through them to both sell products and gain market knowledge. In addition, the development of a dedicated team that handles employer relationships (sales, development, marketing) and is able to speak authoritatively on behalf of the University and its departments about the current course offerings, pricing, etc., but also develop new products quickly to meet their needs. Not to mention slick Accreditation of Prior learning to reduce the time and effort required to achieve a named award – the overall list is long…

A few moments reflection highlights the enormity of this task. Semester patterns that determine delivery opportunities, inflexible staffing models, high levels of autonomy at subject/discipline/department/& individual lecturer level, etc. And as always there is the bigger question of where a 'higher education' simply becomes 'technical training' and whether universities should be in the business of delivering the latter.

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XCRI

Posted on September 14, 2009 | Leave a comment

By way of a revision lesson, I attended the XCRI project support day at Manchester Metropolitan University last Monday. For those who don't know, the XCRI project has developed specification (XCRI-CAP v1.0 Schema) for the exchange of descriptions of courses that is both 'light weight', but also extensible and so flexible to individual institutions needs using XML. The primary aims are twofold, firstly to reduce the duplication of effort and errors that arise out of re-keying data which is common place in institution marketing activities. Secondly, to make information about courses readily available so that third parties can use it for other purposes, obvious examples being UCAS (although not signed up yet) and other

organisations that provide a service to match students to courses.

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Several interest points came out of the session:

1. the pragmatic and wise choice to focus on the marketing function when developing the project and subsequent CAP specifications. With a curriculum design hat on it is easy to grasp the relevance for other University processes, but including Quality Assurance and curriculum design activities would have meant that the project would, in my opinion, have made little progress;

2. the potential of the specification for the HEAR reforms (however they play out) in helping institutions through the minefield of managing rich descriptions of instances of programmes (version control of validated course information as well as marketing and tutor interpretations) and combining that with personal and other extra curricula information.

The big news story is that the close working relationship between this project and the European standards development processes has resulted in a very close mapping between the two. If your institution isn't considering how XCRI could help their business development, then they should certainly take a look and talk to either Scott Wilson, Mark Stubbs or Alan Paull.

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SODA (Journey-making methodology) using Decision Explorer software

Posted on June 29, 2009 | Leave a comment

As part of the activities for our second work-package (Understanding the challenge and identifying the changes) we are attempting to incorporate SODA methodology (now extended to the concept of Journey-making) with our underpinning Soft System Methodology (SSM).

The SODA process uses the techniques of interviews/focus groups and cognitive mapping to help participants collectively understand complex and 'messy' problems and negotiate a plan of action. Like SSM, there is a strong emphasis on group ownership of a problem and collaborative action to address it. Developed initially from Kelly's Personal Construct Theory it utilises the key ideas of:

Individuality – experiences that change us;
Commonality – the idea that similar experiences people have results in them making similar interpretations;
Sociality – the extent to which we communicate;
Hierachy – the natural way we think and prioritise issues.

Based on a workshop I attended at Banxia Software (closely connected to Ackerman & Eden who developed SODA) some key points to bear in mind if you are considering using this approach and in particular the Decision Explorer tool desined for cognitive mapping:

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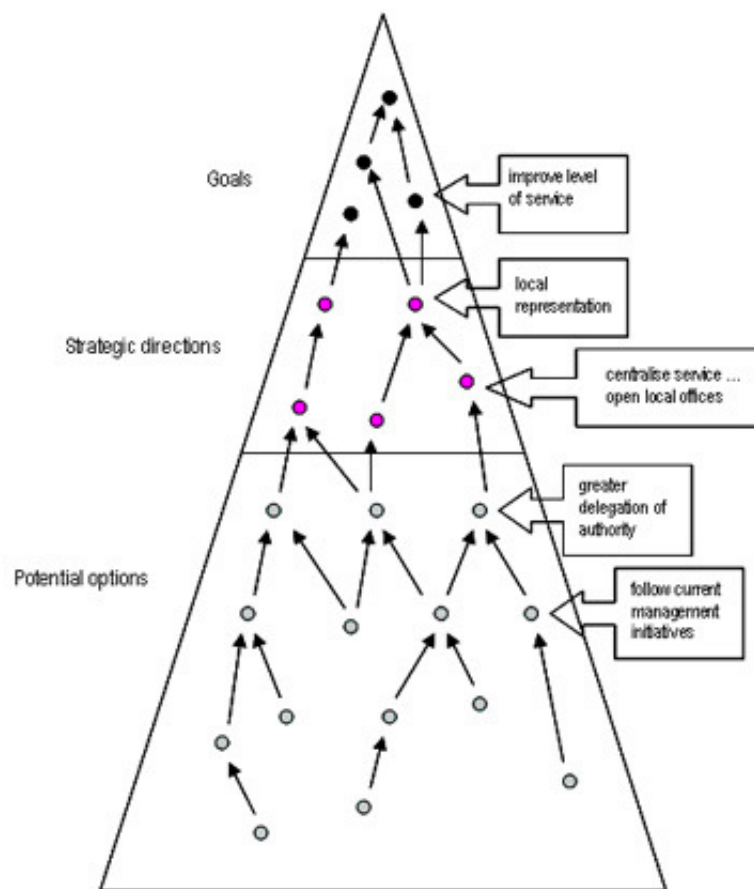
Diagram 1: An example of the structure of a Cognitive Map

it is a qualitative in nature;
cognitive maps imply **causal links** between different concepts that are usually expressed as opposing poles, e.g. Putting lecture material online increases flexibility of access rather than reduces attendance at lectures; cognitive maps are not concept maps nor mind maps which simply show ideas / concepts / actions, etc. around a key word;
using this approach reduces the 'volume' of options to a manageable level;
bespoke software enables analysis of maps to identify most potention options, that is those that impact positively on multiple strategic/key issues and high level goals;
the strength of the approach is in the **structuring of group discussions** and exploration of concepts and their poles not the identification of a particular answer through the use of the software and;
like other modeling methodologies, the individual can gain most by using it as a way of structuring their own thinking about problems.

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CETIS run Curriculum Design Support event on ArchiMate

Posted on May 20, 2009 | 1 Comment

A well pitched workshop that enabled Curriculum Design projects present to evaluate the benefits of different modelling approaches and in particular using ArchiMate.

It is a coherent whole of principles, methods and models that are used in the design and realization of the enterprise's organizational structure, business processes, information systems, and IT infrastructure.

One key message was that ArchimaMate's strength is its ability to support conversations and aid understanding between groups with different levels of technical familiarity. This helps to keep conversations focussed on the business processes avoinding unecessary confusion with particular technological solutions.

Like all modeling approaches, it important to be to draw boundaries in terms of the depth and breadth of the modeling activity – to answer this users need to be acutely aware of the purpose in terms of their project. This is an important point as the working involved in creating models in bespoke software that allows for multiple views of linked objects can be time consuming and expensive. It may be that simple drawing packages that capture the essence of a model are sufficient for supporting conversations around a given implementation or change.

Options for modeling languages include:

Unified Modeling Language (UML) – strength for software modeling
BPMN – strength for business process modeling
Archimate – accessible but not so good for software or pure business process modeling

Posted in Uncategorized   → 1 Comment

Curriculum Design Programme: evaluation

Posted on May 18, 2009 | Leave a comment

The Curriculum Design Programme Meeting (Birmingham, 13th May) had as one of its aims raising awareness amongst the projects of the overarching evaluation that is being undertaken.

The interplay between project and programme goals pose an interesting set of questions around to what extent the latter will or should influence the former. Key stakeholder groups are different as is the political landscape in which they operate. In addition, a wide diversity of methodologies are being deployed both in terms of management of activities and their evaluation.

Conversation briefly touched upon the term transformation and in particular the 'quality' or precise (measurable) nature of the transformations – an important issue for JISC, particularly in the context of upcoming straitened times for public funding. I would imagine that this powerful word had many project teams contemplating what the institutional wide 'dramatic' change would be as a direct result of their project and how realistic a prospect this is.

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Cluster CAMEL meeting with MMU, Leeds Met, UoB & Staffordshire | 1st May

Posted on May 4, 2009 | Leave a comment

Our first cluster meeting or Camel (think along the lines of learning set) hosted by Manchester Met illustrated two commonalities between projects. **First** was the challenges faced by the different institutions present and the relative similarity of our responses. **Second** was how many of the ideas being discussed included 'negotiated' approaches to learning & the development of personalised programmes of study; an inherently more complex and complicated design.

As might be expected, all of the projects depend to a greater or lesser extent on the argument that ICT offers a significant new opportunity to do things differently; to overcome challenges such as administrative complexity & higher 'teaching' costs.

Discussions included:

> size of chunks of learning; options such as accumulate teaching of credits (bite sized) with assessment when sufficient amount is built up to make it worthwhile
> client delivered teaching with university quality assured assessment
> development of frameworks & templates to help with pricing for clients & confident 'sales' discussions
> development of frameworks & templates to aid rapid validation or other less onerous procedures for bringing courses to market
> development of common approaches; assessment patterns, size of modules, generic learning outcomes
> degree to which validated modules/units can be adapted without re-validation; name changes for marketing purposes, different assessments
> shifting QA to faculty/school level; validation modules, award titles within frameworks

Overall the focus of the discussion was on the adaptation of what we currently do to meet perceived changing demands through the spreading of existing good practice within our institutions in the domain of work-based learning.

Although touched upon, we had little critical discussion about the implications of HE institutions developing programmes of learning and modules that match employers and professional bodies requirements and what this means for the **identity** of higher education institutions. Oleg used the Viable System Model to illustrate this point and in particular Stafford Beer's approach to measuring performance illustraed by the diagram below taken from Wikipedia.
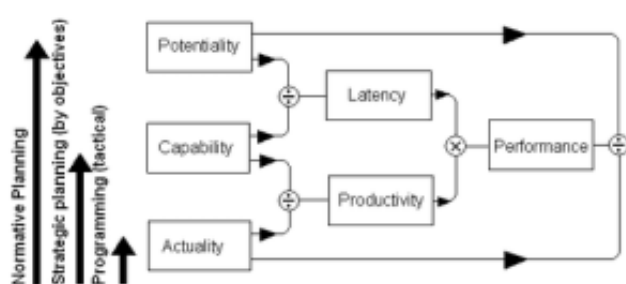
Actuality (what is actually being achieved)

Capability (what could be achieved if problems were identified and removed)

Potentiality (what could be achieved if the process was completely redesigned to maximise effectiveness)

Oleg went on to explain that Actuality/Capability gives us Productivity, and Capability/Potentiality as Latency. Whether or not we chose to actually derrive a measure, this is a useful way of fraeming our considerations and proposals for action.

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Co-educate presentation at CAL 09, Brighton

Posted on March 25, 2009 | Leave a comment

PDF of coEducate presentation. In the discussion that followed, one suggestion made was that we develop the IDIBL framework (one of our pilot initiatives) so that it can be used for CPD around curriculum development issues. This is something that we might pursue as an online tool.

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Boundaries

Posted on March 16, 2009 | Leave a comment

After numerous focus group sessions and interviews the picture of curriculum design at UoB is becoming clearer, although as one might expect, also complex. In starting to apply the Viable System Model (VSM) to analyse the situation, we are lead to think about what are the 'real' boundaries that delineate viable entities within the university (ones with a distinct identity) in contrast to the boundaries resulting from the organisational structure put in place for management purposes of the current curriculum.

This might be significant in terms of curriculum development is if those with management responsibilities (e.g. quality assurance, teaching & learning to name but two) understand different epistemological traditions, or practices regarding assessment from those proposing new courses.

A second question raised is what will it mean to be a viable member of teaching staff as the curriculum changes? How will staff respond and can we build the workflows and regulations that support the changed practices that will be required of them around activities such as marking, getting external examiners to assessment boards, giving student feedback module by module etc.

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Seldon calls for exam revolution in UK schools (you could add Universities to this…)

Posted on March 9, 2009 | Leave a comment

[Seldon calls for exam revolution in UK schools](#) 'In the name of fairness, we have embraced dullness,' **P24** professor of education to tell College of Teachers – Jessica Shepherd guardian.co.uk, Monday 9 March 2009 15.36 GMT

Although primarily aimed at schools, this article does touch on higher education towards the bottom. Arguably a quick find and replace of the word **school/s** with **university/ies**, **teacher/s** with **lecturer/s, heads** with **vice chancellor/s** and it pretty much makes sense in the UK, HE context!

We need to educate people to be flexible, with human skills and a deep sense of value.

Once children start to believe schools are places where things are being done for them, rather than done to them, their interest [in education] will revive," Seldon argues. Schools will then become "places of delight, of excitement, and of harmony.

Testing and examinations have spread in Britain and elsewhere in the world, because of a lack of trust – of schools, heads and teachers," the speech says. "Government officials have sought, through exams and testing, to make education 'teacher proof' around the world.

"This squeezes out originality, imagination, individuality and flair, he argues.

In the name of fairness, we have embraced dullness – and so close are we to it that we do not even see what has happened," Seldon will say. "School districts, individual schools, principals, faculties and departments, and teachers, have become valued according to one measure alone: their success at passing these exams.

We pump 'useless facts' into students – a technique employed in the Victorian era and parodied by Charles Dickens in Hard Times with the character of rigid teacher Thomas Gradgrind.

Whether in Brighton or Burnley, Beijing or Bogotá, Bracknell or Bangalore, schools are dancing to Gradgrind's drum beat of facts, facts, facts more than ever.

Facts have a place, but only a limited place, in education. The facts children learn today will become superseded. We need to educate minds as well as teach facts. The 21st century will be very different: we need to educate people to be flexible, with human skills and a deep sense of value.

"It is not just the school system that has its faults. Seldon accuses universities of ignoring academic breadth and personal achievement."

Despite their protestations to the contrary, most universities do not value academic breadth or co-curriculum and personal achievement," he will say. "By failing to do more to acknowledge and reward breadth, universities are not encouraging school pupils to stretch themselves beyond their A-levels.

Increasingly, higher education institutions are becoming training or instruction grounds for professions – law, accountancy, business – courses which sit uneasily with purer subjects like

English, history and natural sciences.

Posted in Uncategorized

→ **Leave a comment**

Higher Education Academy – Workforce development report July 2008

Posted on March 2, 2009 | Leave a comment

Reading through this report over the past few days has been a valuable activity. Although largely based on only a handful of HE institutions it is a good overview of higher level learning in the workplace and is worth dipping into if not reading cover to cover.

Many projects in the Curriculum Design programme mention frameworks; arguably the most overused term in curriculum development! However, the table below struck me as a good starting point for a discussion on what a work-based learning framework should aspire to. One point that I would take issue with is the characterisation of:

> *"'template' or 'shell' modules, which are based on the traditional module descriptors model, but outline only generic learning outcomes rather than any specific content."*

There is a danger that in trying to explain the difference between such modules and ones that specify a syllabus of discipline knowledge that we fail to make clear that the "specific content" in the learning outcomes are in fact processes that lead to the development of student capabilities not that the modules are 'content free'.

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The role of 'quality' in curriculum design

Posted on February 23, 2009 | Leave a comment

On Tuesday 17th February, we ran a focus group with the middle managers (QPL) responsible for 'Quality Assurance and Enhancement' within the 5 schools (faculty/departments) at the University of Bolton (UoB). Their job title clearly explains their area of responsibility, and although working within the different schools they are coordinated by the central unit responsible for Quality Assurance and Enhancement – I imagine that there is a similar setup elsewhere.

What role do QPL play in curriculum design? Different 'world views' emerged about the nature of work around quality:

> the current system works relatively well with part of the role of the QPL being to interpret a complex set of rules and processes so that others can bring courses to the market. We can tweak it, use technology to make things easier but there is no need for a radical overhaul;
> bureaucratic requirements have become excessive, and we need to devolve more responsibility back to schools away from the centre;
> bureaucracy can get in the way of of creativity, how do we achieve the right balance between the two?

Another interesting discussion that arose was around the extent to which increasing specialisation in the university workforce has reduced the likelihood of new curriculum initiatives developing from the grass roots. This opens up an interesting avenue of thought around the ownership of curriculum and who it is, that might take the risks associated with new initiatives; individual academics, subject areas, schools, employers, learners, professional bodies or even the QAA through their benchmark statements?

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Institutional memory

Posted on February 16, 2009 | Leave a comment

Over the past few weeks discussions with colleagues at Bolton we have begun to surface factors that impact on curriculum development connected to what might be referred to as Institutional Memory.

The University of Bolton (UoB) has a long history and can trace its roots back to 1824 when the Bolton Mechanics Institute was established. Over time, in response to national agendas and local demand new schools and colleges were developed that culminated in the formation of the Bolton Institute of Higher

Education in 1982.

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At this time, the CNAA (1965-1992) awarded degrees for non-university institutions and it had a strong tradition in requiring extensive documentation as a part of its quality control procedures. This included the requirement to demonstrate a rationale and coherence to an overall programme as well as evidence that infrastructure and qualified staff were in place to deliver it. The CNAA was abolished in 1992 and the UoB was awadrd independent powers to award taught degrees in 1990, and research degrees in 1994. However, it was not until 2004 that full University status was awarded to the then Bolton Institute of Higher Education and in 2005 the name changed to the University of Bolton.

An recurring observation being made is that the requirements of the CNAA not only still strongly influence the formal processes surrounding curriculum development, but that they also still strongly influence the culture; informal activities and ways of thinking about curriculum. Deal and Kennedy (1985) used the phrase "the way we do things around here" to refer to these informal cultural elements of a business that are vital to its successful operation.

We need to ask questions of both the formal and informal to check that they are operating in a way that is best suited to the development of curriculum at the UoB in 2009.

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Interview with Vice Chancellor and Deputy Vice Chancellor

Posted on February 9, 2009 | Leave a comment

Last week as a part of the generation of a 'rich picture' (SSM) and problem structuring (SODA) we interviewed the George Holmes (VC) and Peter Marsh (DVC) to try and get a better understanding of the significance of curriculum design for the UoB. Both interviews were interesting and for different reasons. From Peter who has had a long connection with Bolton it was interesting to get an historical perspective of the progression of Bolton from the old Council for National Academic Awards days through to Bolton's status now as a quite new University with independent awarding powers. This perspective helps us to understand the rigorous Quality Assurance process and culture and practice of course development at Bolton.

From George, it was helpful to get an insight into UoB as a 'business' including the analysis of how the institution and its staff will have to change the way we do things rather than just adapt our current offereings incrementaly. Arguably, this will require us to develop new curroculum as well as reinterpret what it is that the higher education experience should offer students.

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What is the difference between work-based and work-focussed?

Posted on February 2, 2009 | Leave a comment

From our projects perspective the distinction between work-based and work-focused is important as it stems from our pedagogical approach which is one of action-inquiry (or action-research).

The key word is action, and we expect learners who follow this approach to improve some aspect of their work not stopping at

finding out about something as as the word inquiry could imply. Kurt Lewin is generally credited with coining the phrase action research with its cyclical or iterative process addressing real **work-focussed** issues or opportunities following the steps in the diagram (reproduced from the encyclopaedia of informal education [www.infed.org]).

In choosing the phrase work-focussed we are deliberately marking out our approach as different from other work-based learning approaches that do not require learners to take actions to improve their work-place.

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Coeducate workshop – inquiry, online community, & work-focussed

Posted on February 2, 2009 | Leave a comment

The Coeducate project ran a workshop for the Northern Universities Consortium for Credit Accumulation & Transfer (NUCCAT) focusing on the IDIBL framework and broader implications for institutions who are seeking to innovate around online community supported, work-based learning that uses action-inquiry approaches. The presentation (pdf) covers some of the history behind Coeducate including the rationale for moving to a model where the module learning outcomes and assessment criteria do not address particular discipline or subject content but are written towards student skills and capabilities that will be developed. Some of the challenges discussed are listed below:

• productivity agreement – 550 hours? Little understanding of the resource implications of supporting students through online communities, certainly old algorithms will need revising

• assessment – let's stop marking? How can we convince teaching staff that alternatives to essays and examinations can be fair, equitable and at least as reliable as current methods

• staff development – how will the new workforce of confident online facilitators be developed

• articulating the argument for action inquiry et al – this is so alien to many potential learners and teachers that it is hard to explain particularly as it requires a quantum shift in perceptions about learning and

teaching

• university enterprise systems – technical, pedagogical and administrative aren't up to the challenge of flexible learning as they were designed for large annual intakes of 'traditional' students

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HEA – The Higher Education Capability Archive (HECA)

Posted on January 26, 2009 | Leave a comment

This newly published archive by the HEA is well worth a browse if for nothing more that to remind you that very little is truly new. The archive is a collection of "reports from the field and discussion papers on what at the time were innovative curriculum developments" presented at 40 national conferences that were set up to give academics a forum to "share experience and learn from each other rather than presenting top-down solutions to curriculum challenges".

Some of the material from this Beyond Competence to Capability and the Learning Society conference looked particularly relevant to some of our work in Bolton today – this paper from the University of Derby being a good example.

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Enterprise architecture

Posted on January 26, 2009 | Leave a comment

One of the strands of inquiry for Coeducate like many other CD projects is mapping and understanding our enterprise systems that support curriculum design. Recent meetings have moved us to a position whereby we know have a basic map across the institutions IT systems, the diagram in this post being a fragment of that, and we are now elaborating the relationships (data flows, etc.), and starting to think in terms of service oriented architecture.

Undertaking this work has surfaced the high levels of interdependency between central units, as well as the conflicts of interest; one example being moving the student application process entirely online.

It is anticipated that this will yield significant efficiency benefits as well as improve the student experience. However, there is also the risk that we will lose benefits that human interventions bring. One small example being the spotting of repeat bogus applications that admissions staff have become very adept at spotting sometimes simply by recognising handwriting from previous attempt to join the university.

The challenge is to automate but to do so in such a way that reconises and retains the advantages of the current approach by working inclusively with staff involved, drawing their experience and expertise, and not imposing a solution.

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Project evaluation – what approach to take?

Posted on January 19, 2009 | Leave a comment

The extract below outlines our initial thinking around the evaluation of the Coeuacte project. A challenge is to identify an approach to evaluation that fits the requirements of Jisc, but that also compliments the overall methodological approach of the project. An analogy could be made between this and the assessment for learning movement: we don't want to evaluate (assess) for the sake of evaluation but do wish to evaluate so that it leads to a better understanding of where we are and the actions we can take to move towards our aims (assessment for learning).

> *The evaluative process is a key component of the Coeducate project. Ultimately, we see the value of the project in being able to say with some certainty to external parties what is likely to happen and in which circumstances if interventions similar to those on the Coeducate project are undertaken. The value of the project is inherent in the added control that this knowledge will give other institutions.*

> *The philosophical grounding for our approach is Realistic Evaluation (Pawson and Tilley, 2002). Its primary role is to identify meaningful distinctions and mechanisms which revolve around the curriculum design process. The evaluation process will involve focus-group activities and other methods (including Soft Systems approaches) of extracting stakeholder views, theories, distinctions and experiences of curriculum design. As each iterative stage progresses, the project will seek to test these mechanisms and distinctions, leading to refinement or rejection. By the end of the project, the intention is that the project will have identified a number of principle mechanisms between its stakeholders with explanatory and predictive powers within the broader Higher Education context.*

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Timeline into the curriculum design project

Posted on December 26, 2008 | Leave a comment

Back in September when we were beginning to think about the Coeducate project in earnest, one of the activities that I undertook was to create a timeline of the HE policies and significant reports that I could find. It is very much work in progress but even a casual glance will stir meories in many connected with HE and may just help set the context for the HE system that we find in the UK today.

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Project aims and objectives

Posted on December 22, 2008 | Leave a comment

As a four year project we are fortunate to have enough time to have a real go at our aim through pursuing the objectives identified. However, it is work bearing in mind that Universities are analogous to supertankers in their ability to change a course or direction...

Aim
Develop a technologically supported approach to programme development that is efficient, agile and responsive to purchaser and learner needs while protecting the rigour and quality of the existing validation mechanisms.

Objectives:
• *development of collaborative and transparent processes for initial course identification & curriculum design across the UoB & with stakeholders;*
• *cross-institutional buy-in to the identification and implementation of the new practices required to develop courses*
• *cross-institutional capacity building in the ability to critically examine and develop the UoB work-focussed curricula*
• *embedding of inquiry-based learning including negotiated learning in work-focussed programmes offered by the UoB*

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Project methodology

Posted on December 8, 2008 | Leave a comment

The text below summarises the Coeducate project methodology. For anyone interested in pursuing this further the following are worth worth looking at: Soft Systems Methodology in Action by Peter Checkland; Realising Systems Thinking: Knowledge and Action in Management Science (Contemporary Systems Thinking) by John Mingers; and Multiple Criteria Decision Analysis: An Integrated Approach by Valerie Belton and Theodor J. Stewart.

> *Our approach is to undertake a complete review of the course development process within the university, from identifying curricular need to validation, in order to identify how this process should be streamlined to allow more dynamic and responsive curriculum processes. The review will necessarily involve modelling academic, departmental and whole university processes, and will provide baseline data to allow comparison with other institutions and the COVARM reference model. Following the review we will work with staff and schools to develop processes and adapt technologies to facilitate these. These processes will include support for developing new ideas for courses, examining their fit with existing provision, and course planning. Tools will be implemented to support these, based on existing JISC work (Phoebe in particular), but reworked to support the CPD, inquiry-based, work-focussed approaches we are proposing to adopt. All new courses will comply to the XCRI specification. The project will not directly address activities supporting the delivery of programmes.*

> *A multimethodology systems approach will be applied to the problem identification and interventions including Soft Systems Methodology, Multiple Decision Criteria Analysis and Viable Systems Model and Strategic Options Development Analysis (SODA). This approach seeks to identify divergent views and to accommodate individuals in a collaborative endeavour to problem solve and arrive at consensual solutions.*

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Coeducate Jisc Bid

Posted on December 1, 2008 | Leave a comment

For anyone who is interested – download the Coeducate project bid.

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IDIBL framework Academic Proposal

1. Rationale, aims, intended learning outcomes

1.1 Rationale

The inter-disciplinary inquiry-based learning framework (IDIBL) provides a pedagogic, organisational and assessment structure which can be used as a basis for course approval through modification of appropriate sections in this document by departments who identify an opportunity for an inquiry-based, work-focussed programme.

Such sections are highlighted by the phrase 'TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK'.

This should provide an agile procedure for introducing new courses, which intend using the innovative approaches developed for IDIBL. It remains for each course validation to identify a rationale for professional engagement, viability and delivery.

The framework is designed to offer a combination of pedagogical approaches, which together provide a different route for academic study and appeal to people who are committed to their. The course will widen participation by satisfying learners' whose need is for flexibility with time, place and pedagogy. More specifically this could be because:

1. They need to continue in full-time paid employment whilst they study;

2. They wish to make their study directly relevant to their work;

3. Family commitments prevent their on-campus attendance;

4. Geographical location or poor transport links makes campus attendance difficult;

5. They seek to develop further their communicative creativity and technological understanding as a complete professional;

6. Traditional examinations and academic essay writing are either intimidating or uninviting;

7. They seek the company, support and intellectual challenge of fellow students rather than studying alone;

8. They seek the advantage offered by technology to enjoy the possibility of work on joint ventures and studying collaboratively.

The modules contained within the framework focus on process, and generic concepts and outcomes rather than subject content. Through a process of negotiation between the individual learner and the course staff, a personalised inquiry will be developed to include learning activities and assessment products that meet the module requirements and informed by the learners' professional practice. All learners in a cohort will be carrying out their inquiries and develop assessment products to the same set of milestones. Thus they are expected to provide support and challenge to each other and travel a common path in spite of the personalisation of their study. The design encourages different perspectives from diverse professional and academic disciplines to be exchanged.

Learners will align and defend their attainment against module learning outcomes and with reference to competencies or national standards relevant to their work context. Learners are expected to look critically at their work setting as a source of knowledge and experience from their own experience, colleagues' experience and reference documents. This approach puts responsibility on the learner to maximise their effectiveness and efficiency through reflection on their work practice scaffolded by module requirements that are intentionally directed to enhance the quality and outcomes of work.

The framework is designed to enable progression by learners from a Foundation Certificate of CPD at level 3 through to level 7 Masters course. Common throughout the framework is an inquiry-led, work-based approach to learning that meets students' progression and continuity needs throughout.

There is a growing realisation that practitioner knowledge can inform academic knowledge. This proposal

recognises and supports a realignment of knowledge acquisition and sharing and a re-alignment of roles for staff in higher education and the practitioner in society.

As a backdrop, the 2006 Leitch report examines the UK's long-term skills needs and identifies increasing employer investment in higher level qualifications to meet the target of more than 40% of adults skilled to graduate level up from 29% in 2005. The approach outlined in this document is one route that should be attractive to employers and employees alike in that it offers a cost effective approach for students as they can gain their qualification at a full-time rate of study. It is attractive to employers as the focus of student study is directly related to improving their work performance.

A rationale for the proposed modification to the Framework, including identification of the target student profile, progression opportunities TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK'.

1.2 Aims

Action inquiry activities are used as a vehicle for learners to gain subject knowledge, typically from a range of disciplines, develop process skills, and become articulate, critically reflective problem solvers within their field of study.

Learners will apply research rigour in identifying and approaching action inquiry projects that present an opportunity or an issue in their work-practice. They will develop strategies for improvement that will be implemented, disseminated and evaluated.

The course will attract people who are prepared to take responsibility for their own learning, will benefit from an action-inquiry approach and personally fulfilling & meaningful study. Learners will support each other in an online community and as part of a deliberate attempt to foster collaborative working, will subject their work-practice to self-examination, as well as the examination of peers.

The model of learning that underpins this programme is one of an autonomous, self-directed, critical, and reflective individual who seeks to learn with others. This model emphasises the analysis of the values, and moral and ethical dilemmas surrounding work-place practice.

1.3 Objectives of the framework and intended learning outcomes

TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK'.

Objective	Learning outcomes at Levels 4 and 5 - the graduate with Foundation Degree / Diploma / Certificate will be able to:	Learning outcomes at Level 6 - the graduate with Bachelors Degree will be able to:	Learning outcomes at Level 7 - the postgraduate with Masters Degree will be able to:
1. Action for improvement to create curious, evaluative and effective 'improvers' in society	With guidance, identify opportunities to improve their own practice, take small-scale actions and evaluate the outcomes.	With support, develop and implement a plan of action for improving their own practice and critically evaluate the outcomes.	Independently identify opportunities to take actions for improvement at an organisational level, systematically implement innovative solutions and critically evaluate the outcomes.

2. Scholarly research to assure the quality of improvement is based on best evidence, analysis and insight	With guidance, construct a research plan and collect data to help answer a simple research question.	Develop and implement effective research plans, which isolate and focus on the significant features of a problem.	Undertake a significant piece of research that fully and critically explores key issues demonstrating rigor in the research process.
3. Communication for effective dissemination of improved practice	Communicate orally, in writing, and in appropriate media, in work and course contexts making informed and balanced arguments.	Effectively communicate orally, in writing, and in appropriate media, in academic and professional contexts making well-informed, coherent arguments.	Synthesize sources and communicate orally, in writing, and in appropriate media, in academic and professional contexts making well informed, coherent and persuasive arguments.
4. Application of subject and professional knowledge for depth of understanding of practice	Demonstrate a sound understanding of the principle issues in their field and take part in an argument around topics of debate or controversy drawing on personal experience.	Evaluate complex issues in their field and take part in reasoned argument around topics of debate or controversy drawing on knowledge from experience, work and course contexts.	Critically analyse and evaluate complex issues and lead reasoned argument around topics of debate or controversy drawing on knowledge at the forefront of their field including a historical perspective.
5. Learning and working with others to sustain lifelong learning and community of practice	Evidence personal practice of lifelong learning, using technology, and working in organisational contexts.	Articulate philosophies of lifelong learning, the applications of technology, and the way organisations work.	Take a leadership role to articulate philosophies of lifelong learning, the applications of technology, and the way organisations work.
7. Organisation and policy to act on wider contexts of organisation and society	Exercise personal responsibility in tacking actions based on work context and local policies.	Use organisational theories to inform analysis of complex work circumstances and exercise personal responsibility in taking action in the light of local and national policies.	Use organisational theories to inform analysis and evaluation of their work context at a strategic level, critiquing local and national policies and develop recommendations for change.
8. Ethics to maintain integrity and respect for individuals and society	Understand the ethical expectations in their work context and act accordingly.	Understand the implications of ethical dilemmas including social implications of activities and interpret these to inform their action inquiry.	Analyse and manage the implications of ethical dilemmas including social implications of activities and work pro-actively with others to formulate solutions.

9. Technology to enhance creativity, confidence and competence with technology as a modern practitioner	Develop an understanding of the potential use of relevant technologies for communication, co-ordination and analysis.	Confidently and competently use relevant technologies for communication, co-ordination and analysis of work-place activities.	Evaluate technology for its contribution to communication, co-ordination and an organisation's enterprise activities.

2. Entry

The framework is intended for student researchers who wish to study their current work-role and consequently they will be in a full or part time, paid or unpaid work setting which may include voluntary, caring or domestic responsibility. Potential learners will be interviewed via telephone to assess their preparedness to undertake inquiry-based studies at an appropriate level and the suitability of their work role for this approach, further detail is TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL *FRAMEWORK and included in ADA1*. This process is a two-way discussion and is a key component of the retention strategy as it offers the best opportunity to explain the innovative nature of the course being offered and ensure its implications for the candidate are understood.

Entry criteria to be applied to potential student researchers:

1. The work context of the potential student researcher is appropriate to the theme of the course employing the framework, and will benefit from the inter-professional discourse ensuing from the course online community;

2. Student researchers are admitted to a programme on the basis of a judgement that they are able to benefit from the study involved;

3. Student researchers are admitted to a programme on the basis of a judgement that they are capable of succeeding in obtaining the intended award;

4. There is a willingness to support other students and seek the support of other students in the online community;

5. Active steps are taken to ensure equality of opportunity for all applicants;

6. ICT literacy is sufficiently advanced so that student researchers may successfully manage the course expectations;

7. Formal qualifications as well as current and previous work experience.

An admission requirement for learners enrolling on programme using the framework is a direct link to the internet with the facility to download, store, and upload files. Learners studying on programmes will need to have proficiency in ICT. This will be initially tested by the requirement on students to complete an online registration form and receive, and respond to, an email sent to an email address specified as a requirement on the registration form. In addition, on admission, prospective student researchers will be questioned to establish their level of ICT literacy to ensure that they can successfully manage the course expectations.

Taster activities will be offered through an induction website so that potential students can familiarise themselves with the approach to learning and meet other potential learners and staff.

Applicants may be advised to use access modules in order to ensure that the approach is appropriate for them at either entry to undergraduate or postgraduate awards. Such CPD modules should touch on all facets of the course pedagogy and organisation whilst providing the student with a real project to complete.

University policies that will inform all decisions made are covered by Admissions and Equity and Diversity. The university disability advisor will be consulted where appropriate.

3. Curriculum structure and content

Further detail is TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK *including a schedule for module delivery.*

This IDIBL framework covers NQF level 3 to 7. Module learning outcomes are generic in nature focusing on process and skills and can be applied to a wide variety of specific programmes with learners in different and unique work-contexts.

As well as combining to offer qualifications individual modules may also be delivered within the university CPD framework regulations.

At the exit point of Bachelor Degree and Masters, the major project/dissertation takes the form of an exhibition in the workplace or appropriate venue to selected stakeholders from whom evaluative feedback is collected. This is then used to validate the assessment product submitted for assessment.

level 3	level 4	level 5	level 6	level 7	level 8
	Certificate of HE	**Diploma / Foundation**	**Batchelors**	**Masters**	**Doctorate**
	Year 1	Year 2	Year 3	Year 4+	Year 6+
	Investigating the professional context	Organisational Impact	Review and Planning	Analysing the Professional Context	Professional Studies
	Understanding reflective practice	Reflection on Practice	Action Inquiry Project Preparation	Organisational Improvement	
	Technology for Communication & Organisation	Independent Lifelong Learning	Implement Action Inquiry Project	Action Research	
	Understanding action inquiry	Action in the Work Context	Exhibition, Validation and Synthesis	Action Research Preparation	
	120 credits	120 credits	120 credits	Action, Research Exhibition, Validation and Synthesis	
Access			Access	180 credits	360 credits
Improvement in the Work Context			Improvement in the Work Context		
20 credits			20 credits		

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4. Learning and Teaching

The action inquiry-based nature of the framework calls for clear definition of the roles of both teaching staff and learners. In doing this, the labels given to these roles are important in conveying the nature of their relationship and the way in which they go about their activities. Learners will be referred to as student researchers and teaching staff as learning facilitators as this more accurately reflects the approach to learning and teaching.

The approach is committed to making learning delightful, seductive and fun! This is known to enhance learning effectiveness, and indeed delight in learning arises naturally where aesthetic sensibility, interest and zest are promoted (Heron, 1992). Furthermore, conviviality, recognition and dissent are encouraged to further delight learners in the context of online community (Millwood, 2008).

The approach exploits all appropriate technologies and implements new technologies as they are developed and where relevant. Experienced learning facilitators will:

1. Employ learning techniques to encourage students to study through the online community using staged tasks;

2. Frame learning discourses within that community and;

3. Translate successful face-to-face strategies for online application where appropriate.

Learning and teaching is based on an approach to inquiry-based learning that is informed by action research methodologies. This requires students to create the foci for their inquiries by identifying an opportunity or issues in their workplace that is of direct relevance to them and over which they have the power to take an action. It is likely that the scope of the action will be progressive, starting with the small-scale and concerned only with their own work practice. At Masters level the expectation is to embark upon an inquiry with wider implications for work colleagues and the institution as a whole.

Student researchers will be members of a lively online learning community, where collaborative learning will be generated through participation using a range of learning processes and protocols including reflective dialogue with peers, and an integrated student-mentoring-student model.

Learning facilitators will take on the roles of tutor, co-learners, experts, coaches and/or mentors. They will provide the active facilitation of the online spaces as well as the individualised support of student researcher. The online learning community will play a significant role in providing affective / social support for all members by fostering social interaction.

Learning will be organised by facilitators to support the learning community and student progression. Experts are invited to bring experience and authority in the form of 'hot seats'. This discourse invites public contextual questions from learners, which the expert responds to publicly. Colleagues in the work context are also sources for experience and authority. Advocates are identified from the students' practice to support their action in context.

Learning process supported by learning facilitator:

1. Identify a focus for an inquiry;

2. Identify learning activities that lead to the development, implementation, and evaluation of an action for improvement;

3. Share selected parts of the inquiry with fellow learners for critical feedback;

4. Construct a final account that identifies learning in relation to module intended learning outcomes.

5. Assessment

5.1 Patchwork Media

Assessment will consist of a 'patchwork media' for each module culminating in exhibition for dissertation at Masters and Bachelors level. The patchwork media is based on Winter's (2003) 'Patchwork Text' approach developed in response to criticisms of the essay as an assessment tool in higher education and sought to make assessment a relevant and integral part of the learning process. This approach aims to reduce 'surface learning' which it is argued is encouraged by some approaches to assessment.

> In adopting a surface approach to learning, students see tasks as external impositions… and seek to meet the demands of the task with minimum effort. They adopt strategies which include: a focus on unrelated parts of the task…and rote memorizing information for assessment purposes rather than for understanding. Overall they would appear to be involved in study without reflection on purpose…
>
> (Prosser and Trigwell. 1999)

> The surface approach arises from an intention to get the task out of the way with minimum trouble, while appearing to meet requirements. Low cognitive level activities are used, when higher-level activities are required…. As applied to academic learning, examples include rote-learning selected content instead of understanding it, padding an essay, listing points instead of addressing an argument, quoting secondary references as if they were primary ones; the list is endless.
>
> (Biggs, 1999)

The approach developed by Winter is particularly suited to inter-disciplinary studies where different perspectives, interpretations and voices can be accommodated as students construct an account of their own learning in relation to the programme of study intended learning outcomes.

Four key elements are implicit in this approach:

1. Learners come with previous knowledge and experiences and abilities which should be recognised and valued through the learning and assessment process;

2. Learning takes place over time through assimilating new and ideas and experiences;

3. Social interactions enable meaning making;

4. Creativity is an essential component of reflection on experience.

Instead of 'demanding' that learners have familiarity with the 'academic voice' the patchwork text encourages the use of different genres of writing to build an ongoing collection of pieces that are accumulated as the module progresses. For submission, the learner constructs a concluding commentary that 'stitches' together the previous pieces, linking ideas and identifying their learning in relation to the module intended learning outcomes. In working in this way, learners are encouraged to develop a range of different writing styles including the creative and imaginative, as well as the analytical and academic, but with realisation that development of these skills will be at different rates.

Biggs (2003) identifies adopting an holistic approach towards developing intended learning, teaching and assessment as "Constructive Alignment" and defines four major steps:

1. Defining the intended learning outcomes (ILOs);

2. Choosing teaching/learning activities likely to lead to the ILOs;

3. Assessing students' actual learning outcomes to see how well they match what was intended;

4. Arriving at a final grade.

It can be seen that the inquiry-based learning coupled with the patchwork text approach places the requirement on the learner to participate in the steps outlined above to ensure that learning activities and assessment products are aligned with intended learning outcomes that are relevant to learners and their work context.

5.2 Assessment for Learning

This approach recognises the importance of evaluative feedback other than the summative given at the end of the module. Patches developed for individual learning activities readily allow for formative feedback from the learning facilitator as well as fellow student researchers, thus the assessment process authentically supports learning.

5.3 Summative Assessment

After each module students shall receive summative feedback against each module intended learning outcome against the relevant assessment criteria. Feedback will be given under the following headings: strong points, and points to consider with targets for improvement.

5.4 Exhibition

The framework proposes that the major part of the final assessment in Bachelors and Masters level is composed of an exhibition. This exhibition can take a range of forms including physical display, presentation, web site, and video. The learner will be expected to identify an audience appropriate to the action they have taken, carry out the exhibition and evaluate its effectiveness. This is proposed in order that objective 3 'Communication for effective dissemination of improved practice' is fulfilled, but also provides opportunity for celebration in a convivial form for learner and colleagues. This practice is common in arts programmes and is highly successful.

5.5 Staff Development and Innovation

Some of these assessment practices will be unusual and new to staff, and furthermore demand a re-balancing of resource allocation from many face-to-face approaches. This will need addressing in staff professional development and training.

6. Student guidance and support

This kind of learner experience is well established through experienced gained on programmes using a similar approach to delivery (see Millwood, Powell and Tindal 2008). The key element is the **online community of inquiry** (Millwood et al., 2008) through which different aspects of guidance and support will be offered to learners. Learners and Facilitators work and learn together in an online community environment where social construction of knowledge is realised through collaboration and critical friendship between learners. Thus much guidance and support will come from peers in a timely fashion, bearing in mind that the community is open 24 hours. Authoritative views on course matters, resolution of disputes and clarification of procedural expectations is usually the learning facilitators job. In appropriate circumstances issues will be resolved by direct communication, but this is deprecated in favour of community sharing.

There will be an area of FAQs, which will address on-going areas of concern and other repetitive queries. A Community of Inquiry Code of Practice covering behaviour and expectations is included in the programme handbook.

6.1 Course staff

When learners first embark upon a programme of learning, the facilitators will provide highly structured learning experiences, moving gradually to become less structured and placing increasing emphasis on self-direction. The particular nature of support required will be informed by the initial profiling and may identify particular needs that will require strategies to help students into the 'learning habit'. The course team will intentionally created an environment where trust and critical friendship could grow and contribute to the development of the online community, anticipating a successful environment for deep learning (Chapman, Ramondt, Smiley 2005). Resources will be produced to support these needs, and to develop study skills required to follow the pathway while students remain in their work context.

6.1.1 Learning facilitator

A named facilitator will act as a consistent point of contact for learners and one of the key aims of this role is to have a positive impact upon retention rates through proactive contact throughout the time of study. In discussing retention, Simpson (2007) reviews the practice of the Open University and other practitioners quoting Anderson "The best predictor of student retention is motivation - retention services need to clarify and build on motivation and address motivation-reducing issues. Most students drop out because of reduced motivation".

It is the responsibility of the facilitator to:

1. At the start of a unit of learning, contact the learner to check for preparedness to study;

2. Identify if there are any particular needs and support learners in developing strategies to deal with them;

3. Monitor learner activity and take supporting action when there is no evidence of participation in the online community over a two week period;

4. Offer moral support and encouragement;

5. Encourage the learner to consider how they will use their existing support networks including family and friends to give encouragement;

6. Model desired behaviour including participation in discussion and critical reflection;

7. Support the learner in the development of their personal development plan and review annually.

6.1.2 Module coordinator

A module coordinator will proactively lead the delivery of a particular module ensuring that the experience has opportunities for purposeful conversations initiated by course staff (Laurillard, 2002):

•   The development of resources;

•   Organisation of the learning sets;

•   Identifying and scheduling of hot seat experts;

•   Ensuring inquiry proposals are individually agreed with learners;

•   Leading focussed discussions;

•   Leading the assessment for the module.

6.1.3   Hot seat guest

Framing a discourse around a need identified by the learner means that it is highly relevant. A hot seat guest responds to questions in such a way as to relate specific questions to theories, concepts and ideas from their given topic. This should include references to research, professional bodies, networks that can be joined and other sources of information. Other community members share their relevant experience asking questions and feedback with the intention of exploring the generic issue at hand through their grounded professional practice or simple

desire to learn. Conversation software shows discussions and the relationship of posts to each other in a page view as well as by topics.

6.2 Peer support

6.2.1 Moral support

By building in models that encourage student-student support (mentoring between cohorts, collaborative work, etc.) the direct support for students can be increased without overwhelming university staff. Technology permits rich dialogue and many-to-many discussion and also to free individuals from travel and timetables. Creating community makes effective use of peers, both for moral support, cooperation and as sources of motivation and perseverance.

6.2.1 Learning sets

The framework model proposes that courses establish learning sets with no more than 5 members. Contract the members to support each other for a defined minimum level of commitment. This should include offering as well as receiving critically constructive feedback. This activity should be supported by someone with expertise in the process who will model the behaviour required as well as explain the process and why it is valuable. Feedback should be targeted to particular aspects of the work, identified by those receiving the feedback and by the level of experience of the members of the learning set. All feedback must have the aim of creating the maximum possible positive impact.

In giving support, student researchers should:

- Identify strong aspects of work
- Suggest alternative approaches based on experience
- Identify inconsistencies
- Challenge unfounded assumptions

6.3 Workplace support

6.3.1 Workplace advocate

This is identified by the learner as someone who can support the learner through their studies in identifying relevant of inquiries and helps them with work place practicalities rather than as a mentor. The arrangement is between learner and advocate with the university offering guidance on how this relationship should be managed but not getting directly involved.

6.3.2 Workplace knowledge

Learners will be expected to identify sources of knowledge from colleagues, training and documentation both in the workplace and in its support mechanisms. These sources will be identified in assessment products.

6.3.3 Workplace Action

Learners will be expected to identify stakeholders and those affected by action inquiry, consider all ethical issues and gain appropriate agreements. Such responsibilities will be evidenced in assessment products.

6.3.4 Professional context

Some courses developed through this framework may have specific professional expectations, although in most cases it is anticipated that inter-professional cross-fertilisation is most effective. Ethical issues in the context of health themes are an example of variation that might be anticipated. In these cases such matters will need TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL

FRAMEWORK.

7. Management and organisation

Each course definition based on this framework will require a plan for management and organisation which needs TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK*. The plan should address each of the following responsibilities:*

1. Student admissions procedures;

2. Student researcher induction;

3. Programme development;

4. Staffing including CPD;

5. Quality assurance and enhancement including assessment procedures and processes;

6. Student researcher appeals procedure;

7. Learning experience;

8. Development of module resources;

9. Hot seat guests;

10. Technical support for students;

11. Administrative support;

12. Overview of technical infrastructure;

13. Overview of student welfare;

14. Marketing and promotion;

15. Research and evaluation.

Many of these responsibilities will require liaison with University departments where they overlap. The actual team makeup and division of responsibilities is not prescribed, and in some cases course teams may cross-departmental boundaries.

8. Resources

The framework is designed for entirely distance delivery and it is not expected, therefore, that there will be any accommodation or site-bound requirements for student researchers. Other resources TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK.

Students researchers will have access to University of Bolton online library services, and access to national university library access schemes offered through the library.

Module learning resources and participation in the online communities will be available 365 days a year enabling students to have a high degree of control over the management of their learning both as individuals and collaboratively. These will be created by the module leaders to support the programme delivery focusing on the explanation of module requirements and the process of action inquiry. The primary approach to learning and teaching is one of conversation and, therefore, is not dependant on high quality published resources.

The programme will be delivered using a core set of learning technology supported by the university with an

expectation that student researchers will themselves take advantage of the wide range of Internet technology services available on the Internet.

Core provision	Other non-exclusive opportunities
Assessment drop box	Weblog
Website with learning resources	Wiki
Hot seat discussion forum	RSS aggregators
Module discussion forum	Websites
Community forum	Collaborative tools such as Google Docs
RSS feeds	Audio/visual communication, e.g. Skype
University email for official notifications	Personal Email for learning support

9. Maintenance and enhancement of standards and quality

Quality assurance procedures TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK.

9.1 Learning Facilitator expertise

Each modification of the framework will require a plan for the development of staff and demonstrate through CV that there is sufficient experience within the team to deliver an inquiry-based course online. This needs TO BE IDENTIFIED WHEN SEEKING SPECIFIC COURSE APPROVAL VIA MODIFICATION OF THE IDIBL FRAMEWORK.

Learning facilitators need to be experienced in both the theory and practice of inquiry-based learning supported through online communities. It is recognised that there will likely be the need for staff development for those working within the framework to develop this knowledge and expertise where it does not exist. This will be supported informally through the online community for learning facilitators working across all courses based on the framework. Within this community, experienced mentors will offer help, advice and support for learning facilitators and 'experts' who are working in the communities.

9.2 Experts

As well as learning facilitators, 'experts' will be invited to interact with online learning communities, bringing specific expertise in domains relevant to the students needs. Experts will not be required to possess the skill set of learning facilitators, and experts will be supported by learning facilitators to prepare and carry out their part.

9.3 Quality and Enhancement

As a part of the QA process, an evaluation will be carried out by online student survey at the end of each module. There is also an element of continuous evaluation in the on-line communities through discussion between learning facilitators and student researchers. The evaluation will cover standard University of Bolton questions and additional more specific course related areas determined by the programme team. These forms will formally be monitored and the responses included to form part of the module review shared with the community.   At the end of

each year these documents, with the annual report from the pathway external examiner, are reviewed to provide an annual course evaluation.

The development of this pathway is an iterative process and is an action research in its own right. Thus in addition to the Quality Assurance procedures outlined above, changes will be made to reflect the needs of the learners based on gathered evidence, analysis and conclusions.

10. Appendices

10.1 References

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Friday 30th January 2009

'Inter-Disciplinary Inquiry-Based Learning (IDIBL)'

Objectives of the workshop
Based on developments at the University of Bolton, the workshop will offer a case study of innovative development of a programme focussed on student's workplaces and practices. Frequent negotiation of learning activities, online community of student researchers, patchwork text assessment and full-time study whilst in full-time work are some of the interesting features to be described. The workshop will then permit delegates to pick some of these issues in a 'world-cafe' format to debate and discuss the challenges to conventional wisdom that these approaches can present. Finally the presenters will suggest 'patterns' for online community of inquiry, intended to communicate these practices in teaching, learning, assessment and accreditation so that staff may effectively work together and students make sense of the learning model offered.

Time	Activity	Notes
10:00	Introduction	Paul Birkett
10:10	Presentation	• The story of Ultraversity and IDIBL - context, values and approaches • the case for social justice / widening participation for individuals • raising the quality of learning and the degree of impact on practice and workplace • combination of innovative approaches adopted • 'Patterns' - staff development to adopt innovation
10:30	World café discussion in groups	How would your institution respond to this kind of innovation?
11:00	Report back	
11:15	Tea & Coffee	
11:30	Presentation	• IDIBL - themes, framework and modules • impact potential - social responsibility • inter-professional and inter-disciplinary • framework - levels and credit volume, progression • drilling down into a module design - learning outcomes, assessment criteria & practice
12:00	World café discussion in groups	Critique of this design.
12:30	Report back	
12:50	Lunch	

13:50	Presentation	• The 'Co-educate' project • JISC funded project to explore curriculum design processes • purposes • audiences - validators, tutors and students • practices - how are curricula designed?
14:20	World café discussion in groups	Is there a shift in curriculum design and new expectations of quality?
14:40	Report back & discussion	• raising issues • further commentary • next steps • summing up
15:00	Tea, coffee & depart	

**NORTHERN UNIVERSITIES CONSORTIUM FOR
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**Inter-Disciplinary Inquiry-Based Learning
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Friday 30 January 2009
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Friday 20th February 2009
York St John University

**Accreditation of Employer Based Training
(EBTA)**
Friday 27th March 2009
University of Central Lancashire

**Making Sense of Credit and Qualification
Frameworks in UK and Europe**
Thursday 30 April 2009
University of Derby

About the workshops

Workshops will start at 10.00 am and finish at 4.00 pm

Please refer to the information which will be sent to you approximately one week prior to the date of your chosen workshop for specific details regarding the venue.

Inter-Disciplinary Inquiry-Based Learning (IDIBL)

University of Bolton – Friday 30 January 2009

♦ **About the workshop leaders:** Richard Millwood is Reader in Distributed Learning in the Institute for Educational Cybernetics at the University of Bolton where he is developing the IDIBL course framework alongside Stephen Powell and Mark Johnson. He also directs Core UK, a not-for-profit organisation devoted to innovation in learning and technology, working with the UK Improvement & Development Agency, UNESCO, the UK Qualifications and Curriculum Authority and BECTa and is associated with Core NZ, based in Christchurch New Zealand. Richard is also establishing the National Archive of Educational Computing. Before joining IEC, Richard co-developed the structure and ethos of Ultralab - one of the most successful innovation centres in learning and technology throughout the world, managing the research and development there to build successful large-scale action research projects. He supported the creative, ethical and conceptual thinking at Ultralab and supervised PhD students in the field of educational computing. For ten years before joining Ultralab in 1990, Richard led software development in the Computers in the Curriculum Project for ten years after beginning his career as a school teacher.

♦ Stephen Powell is Reader in Inquiry-Based Learning at the University of Bolton, undertaking action research into work-focused learning using inquiry-based approaches supported through online communities of inquiry. This has been the focus of his work since 2003, when he led the development of the successful Ultraversity project at Ultralab (Anglia Ruskin University). This project proved that the combination of ideas brought together in an innovative package could achieve the dual aims of widening participation and developing an approach to learning that supported undergraduate researchers in making improvements in the work they do. Prior to this, Stephen worked on the management team of the Talking Heads project for the National College for School Leaders, an early use of the concept of online communities of practice for head-teachers. Before his move to working in Higher Education, he worked as ICT advisor on the Tesco SchoolNet 2000 project, the first UK wide initiative to develop the use of the Internet in Schools. Prior to this Stephen worked as a school teacher and Special Educational Needs Co-ordinator in state secondary schools.

♦ **Objectives of the workshop**

Based on developments at the University of Bolton, the workshop will offer a case study of innovative development of a programme focused on student's workplaces and practices. Frequent negotiation of learning activities, online community of student researchers, patchwork text assessment and full-time study whilst in full-time work are some of the interesting features to be described (see http://idibl.bolton.ac.uk). The workshop will then permit delegates to pick some of these issues in a 'world-cafe' format to debate and discuss the challenges to conventional wisdom that these approaches can present. Finally the presenters will suggest 'patterns' for online community of inquiry, intended to communicate these practices in teaching, learning, assessment and accreditation so that staff may effectively work together and students make sense of the learning model offered.

♦ **Who is the workshop aimed at?** University and college academic and administrative staff, curriculum designers, managers in educational institutions, and staff in national agencies and government departments whose work links to validation, learning technology, assessment, learning and teaching at post-compulsory education levels.

Doctoral Degree Developments: How Relevant is Credit?
York St John University - Friday 20 February 2009

♦ **About the workshop leader:** Janet Jurica is Senior Assistant Registrar in the Secretariat: Legal Affairs at the University of Leeds where she is currently responsible for a number of 'quasi-legal' areas including the regulation of the University's modular UG and PGT programmes and the University's involvement with the Bologna Process. She represents NUCCAT on the EWNI Credit Forum. She chaired the (Banner) Project Team which developed the University's combined Diploma Supplement and Transcript to meet the European requirement. The experience drew deeply on her previous responsibilities across most academic registrarial activities, programme development and validation.

♦ **Objectives of the workshop:** in recent decade's professional and performance based disciplines have sought the development of the traditional concept of the PhD/DPhil to produce formats based on current perceptions of the training needs of or current practice within the disciplines. At the same time Funding Bodies have sought to ensure that PhD/DPhil candidates receive more generalised research training resulting in developments such as the 'New Route PhD' and Integrated Doctoral and Masters Degrees. How viable are such developments? How can universities ensure they receive universal parity of esteem with the PhD/DPhil? Will applying academic credit principles assist or hinder this? Participants will be expected to share how their own institutions are responding to the pressures presented by the new models and experience of their viability.

♦ **Who is the workshop aimed at?** HE officers and administrators involved in Doctoral and Research developments.

Accreditation of Employer Based Training (EBTA)

University of Central Lancashire - Friday 27th March 2009

♦ **About the workshop leader:** Ken Phillips was appointed as Director of Regional Partnerships at the University of Central Lancashire in February 2004, having previously been Head of the Department of Education and Social Science. His role is to support the strategic development of the regional partnerships of the University. His work has resulted in the building of a University Campus as part of a new combined FE/HE campus with Burnley College, and the setting up of the Lancashire Lifelong Learning network. From 2007 he has also been working with fdf to lead the work on the accreditation of employer based training (EBTA – see http://www.fdf.ac.uk/). The initial focus was in the NW and later extended to two other fdf regions and has now developed a strong national profile.

♦ **Objectives of the workshop:** to outline the importance of EBTA in relation to the current HE agenda and the achievements to date. Case studies of successful accreditations will be provided and also details on the current EBTA guidelines relating to quality assurance and costing issues.

♦ **Who is the workshop aimed at?** University, college and LLN staff, colleagues from SSCs, and employers who are interested in how the accreditation of training can work to the benefit of employers, employees, and the accrediting institutions.

Making Sense of Credit and Qualification Frameworks in UK and Europe

University of Derby - Thursday 30th April 2009

♦ **About the workshop leader:** Paul Bridges is Clerk to the Governing Council and Head of Research at the University of Derby. He is a member and former Chair of NUCCAT. He currently chairs the England, Wales and Northern Ireland Credit Forum.

♦ **Objectives of the workshop:** This Workshop will provide an introduction to credit and the role of credit in qualification frameworks in the UK and in Europe. There will be discussion of credit issues such as the re-use of credit and discriminatory practices. The workshop will assume no prior knowledge of credit and will aim to provide you with a clear picture of the current developments the UK and Europe. It will encompass developments in both the learning and skills sector and Higher Education. Discussions will also include the Bologna Cycles, ECTS, the European Qualifications Framework and ECVET. It is also hoped that by the end of the workshop, participants will feel they have an improved understanding of credit and will also feel more confident in finding solutions to issues encountered in their home institutions.

♦ **Who is the workshop aimed at?** Those with no previous background in credit and for those with some background in credit who want to gain a clear picture of current developments of credit and qualification frameworks in the UK and Europe for the purpose of informing institutional planning.

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MORE ABOUT NUCCAT

The Northern Universities Consortium for Credit Accumulation and Transfer is a federation of 44 Higher Education (HE) institutions and HE related bodies in northern and central England and Northern Ireland. The membership includes the Universities and Colleges Admissions Service (UCAS), the Open University and some regional university associations. Working through its membership and in collaboration with other credit bodies, NUCCAT seeks to

● share best practice in the development of modularity, credit frameworks and academic frameworks, including assessment
● promote staff development in these areas
● work with other consortia to resolve issues of common interest
● undertake specific projects on credit

The consortium holds quarterly meetings in September, December, March and June each year. It organises an annual conference in the autumn and has established an annual series of regional workshops to assist member institutions with staff development.

NUCCAT meets regularly with representatives of the other F/HE credit bodies in England, Wales and Northern Ireland as the EWNI Credit Forum. In 2004 the Forum published a major survey of HE credit practice in England, Wales and Northern Ireland and it is currently involved in discussions nationally to develop over-arching principles and descriptors for credit-rated awards which cover FE and HE, vocational and academic programmes and the interfaces between them. The Forum has also made responses to consultation papers on similar issues within Europe arising from the Bologna process.

HOW TO BOOK

Please complete a separate form for each person attending and return to:
Laura Sellars
Conference 21
Sheffield Hallam University
City Campus
Sheffield   S1 1WB

Tel: 0114 225 5334
Fax: 0114 225 5337
Email: L.Sellars@shu.ac.uk

**NORTHERN UNIVERSITIES CONSORTIUM FOR
CREDIT ACCUMULATION AND TRANSFER**

HOW TO BOOK

Please complete a separate form for *each* person attending and return to:

Laura Sellars
Conference 21
Sheffield Hallam University
City Campus
Sheffield S1 1WB
Tel: 0114 225 5334
Fax: 0114 225 5337
Email: L.Sellars@shu.ac.uk

I wish to reserve a place as follows (please tick each workshop you wish to attend):

☐ Inter-Disciplinary Inquiry-Based Learning (IDIBL)
Friday 30 January 2009

☐ Doctoral Degree Developments: How relevant is Credit?
Friday 20 February 2009

☐ Accreditation of Employer Based Training (EBTA)
Friday 27 March 2009

☐ Making Sense of Credit and Qualification Frameworks in UK and Europe
Thursday 30 April 2009

PLEASE PRINT CLEARLY

Dr/Mr/Mrs/Miss/Ms (Please delete as appropriate)

Forename: _____ Surname: _____

Position: _____

Organisation: _____

Address: _____

_____

Post Code:_____ Email**:_____

Tel:_____ Fax:_____

Any special needs relating to diet or disability:_____

_____

** Upon receipt of your booking form you will receive confirmation by email, further joining instructions will be sent to you by post 7-10 days prior to the date of the workshop.

ATTENDANCE FEE

The attendance fee is £60.00 per workshop for delegates from NUCCAT member institutions and HE Colleges and £85.00 per workshop for delegates from non-member institutions. This fee includes morning/afternoon refreshments and lunch (the delegate fee is not subject to VAT).

PAYMENT

☐ **Cheque** for £60/£85* (*Please circle) enclosed **payable to 'Sheffield Hallam University'**

☐ **Invoice** for £60/£85* (*Please circle) to the following address

_____

_____

Purchase order number: _____

☐ **By credit card** (please complete details below)

Please debit my *Access/Visa/Barclaycard/Eurocard/Delta/ Switch, to the sum of £60/£85* (*Please circle)

Card holder's signature: _____

Name and initials on the card: _____

Card holder's statement address: _____

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Card account number: _____

Expiry date: _____ Daytime telephone number: _____

By Switch Card number: _____

Card expiry date: _____ Issue number: _____

CANCELLATIONS

Payment will be refunded if notification of cancellation is received in writing within ten days of the date of the workshop. No refunds can be made after that date but confirmed substitutes will be accepted.

NUCcat

NORTHERN UNIVERSITIES CONSORTIUM FOR CREDIT ACCUMULATION AND TRANSFER

University of Bolton

iec
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educational
cybernetics

co Educate

Richard Millwood
Stephen Powell

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Institute for Educational Cybernetics

Abstract

This paper will present the lessons learnt in the context of the JISC funded CO-EDUCATE project at the University of Bolton. This project focuses on re-engineering of the professional curriculum and development of a 'cooperative' model of higher education, whereby the starting point for curriculum development and design is the needs of the learner and their organisation, negotiated and delivered in partnership with full recognition of in-work and experiential learning. This paper reports on the background and progress made so far.

A major stratagem for realising this vision is the adoption of inter-disciplinary inquiry-based learning (IDIBL) across the university, supported through learning technologies. A validated framework for inquiry-based learning programmes from foundation degrees to doctorates is in place with exemplar programmes up and running and advanced planning for further programmes. This paper will critically analyse activities over the first year of the projects implementation.

Engaging HE lecturers in a discussion around different approaches to learning, teaching, and identification of content increases their motivation to think in new and creative ways about curriculum design in its broadest sense. Developing courses outside of the norm exposes the institutional processes and practices to sharp critique informing those areas which could benefit from technological interventions. Employers are enthusiastic about courses that use students' work as the focus of their studies and that do not pre-determine the subjects to be studied.

Higher education curricula are predominantly described in terms of learning outcomes and underpinning skills. Introduced in response to reports such as Robinson (1994), one effect has been to reduce the ability of programmes to respond to learner needs as bureaucratic processes inhibit agile adaptation. This paper shows how different conceptualisations of the curriculum that focus on process and critical engagement with real world can lead to a relevant and personalised learning experience.

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"science of effective organisation" (Beer, 1982)

Modelling of the education system at multiple levels:
political, institutional, social, pedagogic and personal

...exploration of different technological interventions

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Project aim

Jisc funded Curriculum Development Project to address systemic change issues

Review of current processes and practice

Understanding the initial issue or challenge

Implementing innovations in curriculum design

Piloting and evaluation of the new processes

Embedding the innovations and planning for sustainability

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Sociotechnical approach.

Develop a technologically supported approach to programme development that is efficient, agile and responsive to purchaser and learner needs as well as protecting rigour and quality.

Inquiring into the development of curriculum's full life cycle from inception to withdrawal from university catelogue.

Work packages

1: Review of current processes and practice

2: Understanding the initial issue or challenge and identifying the changes desired by the end of the project

3: Planning and implementing innovations in curriculum design processes in order to realise the desired changes

4: Piloting and evaluation of the new processes

5: Embedding the innovations and planning for sustainability

6: Dissemination and collaboration

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Methodology

- Soft Systems
- Viable Systems Model
- Strategic Options Development and Analysis (SODA)
- Enterprise architecture

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Systems approach using multimethodologies: real activities and desires of actual actors, not about a theoretical work or methodologies themselves

VSM: modeling to offer insight into improving organisational structure and content (Stafford Beer)

Soft systems: improve a problematic situation through agreement on feasible changes (Checkland)

SODA: cognitive mapping to develop models (MDCA) and uses software like Decision Explorer to enable analysis (Eden & Ackerman)

Enterprise architecture: address organisational-wide integration of supporting technologies; business processes, information systems, and IT infrastructure.

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Environment

Leitch agenda   retention   demographics

Institutional response

...reduce its dependence on HEFCE-funded undergraduate students and create a more diverse portfolio of income streams...

- work-based learning
- curriculum development
- curriculum design

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Move to a consumer led curriculum

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Some findings

What the focus of the curriculum debate isn't about for most staff

- approaches to assessment
- design of learning activities
- change in working practices
- demand led curriculum design and delivery

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In open discussion (that is without direction) these are the kinds of things 'management' first talk about.

Some findings

What the focus of the curriculum debate is about for most staff

- market intelligence and marketing

- improving the course validation process and supporting tools

- CPD and short courses

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In open discussion (that is without direction) these are the kinds of things staff first talk about.

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Modelling

- approaches to assessment
- design of learning activities
- change in working practices
- demand led curriculum design and delivery
- market intelligence and marketing
- improving the course validation process and supporting tools
- CPD and short courses

System Five
Decisions
to maintain
Identity

System Four
Development
Research &
Marketing

System Two :
Regulation &
Tactical Planning

System Three
Operations
Planning &
Control

Algedonic
Alerting

ONE

Systems One :
5-4-3-2 repeats
to Process level

ONE

ONE

Beer, 1969

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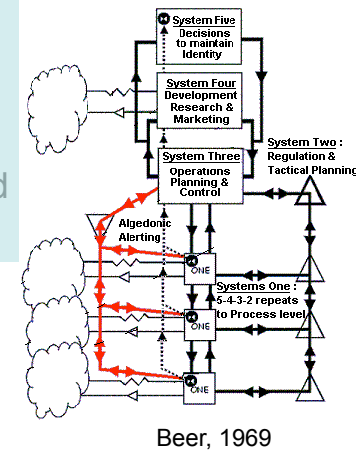
Stafford Beer Diagnosing the System – readable introduction to the Viable System Model (VSM). Using the VSM we can begin to model the activities of Bolton around the curriculum development process.

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Pilot activity

11

idibl Framework

The framework describes a series of modules that are subject content free, and instead use learning outcomes that describe learning processes and student capabilities. As such, the modules can be applied to a wide range of different work contexts where students can apply a action-inquiry approach to learning.

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JISC

JISC Project Plan

1. Background

Traditional models of curriculum design are predicated upon the notion of the educational professional as expert. The curriculum of Continuing Professional Development is therefore usually 'handed down' to employers and employees as fixed and non-negotiable. The University of Bolton's (UoB) strategic aim is to be a Professional, Employer and Community Facing University where the needs of employers and learners drive both curriculum content and mode of delivery.

The University intends that its academic practitioners will deliver professional higher education in partnership and in negotiation with employers and learners. This model is at the heart of a revolutionary approach to Continuing Professional Development (already underway) that will empower purchasers of higher-level skills to participate in the design and accreditation of their own learning and determine the time and place in which it is delivered. The JISC call enables us to focus our staff on a re-engineering of the professional curriculum.

In this model, the starting point for curriculum development and design is the needs of the learner (and their organisation) negotiated and delivered in partnership with full recognition of in-work and experiential learning. This curriculum re-engineering is vital to our institutional strategic mission, informs our strategic dialogue with HEFCE about employer co-funding expansion.

We already have a major stake in employer led and work-based programmes through our work with sector skills councils, professional bodies, the NHS, the Employer Based Training Accreditation (EBTA) framework and the Greater Manchester Lifelong Learning Network with over 50% of our students studying part-time. This platform is the basis for our strategic transformation into an

employer facing university with the agile curriculum design and delivery systems to underpin our mission. The JISC call is therefore a timely catalyst for our institutional curriculum remodelling.

2. Aims and Objectives

Aim
Within the life-cycle of the Coeducate project develop a technologically supported approach to programme development that is efficient, agile and responsive to purchaser and learner needs while protecting the rigour and quality of the existing validation mechanisms.

Objectives:
1. understanding the curriculum development problem at UoB;
2. identify tools and processes for course development & curriculum design across the UoB & with stakeholders;
3. implementation of new tools and processes across the UoB;
4. raise awareness & build capacity of staff to critically examine and develop work-based curricula across the UoB;
5. support staff to embed inquiry-based approaches & negotiated learning in work-based programmes offered by the UoB.

3. Overall Approach

Our approach is to undertake a complete review of the curriculum development process across the university. This will span initial identification of curricular need through to validation and will enable us to implement targeted interventions to enable a streamlined, dynamic and responsive curriculum development. The review will necessarily involve modelling academic, departmental and whole university processes, and will provide baseline data to allow comparison with other institutions and the COVARM reference model. Following the review we will work with staff and schools to develop processes and adapt technologies. These processes will include support for developing new ideas for courses, examining their fit with existing provision, and course planning. Tools will be implemented to support these, based on existing JISC work (Phoebe in particular), but reworked to support the CPD, inquiry-based, work-focussed approaches we are proposing to adopt. All new courses will comply to the XCRI specification. The project will not directly address activities supporting the delivery of programmes.

A multimethodology systems approach will be applied to the problem identification and interventions. This approach seeks to identify divergent views and to accommodate individuals in a collaborative endeavour to problem solve and arrive at consensual solutions.

Soft Systems Methodology (SSM) – the approach developed by Peter Checkland is essentially a form of participatory action research. As such, its strengths lie in the joint identification of a shared issue and the changes required by individuals to bring about an improvement in an organisation. This overall approach will be used throughout the project as iterative cycles of actions to make improvements on those that went before. Inherent in action research approach is the evaluation of and reflection on actions taken by problem solving participants.

Viable Systems Model (VSM) – the approach developed by Stafford Beer offers a powerful analytical tool for our project in helping us to understand the UoB as a system as a whole. In particular this includes the feedback mechanisms that seek to coordinate the strategic objectives of the organisation through operational management layer and into the design of courses. This background work will be used to help problem solving participants understand the problem so that subsequent actions as a part of SSM will be better informed and planned.

Strategic Options Development Analysis (SODA) – the approach developed by Eden and Ackerman is based on cognitive mapping to develop models and uses software like Decision Explorer to enable analysis. Similarly to the VSM, this will be used to help problem solving participants work towards options for tackling curriculum design problems.

Indicative pilot course developments

Institute for Educational Cybernetics – Masters in Learning with Technology, started September 2008
Department for the Built Environment and Engineering – Pathways in Regeneration and Sustainable Communities validated in November 2008
Department for Arts, Media and Education – Foundation Degree in Management of Administration for Education and Training

Critical success factors include:
- cross-institutional buy-in to developing new curriculum design processes and practices
- efficacy of the technological solutions introduced to support the development process
- level of purchaser engagement with the curriculum development process

4. Project Outputs

Deliverables	Knowledge and experience gained
1. Detailed project plan	
2. Report on baseline data, incorporating models of existing processes with a bearing on curriculum development	Capacity building across the UoB in the use of multimethodology systems approach to the problem of curriculum design.
3. Detailed requirements document identifying areas of process change and supporting actions: validation procedures and frameworks; credit based award schemes; staff development actions; technological systems	Collective view from all stakeholders on which strategic actions are needed to improve curriculum design processes in the university.
4. Explicated course development process	Detailed understanding of complete course development process in the university, from conception to validation. This will include as appropriate: case studies, vignettes, multimedia & web-based resources from different user group perspectives.
5. Transparent online form based course development system, incorporating pedagogical and technological choices.	Capacity building with stakeholders including employers in the development of work-focussed HE programmes.
6. A number of discoverable and interoperable learning technology tools (widgets), hosted on local server (Widget server).	Identification of a number of small applications that would enhance learning activities and course design in the universities.
7. Professional Development Framework	Report on the development of credit based awards framework.
8. Curriculum development 'handbook' pulling together project findings	Online resource for teachers, course developers, operational & senior mangers.
9. Evaluative reports on development of new courses: Masters in Learning with Technology; Foundation Degree in Management of Administration for Education and Training; FD in Regeneration and Sustainable Communities	Information of the effectiveness of strategies to address the challenges of successful embedding of innovations in curriculum design and delivery especially the preparedness of educational institutions, workplaces and individuals to embrace them in juxtaposed to UK government policy and rhetoric.
10. A report describing the impact of inquiry-based learning in the workplace, and how it meets the needs of changing learner and employer needs.	Deeper understanding and experience of the role of enquiry for employees working in a range of workplaces and contexts, and its value for employers.
11. Jisc interim reports.	Ongoing description of project actions and outcomes.
12. Jisc final report.	A case study on a successfully completed

	university-wide curriculum re-design process, incorporating recommendations for others seeking to implement similar innovations.

5. Project Outcomes

The Coeducate project was informed from the stat by the UoB strategic development plan, and as such its actions form an integral part of that around employer engagement, work-based learning, and the development of new and innovative curricula.

The SSM approach will ensure that any actions for improvement are identified and developed by the problem solving participants, as such there will not be an attempt to impose project solutions. The buy-in from departments, central supporting units and the championing of the project by the Vice Chancellors office will also ensure that changes are in-line with the development plan of the university and as such have as good a chance of being embedded in policies and practice as is realistically possible. Project outcomes listed below are indicative of the likely interventions, but will be refined through activities in work-package 2 (2: Understanding the initial issue or challenge and identifying the changes desired by the end of the project).

Indicative project outcomes:
1. rich picture of the curriculum development process at UoB & outlining possible strategic interventions;
2. amended and improved technical systems to support curriculum development;
3. simplified and streamlined curriculum development processes;
4. increased capacity for development of curriculum relevant to purchaser needs including delivery, teaching and assessment approaches;
5. increased employer understanding of and engagement with Higher Education in the development of work-based programmes of learning;
6. new courses that enable new groups of students to access Higher Education;
7. use of inquiry-based and negotiated learning approaches across the UoB work-based learning portfolio.

Mapping of Coeducate project intended outcomes to Jisc programme outcomes

JISC Programme	Coeducate project
1. The anticipated outcomes from this programme of work are:	
Improved understanding at practitioner and senior management level of effective curriculum design, and of how design processes can be supported by technology to help the institution achieve its strategic objectives;	1, 2, 4
Evidence of learners achieving their goals through participation in flexible, appropriate, well-designed and learner-led curricula across a range of discipline areas;	6, 7
Enhanced curriculum design processes in place which support flexible delivery to meet diverse and changing learner requirements;	6, 7, 3
Enhanced institutional processes in place which support educational innovation and contribute to the delivery of national policy on lifelong learning, skills and widening participation;	3
Domain knowledge, reusable models of processes and practice, and user requirements to support the continuing development of a technical infrastructure for the whole curriculum lifecycle;	1, 2, 3
The stimulation of positive and informed change in curriculum	4, 5

design processes in the sector through enhanced capacity, knowledge and skills in the use of technology to support curriculum design;	
Enhanced understanding of how the use of technology in the curriculum design process can lead to tangible benefits in terms of efficiencies, enhancement of the student and staff experience, and other key changes in what institutions can offer learners[1], to inform the decision-making of JISC and institutions.	2

6. Stakeholder Analysis

Internal Stakeholders	Interest / stake	Strategy for involvement	Importance
1. Peter Marsh: Deputy Vice Chancellor	Project sponsor	Chair of steering group	high
2. Staff on UoB Teaching and Learning Sabbaticals	Liaison with departments over project implementation	Members of project Design Group	high
3. Departmental heads	Responsible for overview of curriculum	Individual meetings and input into University Executive Committee through project director	high
4. Paul Birkett (Dean Quality Assurance and Enhancement)	Changes to validation processes	Regular individual meetings	high
5. Principal Lecturers (Quality and Programme design)	Middle management layer responsible for curricula innovations	Project manager regular input into PL management meetings	high
6. Carole Sykes (Head of Student Data Management)	New patterns of study challenge processes and practices for collecting fees and drawing down Hefce contribution		high
7. Course designers and developers: Marie Norman, Margaret Nelson	Developing new courses and programmes.	IDIBL project activities and events including supporting colleagues through validation process & online course focussing in Inquiry-based learning	high
8. Patrick O'Reilly: Head of Information Systems and Technology	Technological developments will require his active support	Regular individual meetings	high
9. Mike Lomas (Head of Collaborative Partnerships and Employer Engagement)	New approaches to employer engagement	Regular individual meetings	high
10. Sue Burkinshaw (Educational Development Unit Co-	Runs sabbatical programme and is a key link to maintaining engagement	Regular individual meetings & contribution to CPD activities	medium

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[1] The CAMEL tangible benefits of e-learning project explored some of the benefits which institutions have experienced through appropriate use of e-learning. A briefing on this work is available at: http://www.jisc.ac.uk/publications/publications/bptangiblebenefitsv1.aspx.

ordinator)	with staff on sabbaticals		
11. Nigel Hill (Director of Marketing and Communications)	Responsible for promotion and marketing of new courses	Regular individual meetings	medium
12. UoB teaching staff	Deliverers of programmes and pathways	CPD activities	medium
External stakeholders			
1. JISC	Funding body	Attending Curriculum Design & other JISC sponsored events	medium
2. Other curriculum design projects	Sharing findings, engaging in discussion, shared understanding. Interest in tools, approaches and resources developed.	Attending Curriculum Design & other JISC sponsored events	low
3. Other HE and FE institutions	Potential customers for the guidance and tools the project develops	Conference presentations	low

7. Risk Analysis

The risk register will be included as a standing item on project steering group meetings where risks will be monitored and advice given to project team on how they might be managed.

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Creep of project scope away from project aims and objectives	2	4	8	Use steering group to keep project on track and aligned with its initial aim – amending objectives only after careful consideration and consultation with project stakeholders.
Lack of commitment and active engagement of problem solving participants over four year duration of the project	2	4	8	Project manager and project director to actively pursue relationship building across the university and to review level of engagement regularly with project design group
Not being able to secure the time commitment from colleagues to undertake work-packages 3-5	2	4	8	Work closely with the project design group who represent the various departments and functions of the University. Identify detailed work-packages required for 2009-10 and negotiate individual's contributions concurrently with the university planning cycle
Inability to embed project outputs in organisational policies, practices and procedures	2	5	10	Keep Deputy Vice Chancellor appraised of progress so that high-level support can quickly be brought to bear on issues. Ensure central units and academic departments retain ownership of developments.
Implementation of	2	4	8	Work closely with CETIS service to

technology that does meet standards based & interoperability requirements and therefore is not sustainable over a period of time				ensure solutions are informed by current good practice. Be realistic with expected outcomes in terms of integration with other enterprise systems within UoB – focus on efficacy for supporting curriculum development
External suppliers	1	1	1	None
Legal	1	1	1	None
Complexity and resulting difficulties of using a multimethodology systems approach	2	5	10	Work closely with project critical friend and continually evaluate progress to ensure appropriate methodology for challenge at hand

8. Standards

At this early stage of the project, before requirements have been established in a detailed and formal way, it is difficult to be clear on the areas of activity that will require standards-based interventions. Any new courses will make use of the XCRI specification, and the project will be informed by the work of the COVA reference model. The widget development will adhere to the W3C specification. Any more specificity would not be appropriate. However, by having JISC CETIS located in the university, we aim to be exemplary in ensuring that we use standards in the most appropriate and thorough way.

Name of standard or specification	Version	Notes
XCRI-CAP	1.0	Course advertising profile
Widgets 1.0: Packaging and Configuration	1.0	

9. Technical Development

Development will follow the principles of user centred design from the earliest stages, following naturally from a Soft Systems approach to identifying the areas where new or adapted ICT systems are required to support the "to-be" business architecture. A pragmatic approach to iterative development will be evolved using an inclusive process, borrowing particularly from the repertoire of the "Users and Innovation Development Model" (JISC EMERGE). Early, pre-coding, engagement will use techniques such as paper prototyping and CRC cards to develop common thinking between developers and end users or those with a view of the "to-be" architecture. This work will be supported through he use of UML or BPMN design tools.

Technical design will favour service-oriented principles where services can be identified and their development justified within the scope of Cooducate. Service identification will take into account the local ICT and business process landscape and intelligence on common analysis within the Curriculum Design Programme or further afield, e.g. the eFramework or Kuali Student. In the first instance, it is likely services will be prototyped with point-to-point dependencies; the implementation of an architecturally-desirable Enterprise Service Bus will depend on the degree that this can be justified by the services that are developed.

In line with the skills of the development team the Microsoft development platform will be used for new developments and adaption of previous in-house code. The Visual Studio platform will provide the core IDE and integrated support for unit testing and source code version control. A decision on software to support bug tracking and communication between the developers and wider project members is yet to be made but is likely to be Trac or a similar system. Web services, whether WS-* or REST, will be devised in a design-first rather than a code-first manner and follow good principles for platform independent design.

10. Intellectual Property Rights

University of Bolton will be the sole owner of intellectual property. All the project deliverables, reports and other relevant outputs will be published via the project website and made freely available to the academic community. Where appropriate, materials will be offered to relevant repositories (including JORUM and CloudWorks) to support wider dissemination and sustainable access.

11. Project Partners

No project partners.

12. Project Management

Two groups will support the Co-educate project at the UoB. The project management group will steer the project at a strategic level and the curriculum design group will support the project at an operational level reporting to the management group.

Project Management Board
The Project Management Board chaired by the Deputy Vice Chancellor, Dr Peter Marsh, with members from academic schools and support departments will oversee the project. This in turn will report to the University's Executive Board. The Project Management Board will meet 3 times per year.

Curriculum Design Group
The Curriculum Design Group membership will change over time, depending on the phase of the project. It will include staff working on the project and other key stakeholders involved in the particular phase or workpackage currently running. The group will:

1. advise the project management group on the implementation strategy for the project;
2. elaborate project activities based on the project plan;
3. monitor progress against the project plan and agreed project activities;
4. meet regularly to carry out the above activities;
5. review its composition regularly to reflect the stage of the project and particular demands and requirements.

Project Team

The project is staffed by university staff members with responsibilities that are closely aligned with the aims of the project. Involvement will depend on the phase of the project, and some people will work for short concentrated periods, while others will contribute on a shorter more regular basis. It is likely that over the life of the project, staff not identified below will make significant contributions, and so the list should be seen as indicative rather than exhaustive.

FTE	Role	Name	Position	Contact
0.2	Project Director	Professor Oleg Liber	Director of the Institute for Educational Cybernetics	07919573532 o.liber@bolton.ac.uk
0.5	Project Manager	Stephen Powell	Reader in Inquiry-based learning	07854864124 stephenp.powell@gmail.com
0.2	Work Package contributor	Richard Millwood	Reader in Distributed Learning	0779055 8641 R.Millwood@bolton.ac.uk
0.2	Work Package contributor	Scott Wilson	Senior researcher (Learning	01204903876 S.Wilson@bolton.ac.uk

			Technology)	
0.2	Work Package contributor	Mark Johnson	Reader in Applied Research in Education Technology and Systems	01204903567 M.W.Johnson@bolton.ac.uk
0.1	Work Package contributor	Sue Burkinshaw	Educational Development Unit Co-ordinator	01204903655 S.F.Burkinshaw@bolton.ac.uk
0.1	Work Package contributor	Mike Lomas	Head of Employer Engagement and Partnerships	01204903460 M.Lomas@bolton.ac.uk
0.1	Work Package contributor	Dr Paul Birkett	Dean of Academic Quality and Standards	01204903051 P.Birkett@bolton.ac.uk
0.1	Work Package contributor	Hilary Birtwistle	Head of Business Strategy and Policy Support	01204903867 H.Birtwistle@bolton.ac.uk

13. Programme Support

The university needs to be well informed on the options available to it with respect to curricular choices, appropriate to its needs as a widening participation university. For this input from Professors and other experts in Higher Education, for example Professor Ronald Barnett, would be desirable. This would almost certainly be useful to other projects, and so could be organised by the support project in addition to acting as consultants to this project.

The project will be applying techniques from Operational Research (OR), in particular from what is known as "Soft OR" which incorporates a range of methodologies. The project team have some expertise in several of these, but advice and support on other approaches could be helpful, especially in the area of problem structuring methods.

The project's technical approach will seek to embrace a service oriented approach.

14. Budget

Attached.

Detailed Project Planning

15. Workpackages

Attached.

16. Evaluation Plan

Owner, Mark Johnson

The evaluative process is a key component of the Coeducate project. Ultimately, we see the value of the project in being able to indicate to external parties *what is likely to happen and in which circumstances* if interventions similar to those on the Coeducate project are undertaken. The value of the project is inherent in the added control that this knowledge will give other institutions.

The philosophical grounding for our approach is Realistic Evaluation (Pawson and Tilley, 2002). Its primary role is to identify meaningful distinctions and mechanisms which revolve around the curriculum design process. The evaluation process will involve focus-group activities and other methods (including Soft Systems approaches) of extracting stakeholder views, theories, distinctions and experiences of curriculum design. As each iterative stage progresses, the project will seek to test

these mechanisms and distinctions, leading to refinement or rejection. By the end of the project, the intention is that the project will have identified a number of principle mechanisms between its stakeholders with explanatory and predictive powers within the broader Higher Education context.

Baseline activities - what is the situation prior to project activities

Timing	Factor to Evaluate	Questions to Address	Method(s)
December 2008-July 2009	Current practice	How does a course progress from the initial idea to delivery including benefits & drawbacks	Focus groups and interviews Analysis of documentation
December 2008-July 2009	Business processes	What are UoB business processes around course design, development and delivery	Modelling
December 2008-July 2009	Enterprise systems	What are the enterprise systems that support course design, development and delivery	Systems diagrams Interviews

As an Implementation project evaluation will focus on both process and outcome. As described by the project methodology (section three) the precise nature of interventions and outcomes will be decided as a part of work-package 2 and it is at this time that more detailed evaluation criteria against outcomes will be established.

Timing	Factor to evaluate (project objectives)	Questions to Address	Method(s)	Measure of Success
Yr. 1-4	1. Understanding the curriculum development problem at UoB	Does project methodology enable the identification and prioritisation of interventions	Gathering stakeholder theories of process: • Soft Systems Methodology: Focus groups and interviews • Analysis of current documentation • Strategic Options Development Analysis	University validated description and identification of problem
Yr. 2-3	2. Develop tools and processes for course development & curriculum design	Q1. Are tools and processes robust and reliable technologically Q2. Were the tool and processes development activities owned by problem solving participants	Tools developed from emerging models and theories: • User testing • Evaluation against functional specification • Problem structuring activities	Tools meet functional specifications and can be used with existing university processes
Yr. 2-4	3. Implementation of new tools and processes	Q1. To what extent are staff using new tools and processes for curriculum development Q2. Do staff find the tools useful for new and innovative curriculum development Q3. Do tools and processes enable	Iteration of tools, processes & theories: • Usage statistics • Staff workshop feedback • Key staff Interviews	Staff are using new tools and processes to develop courses

		collaboration around curriculum development		
Yr. 1-4	4. Raise awareness and build capacity of staff to critically examine and develop work-based curricula	Q1. What are the nature of the 'learning conversations' around new curriculum design	Engaging people in the process: • Board of studies meetings • Senate meetings • Coeducate support activities: meetings, workshops, evaluations	Engaged staff from all schools and central units in ongoing project conversations and activities
Yr. 1-4	5. Support staff to embed inquiry-based approaches & negotiated learning in work-based programmes	Q1. What is the impact of the development activity on new work-based curriculum design	Engaging people in the process: • Validation documents • UoB course portfolio • Module catalogue	Courses / modules validated

17. Quality Plan

Output					
Timing	**Quality criteria**	**QA method(s)**	**Evidence of compliance**	**Quality responsibilities**	**Quality tools (if applicable)**
1. Report on baseline data, incorporating UML model of existing processes.	Publication in peer reviewed journal	Academic peer review	Publication of paper	Project Manager (Stephen Powell)	**N/A**
2. Detailed project plan.	Jisc guidelines	Evaluation against Jisc project management guidelines	Programme manger signoff	Project Manger (Stephen Powell)	**N/A**
3. Detailed requirements document identifying areas of process change and supporting actions – validation procedures and frameworks, credit based award schemes, staff development actions, technological systems.	Be in accordance with the Quality Assurance Agency for Higher Education guidelines & UoB Academic Quality and Standards regulations	Approval by UoB Academic Board	Minutes of board meetings	Dean of Academic Quality and Standards (Paul Birkett)	**N/A**

Elaboration of the model against COVARM.					
4. Evaluation reports on three project phases: early trial courses (Masters in Learning Research; initial trials of new processes (FD in Regeneration and Sustainable Communities); full new system trials.	Aims of the IDIBL framework as expressed in validation documentation	IDIBL UoB internal project partners	Report to Deputy Vice Chancellor (Peter Marsh)	Project Manger (Stephen Powell)	**N/A**
5. Report on the development of credit based awards framework.	In accordance with Academic Quality and Standards regulations	Approval by UoB Academic Board	Minutes of board meetings	Dean of Academic Quality and Standards (Paul Birkett)	**N/A**
6. Documented course design process.	In accordance with Academic Quality and Standards regulations	Approval by UoB Academic Board	Minutes of board meetings	Dean of Academic Quality and Standards (Paul Birkett)	**N/A**
7. Transparent online form based course development system, incorporating pedagogical and technological choices.	Extent to which the course development tools facilitate: • usability • discoverability • technical robustness • interface with other UoB systems	Iterative user evaluation including feedback from UoB staff on the value of the tools provided	Online issue tracking and user feedback tools	Head of Information Systems and Technology, Information Systems and Technology (Patrick O'Reilly)	**N/A**
8. A number of discoverable and interoperable learning technology tools (widgets), hosted on local server (Widget server).	Extent to which the development process facilitates: usability discoverability technical robustness interface with other UoB systems	Iterative user evaluation including feedback from UoB staff on the value of the tools provided	Online issue tracking and users feedback tools	Head of Information Systems and Technology, Information Systems and Technology (Patrick O'Reilly)	**N/A**
9. A case study on a successfully completed university-wide curriculum re-design process, incorporating recommendations	Publication in peer reviewed journal	Academic peer review	Publication of paper	Project Manager (Stephen Powell)	**N/A**

for other seeking to implement similar innovations.					
10. A report describing the impact of inquiry-based learning in the workplace, and how it meets the needs of changing learner and employer needs.	Publication in peer reviewed journal	Academic peer review	Publication of paper	Project Manager (Stephen Powell)	**N/A**

18. Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
November 2008	Project website	HE including international	Raising awareness	Approach to re-engineering curriculum design
January 2009	Case study in HE Academy publication: Developing undergraduate research and inquiry	HE academy stakeholders	Share the inquiry-based, work-focussed approach to learning developed by the project	Challenges of action-inquiry as an approach to undergraduate, work-focussed learning
March 2009	Oral presentation at CAL	Educationalists	Engage with a wide audience involved tin the delivery of education through the use of technology.	Different conceptualisations of the curriculum that focus on process and critical engagement with real world can lead to a relevant and personalised learning experience.
End 2009	Journal publication	Operational Researchers & HE managers	Communicate with strategic level managers.	A case study on an approach to curriculum design
TBA (Tony Toole)	Cluster meetings	Cluster	Sharing experiences with critical friends	Challenges faces including successes and setbacks
Ongoing as arranged by JISC	JISC Learning and Teaching Experts Group	JISC projects	Capacity building within JISC community	Alignment of organisational priorities with programme development including teaching, assessment, & learning design

19. Exit and Sustainability Plans

Requires consideration and development as project unfolds.

Project Outputs	Action for Take-up & Embedding	Action for Exit
Curriculum frameworks	Embedded into the university Quality Assurance and Enhancement policies and processes	Ongoing development required.
Tools supporting curriculum design	Adopted by university IST department as a core technology	Ongoing development required.
Capacity raised in the area of curriculum design and delivery for work-based learners	Cross institution approach to project implementation including CPD events	Ongoing development required.

To be developed in the light of project implementation.

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address

Appendixes

Appendix A. Project Budget

Appendix B. Workpackages

JISC

Appendix A: JISC Project Project Plan Budget Template

Before completing this template please note:
- *Fill in the information for the header, e.g. project acronym, version, and date.*
- *Text in italics is explanatory and should be deleted in completed documents.*

Directly Incurred Staff	Aug08– Jul09	Aug09– Jul10	Aug10 – Jul11	Aug11 – Jul12	TOTAL £
Project Director, Senior Manager, 0.2 fte	£14,754	£16,761	£17,237	£14,754	£63,506
Project Manager, Principal Lecturer/Reader, 0.5 fte	£28,347	£32,204	£33,118	£28,347	£122,016
Director of Learning, Teaching and Professional Practice, Senior Manager, 0.1 fte	£6,704	£7,616	£7,832	£6,704	£28,856
Head of Employer Engagement and Partnerships, Senior Manager, 0.1 fte	£6,497	£7,381	£7,591	£6,497	£27,966
Dean of Academic Quality and Standards, Senior Manager, 0.1 fte	£6,207	£7,052	£7,252	£6,207	£26,718
Head of Business Strategy and Policy Support, Senior Manager, 0.1 fte	£5,646	£6,414	£6,596	£5,646	£24,302
Learning and Teaching Fellow, Principal Lecturer, 0.2 fte	£6,121	£6,637	£6,994	£6,121	£25,873
Project Contributor, Principal Lecturer/Reader, 0.2 fte	£11,339	£12,882	£13,247	£11,339	£48,807
Project Contributor, Principal Lecturer/Reader, 0.2 fte	£11,851	£13,463	£13,845	£11,851	£51,010
Total Directly Incurred Staff (A)	**£97,466**	**£110,410**	**£113,712**	**£97,466**	**£419,054**

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Non-Staff	Aug08– Jul09	Aug09– Jul10	Aug10 – Jul11	Aug11 – Jul12	TOTAL £
Travel and expenses	£1,100	£1,200	£1,200	£1,000	£4,500
Hardware/software	£0	£0	£0	£0	£0
Dissemination	£600	£800	£500	£500	£2,400
Evaluation	£0	£500	£1,000	£390	£1,890
Other	£0	£0	£0	£0	£0
Total Directly Incurred Non-Staff (B)	**£1,700**	**£2,500**	**£2,700**	**£1,890**	**£8,790**
Directly Incurred Total (A+B=C) (C)	**£99,166**	**£112,910**	**£116,412**	**£99,356**	**£427,844**
Directly Allocated	**Aug08– Jul09**	**Aug09– Jul10**	**Aug10 – Jul11**	**Aug11 – Jul12**	**TOTAL £**
Staff	£1,052	£2,193	£3,482	£1,816	£8,543
Estates	£	£	£	£	
Other	£	£	£	£	
Directly Allocated Total (D)	£1,052	£2,193	£3,482	£1,816	£8,543
Indirect Costs (E)	**£70,519**	**£76,930**	**£76,930**	**£64,108**	**£288,487**
Total Project Cost (C+D+E)	**£170,737**	**£192,033**	**£196,824**	**£165,280**	**£724,874**
Amount Requested from JISC	**£125,000**	**£125,000**	**£125,000**	**£25,000**	**£400,000**
Institutional Contributions[1]	**£45,737**	**£67,033**	**£71,824**	**£140,280**	**£324,874**
Percentage Contributions over the life of the project		**JISC 55.2%**	**Partners 44.8%**	**Total 100%**	

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[1] If the institutional contributions include a contribution towards the direct costs of the project please complete a table along the lines of the example overleaf

Nature of Institutional Contributions

Directly Incurred Staff				
Post, Grade & % FTE				
Project Director, Senior Manager, 0.2 fte				£14,754
Project Manager, Principal Lecturer/Reader, 0.12 fte	0	0	0	£7,053
Director of Learning, Teaching and Professional Practice, Senior Manager, 0.1 fte	0	0	0	£6,704
Head of Employer Engagement and Partnerships, Senior Manager, 0.1 fte	0	0	0	£6,497
Dean of Academic Quality and Standards, Senior Manager, 0.1 fte	0	0	0	£6,207
Head of Business Strategy and Policy Support, Senior Manager, 0.1 fte	0	0	0	£5,646
Learning and Teaching Fellow, Principal Lecturer, 0.2 fte	0	0	0	£6,121
Project Contributor, Principal Lecturer/Reader, 0.2 fte	0	0	0	£11,339
Project Contributor, Principal Lecturer/Reader, 0.2 fte	0	0	0	£11,851
Directly Incurred Non Staff				
Hardware/Software etc.	£0	£0	£0	£
Directly Allocated				
Staff, Estates etc.	£0	£0	£0	£0
Indirect Costs				
Indirect Costs	£45,737	£67,033	£71,824	£64,108
Total Institutional Contributions	**£45,737**	**£67,033**	**£71.824**	**£140,280**

Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility

JISC

Appendix B: JISC WORK PACKAGE

WORKPACKAGES	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
1: Review of current processes and practice		▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓													
2: Understanding the initial issue or challenge and identifying the changes desired by the end of the project										▓	▓	▓		▓	▓	▓	▓								
3: Planning and implementing innovations in curriculum design processes in order to realise the desired changes											▓	▓		▓	▓	▓	▓	▓	▓	▓	▓	▓	▓		
4: Piloting and evaluation of the new processes		▓	▓	▓	▓	▓	▓	▓																	
5: Embedding the innovations and planning for sustainability																									
6: Dissemination and collaboration						▓		▓	▓						▓	▓									
7: Project management		▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	

Project start date: September 2008

Project completion date: May 2012

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility

Duration: 41 months

				Milestone	Responsibility
YEAR 1 & 2					
WORKPACKAGE 1: Review of current processes and practice *Objective*:					
1. Identify systems methodologies to be used in WP	Oct 2008	Nov 2008	Methodology refinement		OL
2. Pilot Strategic Options Development and Analysis (SODA) focus group activities	Nov 2008	Dec 2008	SODA analysis using Decision Explorer software		OL
3. Run cross-institutional focus groups x 4	Jan 2009	April 2009	SODA analysis using Decision Explorer software		AMR
4. Interview key personnel	Dec 2009	April 2009	SODA analysis using Decision Explorer software		AMR
5. Conduct online survey of selected curriculum developments	Feb 2009	April 2009	Identification 'big picture' of trends and issues		SP
6. Develop initial curriculum process design models	Feb 2009	April 2009	**Diagrammatic representation of processes**		SP
7. Develop initial business processes models	Feb 2009	April 2009	**Diagrammatic representation of processes**		HB
8. Develop initial enterprise technology system diagrams	Feb 2009	April 2009	**Diagrammatic representation of technological architecture**		OL
9. Synthesise WP 1 inquiry activities	May 2009	July 2009	**Report on baseline data, incorporating UML model of existing processes July 2009**	√	SP

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
WORKPACKAGE 2: Understanding the initial issue or challenge and identifying the changes desired by the end of the project **Objective:**					
10. Structured discussions about the situation and its improvement	May 2009	Dec 2009	Prioritised actions		SP
11. Develop action plan for cross-institutional interventions	Sept 2009	Dec 2009	**Working document specifying requirements for process change and supporting actions**	√	SP
WORKPACKAGE 3: Planning and implementing innovations in curriculum design processes in order to realise the desired changes **Objective:** **Indicative activities to be informed by WP2**					
12. Online form based course design system, incorporating pedagogical and technological choices.	Identified by WP 2	Identified by WP 2			
13. Documented course design processes	Identified by WP 2	Identified by WP 2			
14. Discoverable and interoperable learning technology tools server (Widget server	Identified by WP 2	Identified by WP 2			
15. Credit based awards framework	Identified by WP 2	Identified by WP 2			

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
WORKPACKAGE 4: Piloting and evaluation of the new processes **Objective:**					
16. Pilot cohort for Masters in Learning with Technology	September 2008	June 2009	**Evaluative report September 2009**	√	SP
17. Validate suite of courses around the theme of Regeneration and Sustainable Communities	September 2008	November 2008	**Validated courses**	√	SP
18. Pilot cohort for Regeneration and Sustainable Communities	September 2009	June 2010	**Evaluative report September 2010**	√	SP
WORKPACKAGE 5: Embedding the innovations and planning for sustainability **Objective:**	TBA				
WORKPACKAGE 6: Dissemination and collaboration **Objective:**	TBA				
WORKPACKAGE 7: Project management **Objective:**					
19. Project reflective log	September 2008	May 2012	**Online reflective journal**		SP
20. Project website	Nov 2008	Jan 2009	**Project website coeducate.bolton.ac.uk**		SP

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Workpackage and activity	Earliest start date	Latest completion date	Outputs (clearly indicate deliverables & reports in bold)	Milestone	Responsibility
21. Project planning documentation	Oct 2008	Jan 2009	**Draft project plan Jan 2008**		SP
22. Project planning documentation	Jan 2008	April 2009	**Project Plan April 2009**		SP
23. End of year 1 project progress report	July 2009	July 2009	**Progress report**		SP
24. Mid year 2 project progress report	Jan 2010	Jan 2010	**Progress report**		SP
25. End of year 2 project progress report	July 2010	July 2010	**Progress report**		SP

Members of Project Team:
SP – Stephen Powell
OL – Oleg Liber
SW – Scott Wilson
Ann-Marie Reid – AMR
Hilary Birtwistle - HB
Oleg Liber - OL

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External Examiner's Report

Award and Programme Title(s)	MA Learning with Technology
Date of report	23 October 2009 (visit 15 October 2009)
Academic year	2008-2009
University School or Centre (include identity of any partner organisation(s))	IEC
Name of External Examiner	Pete Bradshaw

Instructions

Please complete the following template, typing your text into the box beneath each heading, as indicated. If any matters raised apply solely or particularly to any collaborative provision encompassed by this report please ensure that this is clear and that you identify the partner institution(s) involved if it is not otherwise evident.

Home institution and/or other professional/institutional affiliation of external examiner.

The Open University

PART ONE : SUMMARY RESPONSE ON STANDARDS AND ASSESSMENT

'In the view of the examiners, the standards set for the awards are appropriate for qualifications at this level, in this subject.'
Is the above statement correct (Yes/No)

Yes

If you have stated 'no', or if you wish to give additional information, please do so below.

'In the view of the examiners the standards of student performance are comparable with similar programmes or subjects in other UK institutions with which they are familiar.'
Is the above statement correct (Yes/No)

Yes

If you have stated 'no', or if you wish to give additional information, please do so below.

As this is a new programme, I have only seen work from the first two modules to date. Students are thus at the beginning of a learning journey. Their performance is fairly low to date, accurately reflected in the marking and feedback, and I would expect this to rise as they progress through the programme.

'In the view of the examiners, the processes for assessment, examination and the determination of awards are sound and fairly conducted.'

Is the above statement correct (Yes/No)

Yes

If you have stated 'no', or if you wish to give additional information, please do so below.

This is the first time the team have been through the examination board process. There were some things that they were unsure of but I am confident in the systems being in place to iron them out.

Where appropriate, a description or bullet point list of any particular strengths or distinctive or innovative features in relation to standards and assessment processes, that would be worth drawing to the attention of external audiences.

This is, in itself, an innovative course. It is based on a framework (IDIBL – inter-disciplinary inquiry-based learning that is designed to be applicable to a range of work-related contexts at levels 4 to 7. It is the first course to be implemented against this validated framework. The assessment processes are similarly generic and exemplified through mapping to the students' own contexts. This works well and gives the student a key role in the assessment process.

FOR THE ATTENTION OF THE PROGRAMME LEADER:

The issues and good practice raised in this report should be incorporated within the relevant Programme Quality Enhancement Plan (PQEP) and a copy of the plan sent to the External Examiner (with a covering letter) and (unless the PQEP is on QualTrack) to eereports@bolton.ac.uk by the end of November.

PART TWO: QUALITY OF PROVISION

This section of the Report will be used to give the Programme Team (including staff at any partner organisation) further feedback on the quality being achieved in the programme, the effectiveness of the assessment processes, the quality of the student learning experience and the quality of student achievement. Where responsibilities include collaborative provision please identify the partner organisation(s) involved. It would be useful if you could identify areas of good practice as well as issues for action.

A. Academic Quality

Please give your views on the quality being achieved in the curriculum and the quality of provision being delivered, particularly curriculum content and teaching and learning strategies. Please indicate any specific action that you believe could be taken to enhance quality. If you feel that quality is at risk in any respect, please comment on any specific action that could be taken to address this.

PLEASE PROVIDE AN OVERALL RATING OF ACADEMIC QUALITY **Key: 1=Excellent 2=Highly satisfactory 3=Acceptable 4=Unsatisfactory 5=Very unsatisfactory**	**Rating** **2**

Please identify concisely below those major strengths and/or weaknesses (if any) in Academic Quality which in your view are **sufficiently significant to warrant explicit attention, action and tracking by the appropriate part(s) of the University.**
Significant Strengths
   1. The linkage between professional practice and theories and models
   2. The contextualisation to individual settings and needs

Significant Weaknesses
   1. The provision of background reading and materials to guide students in the theoretical frameworks that underpin their study.
   2. The lack of criticality in the student's response (probably as a result of the previous point).

Please use the space below for further explanatory comments and/or any additional points you wish to raise.

There was some confusion in the documentation between learning outcomes, assessment criteria and assessment product. For example in the final product of the 'Analysing the Professional Context' module. What are the learning outcomes and criteria?

B. Assessment Processes

Please comment on the appropriateness of the assessments in assessing the learning outcomes of the units (including work-based learning where relevant), the reliability of internal marking procedures and the effectiveness of the moderation processes.

PLEASE PROVIDE AN OVERALL RATING OF ASSESSMENT PROCESSES **Key: 1=Excellent 2=Highly satisfactory 3=Acceptable 4=Unsatisfactory 5=Very unsatisfactory**	**Rating** **2**

Please identify concisely below those major strengths and/or weaknesses (if any) in Assessment Processes which in your view are **sufficiently significant to warrant explicit attention, action and tracking by the appropriate part(s) of the University.**

Significant Strengths
1.   Personalisation of feedback

Significant Weaknesses
1.   Lack of in situ comments on work

Please use the space below for further explanatory comments and/or any additional points you wish to raise.

The key strength of this programme is the way in which there is an authentic learning experience through its application to the workplace. This similarly applies to assessment processes.

There programme's coherent contextualisation in individuals' workplaces means that each student's journey is highly personal. It also means that there will be a tendency for students to be engrossed in the same context throughout their journey to MA. The same context will apply to a number, if not all, modules. The team to be careful to avoid work being assessed, and credited, more than once. Students could be encouraged to be explicit about the journey showing how later work is distinct from, references and build on earlier work.

Feedback is against learning outcomes and I would have expected it to have been against criteria. This is the manifestation of the confusion noted above.

C. Quality of Student Learning Experience

On the evidence available to you, please give your views on the quality of the students' learning experience, including provision of student support and guidance and teaching and learning resources, indicating whether you have had the opportunity to meet students.

PLEASE PROVIDE AN OVERALL RATING OF STUDENT LEARNING EXPERIENCE **Key: 1=Excellent 2=Highly satisfactory 3=Acceptable 4=Unsatisfactory 5=Very unsatisfactory**	**Rating**

Please identify concisely below those major strengths and/or weaknesses (if any) in the Student Learning Experience which in your view are **sufficiently significant to warrant explicit attention, action and tracking by the appropriate part(s) of the University.**
Significant Strengths
1. Students report that the course in one that has re engaged them with academic study.
2. The tutor team is unequivocally praised.

Significant Weaknesses
1. Small numbers on the programme make the viability of discussion forums less than it should be.
2. The concept of an e-portfolio is not yet manifested as well as it might be. More guidance needs to be given as to what makes an effective e-portfolio.

Please use the space below for further explanatory comments and/or any additional points you wish to raise.

I spoke to two students to get feedback. They were very positive about the course and espoused the concept of being co-learners with their peers and, indeed, with the tutor team. The small numbers did mean that the experience moved to being one of a group learning together to one-to-one tutorials. This was reported by both students and the team as being an issue to address.

D. Student Achievement

Please comment on the overall quality of performance being achieved by students.

PLEASE PROVIDE AN OVERALL RATING OF STUDENT ACHIEVEMENT **Key: 1=Excellent 2=Highly satisfactory 3=Acceptable 4=Unsatisfactory 5=Very unsatisfactory**	**Rating** **3**

Please identify concisely below those major strengths and/or weaknesses (if any) in Student Achievement which in your view **are sufficiently significant to warrant explicit attention, action and tracking by the appropriate part(s) of the University.**
Significant Strengths
1. Application to the workplace context.

Significant Weaknesses
1. Lack of incorporation of theoretical models.

Please use the space below for further explanatory comments and/or any additional points you wish to raise.

E. Do you have any additional comments about programme quality (other than any covered previously in this report), including good practice, which you particularly wish to note?

The application of the IDIBL framework is clear and the programme appears to meet a

specific need. The target audience and associated marketing strategy needs to be more clearly articulated, I feel. I was left wondering 'Who is this for?' (beyond those who had signed up). There is possible articulation with PGCHE and this opens up a much bigger audience. The programme would equally be appropriate for others outside of the university. School teachers would be a natural part of this audience but TDA funding of other level 7 programmes would diminish its attraction – it is not part of the PPD framework. The team needs to investigate other markets to boost numbers so that the course can be a truer demonstrator of the IDIBL framework in practice.

The learning guides are posted as wikis and anyone can edit them. While commendable in principle I feel it would be useful to have some material in read-only form (eg PDFs) to provide core information to students.

I thank the team and all at the University involved in this process for a smooth visit and meeting. The provision of online access to see into the VLE is particularly welcome. It is hoped that in future this will be an ongoing permission for external examining.

In the light of small numbers the need for a second visit was discussed. The use of video conferencing may be more cost and time effective.

F. Are you satisfied that any previous comments made by you as External Examiner have been noted and responded to?		
		N/A

Comments: This is the first report.

FOR THE ATTENTION OF THE PROGRAMME LEADER:
The issues and good practice raised in this report should be incorporated within the relevant Programme Quality Enhancement Plan (PQEP) and a copy of the plan sent to the External Examiner (with a covering letter) and (unless the PQEP is on QualTrack) to eereports@bolton.ac.uk by the end of November.

Please return by e-mail to eereports@bolton.ac.uk

**Coeducate project baseline report. University of Bolton. Stephen Powell & Oleg Liber.
Version 2. July 2009. JISC Curriculum Design Programme**

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Coeducate Baseline Report

University of Bolton

13th July, 2009

Stephen Powell & Oleg Liber

Not for circulation outside
Of the University of Bolton
except for the purpose of
Jisc Curriculum Design
Programme Synthesis

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1. Introduction & Background

This report provides a snapshot of curriculum development at the University of Bolton (UoB). In particular, it is concerned with how current activities and new approaches under development contribute to employer engagement in the design and development of courses.

At a national level, this agenda area is being driven by the HEFCE strategy on employer engagement, that is seeking to encourage the development of a new relationship between employers and HE through its Workforce Development programme. If successful, this will see an increasing amount of provision developed and delivered in partnership with employers and with their increasing financial contribution beyond paying for the fees of their employees.

At the UoB, there is a long track record of working with employers using different funding models and organisational approaches. However, there is recognition that to sustain the UoB financially, there will need to be growth in the numbers of non-traditional undergraduate students including those who are not funded by Hefce. It is to this end that the Coeducate project at the UoB is seeking to make targeted interventions in curriculum development through the use of technology.

The starting point for curriculum development and design for work-based courses must be the needs of the learner and their organisation. As a part of its overall portfolio, the university intends that its academic practitioners will become more adept at delivering professional higher education in partnership and in negotiation with employers and learners.

Importantly, this should fully recognise the place of experiential and professional learning where it can be correlated to the concepts of levels and volume of learning. The IDIBL project at the UoB represents a significant stream of work currently underway and central to the Coeducate project.

The activities undertaken in the data gathering exercise for work package 1, the baseline report, have also enabled us to begin to address project objectives 1 & 4:
1. understanding the curriculum development problem at UoB;
4. raise awareness & build capacity of staff to critically examine and develop work-based curricula across the UoB.

The following sections first describe the UoB context in some detail, followed by an explanation of the methodology used to establish the baseline. Data is then presented with analysis and discussion of the implications of possible courses of action.

2. Internal context

Origins of the University of Bolton

The UoB is one of the youngest universities in the UK, receiving approval for its choice of name from the Privy Council in January 2005. However, it can trace a long history in the town of Bolton with its origins dating back to 1824 as the Bolton Mechanics Institute.

From the 1800's, the needs of the local textile industry provided a demand for vocational and educational training and this led to the establishment of several different educational institutions in Bolton. In the 1960's the then named Bolton Institute of Technology developed its first degree programmes validated by the Council for National Academic Awards. At this time, the curriculum was broadened to reflect a broader coverage of subject areas that would be expected of a higher education establishment.

In 1982 an amalgamation of separate institutions formed the Bolton Institute of Higher Education. It received taught degree awarding powers in 1992 and research degree awarding powers in 1995.

Organisational Makeup

Staff

The UoB is a relatively small HE institution with 302 FTE academic staff, 54 research staff, and 251 support staff at the start of the academic year 08/09. Staff annual turnover is approximately 14% with the age profile across the university shown below.

Figure 1. Staff age profile

Academic year and delivery pattern
The UoB delivers most of its provision through a semester pattern within a modular framework for both Undergraduates & Postgraduates with a growing provision within a Continuing Professional Development (CPD) framework.

Organisational structure
Two organisational structures operate in the university. Management responsibilities are discharged through the directorate and departmental structure and working in tandem with this is the structure of Senate and its Committees that has overall responsibility for the academic provision and standards of the university.

Academic Schools
- School of Arts, Media and Education (AME)
- School of Games Computing and Creative Technologies (GCCT) including Bolton Business School
- School of Health and Social Sciences (HSS)
- School of the Built Environment and Engineering (BEE)

Research Centres
- Centre for Materials Research and Innovation (CMRI)
- Institute for Educational Cybernetics (IEC)

Each of the 6 units (research centres and academic schools) operates as a cost centre and is led by a director. Schools have a management team and a common committee structure sits across the academic schools including identified roles with specific responsibility for the activities of the university.

Of particular relevance to the curriculum development are the principal lecturers responsible for areas of work including quality assurance and enhancement, employer engagement & business development, and teaching & learning. To coordinate activities, there are both departmental meetings as well as university committees reporting to the Senate. It is through these structures that there is an opportunity to influence institutional wide change.

An area of activity that is key to the success of the Coeducate project is that of the work of the Senate Committee for Innovations & Employer Engagement, chaired by the Head of Business Development & Partnerships. Its remit includes Third stream activities such as supporting schools in developing their employer engagement activities.

Reflection
Schools were formed about four years ago for administrative purposes and as a result do not have a coherent identity that subject / academic staff relate too.

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Business Support and Development Unit (BSDU)
The aim of the BSDU is to cement its relationships with intermediaries, such as Business Link and to create a 'one stop shop' for employers. It links together some of the University's business services and provides an essential brokerage into its Schools and Research Units. The BSDU also coordinates the University's partnerships development in the UK and so many of the employer focussed products have been developed in conjunction with academic or employer partners.

An example of this is the work undertaken with the Greater Manchester Strategic Alliance (GMSA) in developing an online service, Advance, designed to enable work-based students to combine modules from different member institutions towards a qualification. As a tool for helping students build bespoke learning pathways it has the potential for important synergies with the Coeducate project.

The Employer Based Training Initiative (EBTA) is designed to enable HEI to recognise workplace training with higher education credits. The work of the BDSU is an area of activity that the Coeducate project should work closely with BDSU to ensure alignment and coordination of activities across the UoB.

Student Composition

Groups Full Time Equivalency	15th May 08	29th May 09
HE FT Home	3367	3278
HE FT Overseas	377	445
HE PT Home	1241	1411
HE PT Overseas	25	17
Total	5010	5151
FE	222	222

Table 1. Student Composition Taught Courses
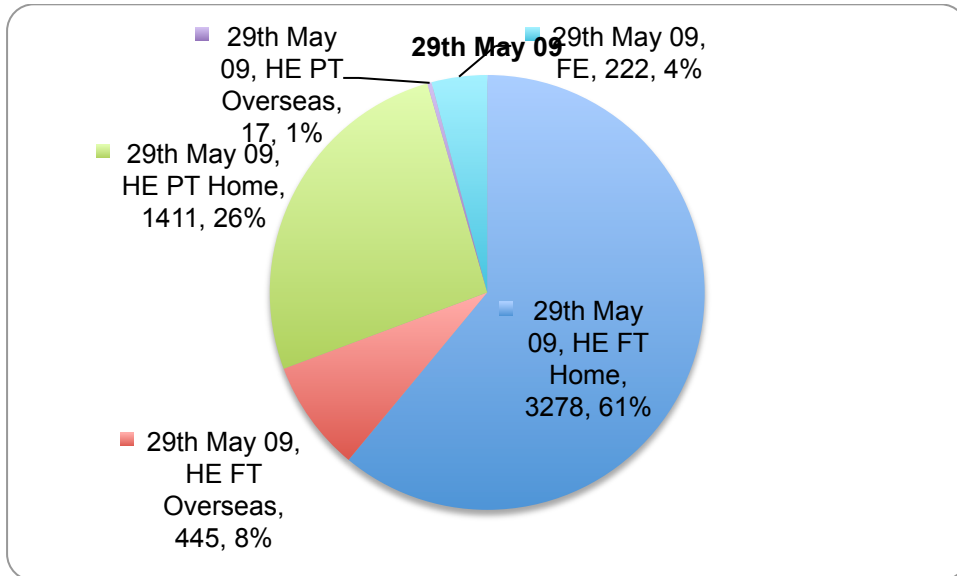
Figure 2. Student Composition Taught Courses

UoB has a high percentage of mature students (56%) within the full-time undergraduate population. Overall, undergraduates account for 70% of the student body with postgraduate students, a target area for growth at UoB, at 14%. Although over 50% of UoB students by numbers study part time, there is still a significant majority on full-time undergraduate programmes when measured by full-time equivalency.

Short courses

No of CPD/PD/Adv PD course codes (with students on)	Academic Year	Distance Learning	Off Campus	On Campus	Overseas Centre	Externally Registered	Grand Total
51	2006/7	14	156	453	0	12	635
79	2007/8	25	404	537	0	12	978
104	2008/9	20	720	946	5	0	1691

Number of CPD, Advanced PD and PD course codes in use and students on these courses by academic year and location

Table 2. Growth in CPD

From 2006/7 to 2008/9, there was a 266% increase in students enrolling on short courses. This growth may be indicative of a movement in the overall student makeup as the UoB develops its employer led provision.

Postcode Analysis
Overseas students contribute a relatively small but significant component of the student population. A large percentage of the student population come

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from within Bolton and the North West giving a regional characteristic to the university student body.

Student origins

Student origins, Non UK, 9, 9%

Student origins, Other UK, 12, 12%

Student origins, Bolton MBC, 30, 30%

Student origins, North West, 49, 49%
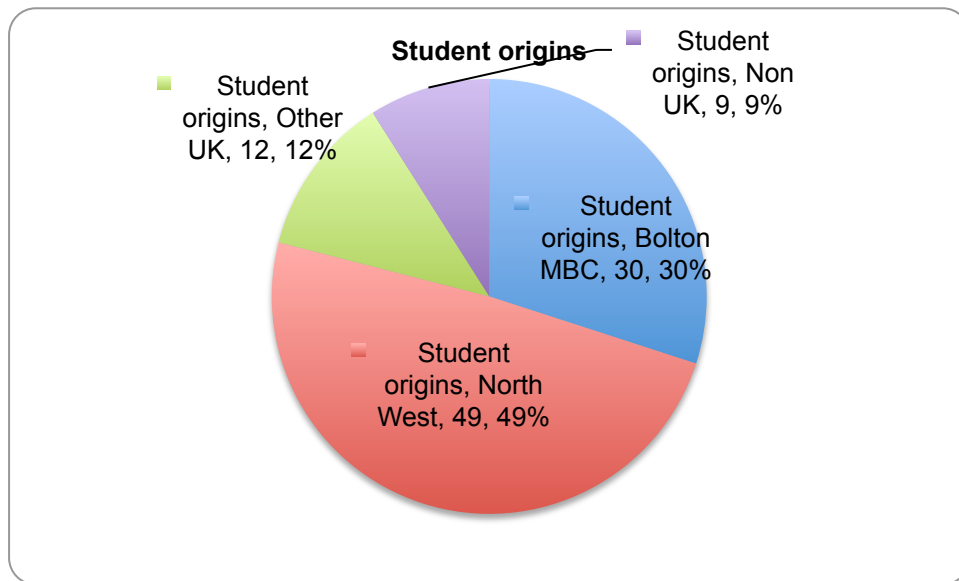
Figure 3. Student Origins

Institutional Strategies

UoB strategies currently awaiting approval include the new E-strategy and Teaching, Learning & Retention Strategy. The approach being developed separates out the strategic element from an operational plan that will be reviewed on an annual basis and will be used to evaluate progress.

In both cases, the emphasis is on capacity building of university staff and their ability to make informed choices about the use of appropriate technology, teaching approaches and assessment strategies. Maintaining a close working relationship between these initiatives and the Coeducate project will be an important component in the transformation of the UoB portfolio of work-based courses.

UoB Strategic Plan

The current UoB institutional strategy runs from 2006-2012 and is currently undergoing a mid-point review.

The strategy is based upon the assumption that the overwhelming majority of students come to UoB to study with the aim of developing or improving their career prospects.

With this in mind, the identified sector trend where full-time study will increasingly fit around full-time employment will have particular significance

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for the UoB. This will drive changes in course development and delivery that will increasingly rely on technology.

For staff working at UoB, this has significant implications. **Rather than adopting a traditional posture of an academic immersed in a subject discipline, it requires them to actively cultivate professional relationships with employers and professional bodies, building their networks for and with students**.

These strong links will be used to lead the development of provision that meets the needs of both employers and students. A process of "continually adapting our programmes' content, structure, delivery and accreditation to keep them up-to-date and relevant" will need to become a part of the way we do business at UoB.

Relevant goals and objectives from the strategic plan are summarised in the table below.

UoB Strategic goals	Targets - by 2009 we will have:
1. Helping every career-motivated student to achieve their career aspirations	• developed highly relevant and current continuing professional development programmes across our full range of study areas, in collaboration with relevant professional bodies; • developed a more flexible range of delivery options, including intensively delivered programmes and extended undergraduate degrees resulting in professional accreditations; • integrated professional skills in the curriculum, encouraging a high degree of student self-responsibility, self-evaluation and self-awareness to improve graduates' skills for career success;
2. Consistently delivering academic excellence	• expanded our undergraduate, postgraduate and continuing professional development programmes delivered in partnership with key sectors, professional bodies and employers; • reviewed every programme to ensure each combines challenging curriculum content and current professional practice; • developed innovative teaching practices which support student learning in professional contexts across all curricula; • defined long-term academic programme development strategies for key growth sectors; • used our research expertise in e-learning to develop innovative and effective ways to meet students' and employers' learning needs in the workplace as well as on campus;
3. Building a public investment into a vibrant, sustainable	• developed continuing professional development programmes aligned to the professional capabilities and aspirations of our

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public asset	staff, students and partners;
4. Contributing to the professional, social and cultural prosperity of the North West	• expanded progression and delivery partnerships with regional schools, colleges, work-based learning providers and employers to increase university participation and promote social and economic inclusion.

Table 4. UoB Strategic Plan

In working towards the above targets a key priority area for the UoB is in developing its capacity in teaching and learning:

1. Establish a new framework for developments in learning and teaching to meet the challenges of developing outstanding professional graduates and the academic role defined by 'The Bolton Academic';
2. Develop flexible and innovative approaches to learning, teaching and assessment which increase the knowledge and skills of students with diverse educational experience and needs, and enable them to reach their full potential;
3. Create policies and practices, which enable students to take advantage of and benefit from the opportunities afforded by the university's new strategic direction.

Non-UK Based Students
The university has worked with a number of partner organisations largely in developing economies, to deliver courses.

One approach that has been successfully used for several years is through a 'Flying Faculty' where UoB staff travel to host organisations, to deliver block periods to students.

More recently, in 2008, UoB entered into a franchise agreement with a private educational provider in Ras al Khaimah (RAK), UAE (United Arab Emirates) to develop a new remote campus. The agreement allows for students to register with the UoB and be taught existing UoB courses on campus by staff employed by the company located in RAK. The campus has over 150 registered students in the academic year 2008-9.

Collaborative Partners
Collaborative partners including Further Education colleges and private providers deliver UoB programmes through a variety of different contractual arrangements. This has been a growing area of UoB provision and may prove to be significant for the Coeducate project as it is an area where curriculum development occurs and is often closely related to employers. At UoB this activity is coordinated by the Head of Business Development & Partnerships.

University Annual Objectives 2009-10
Strategic Objectives

For annual planning purposes, the UoB strategic goals outlined in table 5 are arranged under the following 'themes':

A. Curriculum and Programme Change (Content and Mode of Delivery)
B. Learning and Teaching Professionalism
C. The Professional and Successful Student (including Retention, Professional Career Preparation)
D. Research, Professional Practice and Public Engagement
E. Professional Business Processes and Internal Culture
F. Institutional Sustainability

Analysis of the annual objectives identifies the key areas (red text) in which the Coeducate project has an explicit role or where it can work alongside other initiatives.

A Curriculum and Programme Change

Objective	Performance Indicator (with target)	Time-scale	Potential Events which could affect achievement	Mitigating Actions
To provide programmes which meet the local, regional, national and international needs of students and employers	Market/employer led CPD/PG offer developed in each subject area (10% p.a. increase in CPD enrolments)	2012	Offer not well-matched to market, impacting on recruitment. Potential adverse impact of economic recession on PT/CPD recruitment	Business Support & Development Unit established to provide focal point for employer engagement activities. Investigate the potential for the development of CPD market e.g. through IDIBL framework and overseas collaborative partners
	Every School/Centre to have a validated programme within the IDIBL framework (7 programmes validated)	July 2010	Inability to identify academic development suitable for IDIBL framework. Resistance to new delivery methods. Insufficient student	Ensure IDIBL successes are well-publicised. Further staff development to ensure staff have appropriate skills for successful delivery. School/Centre plans to being pursued in planning meetings.

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Objective	Performance Indicator (with target)	Time-scale	Potential Events which could affect achievement	Mitigating Actions
			demand and/or poor retention High cost of delivery.	
	Academic Planning and Approval procedures strengthened at initial approval stage to ensure successful development of new courses in line with Academic Strategy	Ongoing	Lack of School scrutiny could result in weak proposals being referred back Insufficient background information to enable validation panels to evaluate new course proposals	Development of new partnership arrangements for delivery in London, Dublin, Greece Improved agent network. Improved commission rates and availability of scholarships and incentives Review of organisation structures/staffing Develop PG Course offer Ensure benefits of the new procedures are understood. Strengthen internal School scrutiny of new proposals Review information needs of validation panels Ensure benefits of the new procedures are understood. Strengthen internal School scrutiny of new proposals Review information needs of validation panels

B Learning and Teaching Professionalism

Strat Goal Ref	Objective	Performance Indicator (with target)	Time scale	Potential Events which could affect achievement	Mitigating Actions
2	To improve the academic and professional knowledge, skills and	PG Cert Teaching & Learning in HE launched(1st cohort recruited and HEA accreditation achieved)	Dec 09	Lack of resources to support delivery and operation. Unwillingness to release staff to attend Course does not meet the needs	Resource required for successful delivery identified and secured at validation. Entitlement for priority staff to attend established

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Strat Goal Ref	Objective	Performance Indicator (with target)	Time scale	Potential Events which could affect achievement	Mitigating Actions
	qualifications of staff			of the University/participants Unable to secure HEA accreditation	
		Increase % of staff using distributed learning methods to support student learning (E-learning strategy agreed and funded action plan in place)	Sept 09	Insufficient resources to implement replacement of WebCT Resistance to moving to new VLE	Ensure that E-learning strategy includes a costed action plan which is supported by Dirs of School

Table 5. Annual Plan

Reflection
Maintaining a close relationship with the annual planning cycle to ensure project aims are represented and that synergistic opportunities are identified is an important strategy for ensuring that the Coeducate project has a chance of impacting in a transformative way of UoB.

3. External context

UK policy agenda

The Leitch Review of Skills (2006) set an agenda for workforce development to secure the "economic and social health of the UK". This is of particular relevance because of the nature of the provision of the UoB courses.

Hefce Framework 2009 – future development of higher education

In September 2009, Department for Business Innovation & Skills will release a framework for the future development of higher education. Key components of this framework will be engaging with business and widening access and this will likely have significant implications of UoB and the role of the IDIBL project.

Widening Participation

The recent Widening Participation Strategic Assessment exercise will inform the discussion between Hefce and the UoB around how successful UoB widening participation (WP) activities have been and the extent of future WP funding.

Employer Co-funded numbers

UoB does not currently benefit from the Hefce employer co-funded student initiative, however in 2009-10 it is anticipated that additional numbers will be made available and UoB may bid for some of these.

Economic Challenge Investment Fund

The HEFCE Economic Challenge Investment Fund (ECIF) is designed to meet the needs of employers and individuals in the recession.   Funded up to a maximum of £500000, this presents another opportunity for the Coeducate project to integrate into UoB activities.

4. Methodology

The strategy of inquiry adopted by the Co-educate project for base lining was Participatory Action Research, drawing in particular on Soft Systems Methodology (Checkland, 2006). As such, its strengths lie in the joint identification of a shared issue and the changes required to bring about an improvement in an organisation.

The first stage of the approach requires us to develop a strategy to find out about the initial situation through various approaches including interviews, focus groups, and analysis of documentation, including an ethnographic approach, table 6.

Interviews
Vice Chancellor

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Pro-vice Chancellor
Head of Strategy, Policy & Support
4 directors of schools
Head of QAE
Head of Student Data Management
Head of Marketing & Communications
Head Information Technology, & Services
Focus groups
Principal lecturers with responsibility for Quality
Principal lecturers responsible for Teaching and Learning
Representatives from Arts, Media & Education
Representatives from Built Environment & Engineering
Representatives from Health & Social Sciences
Representatives from Psychology subject area
Cross institutional Curriculum Design Group
Documentation
UoB Strategic Plan 2006-12
UoB e-Strategy 2009
Professional Development Framework 2009
IDIBL framework 2008
Academic Development Approvals (ADA) Process
University CPD Framework
Ethnography
Participant and non-participant observation, anecdotes, tentative hypotheses, critical incidents, repeated occurrences, etc.

Table 6. Activity of Validated Courses

Interviews
Interviews were semi structured in nature with a general outline of areas to cover but with a high degree of freedom to allow for free flowing conversation around topics of interest or concern to the interviewee. Selected interviews were used to develop process maps included in appendices.

Focus Groups
Focus groups were structured around key extracts from the UoB strategic plan although conversation was allowed to flow in the direction that the participants took it in rather than address a pre-determined agenda of topics to cover.

Documentation
Key documentation was used to compare the codified description of activities with other sources of data to identify disconnects and areas for further inquiry.

Ethnographic

The rationale behind including an ethnographic approach to data collection is that in studying 'real people in real contexts' we cannot know in advance which aspects of activity or exactly which people will yield insights into the focus of our study. The above mentioned data collection activities were a 'best guess' of places to look for insight, but as anticipated they only revealed part of the true picture of curriculum development, design and delivery at UoB.

In interpreting the observations made we are seeking & describe and understand the significance from the perspective of the participants involved in relation to the broader social context in which they are operating. Validation and refinement of our interpretation will be achieved through using the baseline report as a starting point for work-package 2 Understanding the initial issue or challenge and identifying the changes desired by the end of the project.

Analysis and Reflection

Data from the activities listed in table 1 were collected in a private project blog for subsequent analysis and reflection by the project team.

Presentation

To open up the discussion and problem identification process, there is the requirement to effectively communicate the findings of the baseline review. Process models, 'Rich Pictures', illustrative vignettes, and selected quotes and paraphrases are used to identify potential issues and opportunities.

5. Data & Analysis

i) Key personnel

Vice Chancellor Perspective

The semi-structured interview with the Vice Chancellor revealed several key messages about the direction of UoB and implications for staff that work there. Reported quotes are verbatim and are selected to exemplify the author's analysis that identified the key points a-d, as outlined below.

Key Points

a) UoB must change over the next 5 years to a position where it has an employer led curriculum and can respond rapidly to employer needs.

> "Won't be acceptable to re-badge and re-hash although much content will be valid, courses must be directly relevant to employers needs if employers are to fund studies"
>
> "Enjoin the employer to work together with us on developing courses possibly non-content specific templates for achieving learning outcomes that employers can then populate with content relevant to their needs."

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b) Increasing requirement for staff across UoB to change practice to embrace employer led course design:

> "Awareness raising about a transformed need and the Wellbeing centre a physical representation of this a model – staff move out of Tower building to work alongside practitioners whose immediate needs will be transparent will 'force' staff to re-think the curriculum and how they deliver it."
> "Those near to retirement won't need change, those earlier in their career will be enthusiastic and need to change if they want to sustain a career."

c) Change should be embedded in existing departments not the development of central units:

> "The strength of a university is therefore comes from the strength of its academic subject areas not its approach to delivery. So units like the ones described overlay an irritation on departments that isn't integrated into what they do so students become someone else's problem that the 'real' department are interested in. Argues that a truly strong academic department should be competent in delivering its knowledge, curriculum, research with staff who are passionate about doing that from a discipline area."

d) In bringing about change in a university, all possible approaches need to be pursued:

> "Point 1 everyone to be aware – "socialise the idea that there is a rational reason for this change which is driven by an opportunity to improve the quality of our curriculum and the quality of what we offer to students and our viability to the market" This would provide a significant USP "employment based, employer driven provision"
> "RAK deliberate intervention to get staff to reflect upon and examine their practice."

> "Another lever is resource – do we create a strategic initiative where people can did to for resource, research assistants, item or whatever it is that enables them to look at attractive opportunities. Motivation might be for time for individuals or a cash incentive possibly linked to subject areas and the kind of people they attract."

> "Appeal to intellect as individuals – education development programmes such as thinking about how to teach (pedagogy, andragogy) but many staff don't take advantage of this. Some staff do this but many simply re-create their own education."

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Pro-Vice Chancellor Perspective
The semi-structured interview with the Pro-vice Chancellor revealed several key messages about the direction of UoB and implications for staff that work there. Reported quotes are verbatim and are selected to exemplify the author's analysis that identified the key points a-d.

Key points:

a)   As a generalisation, the UoB currently has a supply-side model of curriculum development:

> "Academics as experts in their field come together to plan a curriculum which they feel is a worthwhile plan a curriculum which they think will deliver a worthwhile educational experience. They set out to document that in some degree of detail according to what is a CNAA tradition of exposing the academic rationale of a programme and its internal logic and the credibility of the expertise of the staff who are teaching it."

b)   The need for the UoB to move towards a demand supply model of curriculum development that includes different 'influences' & 'voices' in the design process avoiding the trap of becoming simply 'training':

> "The motivation for Coeducate is can we make existing processes slicker and more responsive and secondly can we find ways of open it up to allow for the co-design of a curriculum with a professional group or community of practice or a relevant partner."

c)   The need for academics to change to become more engaged with relevant sectors / communities of practice and have an outward facing stance:

> "They have to begin to accept that people other than themselves can influence the design of the curriculum and that compromises need to be made. Increasingly employers and students want skills and practical experiences and it is that sort of negotiation of the linkages between learning through practice and the normal academic process that is needs."

d)   The need to focus on assessment strategy:

> "One of the biggest issues for students is formative feedback as a part of the assessment process. Most academics still see assessment as an add on at the end rather than the process."

Reflections

There is a strong alignment between the Vice Chancellor and Pro-vice Chancellor and the change that they envisage for the UoB are significant and ambitious in scale and scope. The extent to which this is understood elsewhere in the UoB is an important issue.

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Senior Staff

The selected and paraphrased comments below are views expressed by
senior staff, analysed through broad categories a-d.

a)   Course development & curriculum design:

- *Help needed for courses designers at an early stage both in terms of
  technical requirements and creatively - seeding of ideas, through more
  informal conversations around the university.*
- *We don't have curriculum structure or delivery that helps unlock the new
  market place (we need the non-conventional) where growth will come from.*
- *Bite sized offerings, at least not full degree programmes, which can be
  delivered in the workplace and assess in an efficient and relevant way.*
- *Students need ownership and control of how they study to meet their
  lifestyle.*
- *One option would be to engage with employers on a consultancy basis for
  free to bring them into discussions.*
- *Study skills built into induction period would help retention – speculation
  those with low skill are the ones that drop out, at least run a pilot.*
- *Are we developing courses that students/employers need? If we are to do
  this we need to recognise that there is a lot of effort required to do this
  rather than simply re-working what we already have.*
- *No university wide discussion on structure of curriculum since the
  introduction of HE levels 2 & 3 over 10 years ago.*
- *ADA documentation is of very variable quality. The large number of new
  programmes is partly made up of minor modifications, some tinkering with
  existing programmes (satellite titles – response to attract new students but
  in effect it simply moves the numbers around who would have come
  anyway, with fewer truly new offerings.*
- *We over assess – we don't think about the need for or approaches to
  assessment nor appreciate the consequences of developments like 10
  credit modules.*
- *UoB Foundation Degrees come down from the top (push) and are not
  developed from the bottom, employers, students, etc. FE colleges have
  much stronger workplace links and are better as such developments.*

b)   Market intelligence:

- *ADA1 has insufficient emphasis market research to inform the business
  cases including course titles, possibly the need for an ADA0.*
- *Market intelligence is generally poor and needs improving.*

c)   Communication and effective organisation:

- *ADA1 feedback, from a wider pool of people with a developmental slant;
  rather than the Vice Chancellor summarising, other colleagues should offer
  feedback taking the role of a 'critical friend'.*

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- *Hard to progress work-based initiatives from a central unit without strong coordination and buy-in.*
- *Confused implementation of CPD strategy; to a large extent, departments put all of their modules online without any targeting or focus*
- *Links with businesses mostly generated on a personal level- not systematic.*
- *Monies for a CRM database for employers and alumni are approved but will take up to 2 years to implement.*
- *Need people 'on the road' making connections with businesses that can 'sell' courses.*
- *Much reputational damage done by courses being offered, recruiting low numbers and as a consequence withdrawn late on in the year – potential students report this bad experience to their schools.*
- *Big enterprise architecture issue connecting up course DB, finance, etc. Need to recruit an IT person within the marketing unit to tackle some of these issues.*
- *Poor data on course database – schools don't understand its significance. IPP database will help improve production of second level information for students.*
- *VRF marketing campaign, made lots of initial employer contacts but little evidence of departments following through.*
- *ADA approvals process rests in the hands of the Pro Vice Chancellor, this is an unusual setup as many HE institutions would have a sub-committee who, arguably, can better make better judgments as they would bring a wider set of experience to bear.*
- *The proliferation of courses with low numbers of students is inefficient from the universities point of view, but there isn't the clarity of design structures to inform development choices.*
- *So many initiatives going on in schools, employer engagement, government policy, co-funded student numbers – a very difficult environment to make sensible decisions in.*
- *Is the future of UoB in the postgraduate or undergraduate market – arguably the latter despite its strategic aim.*
- *Leadership vacuum, we have a strategy of the Professional University (can be questioned in its realistic chance of increasing CPD significantly) but policy and implementation is weak. To what extent are heads of schools acting strategically?*
- *Budget process is 'interesting', little connection on the face of it between income generated and budget allocated for following years – makes growth in successful areas hard and allows less successful areas to continue without apparent consequences.*

Reflection

Many of the issues that senior staff identify are around the operational challenges about the implementation of strategy and display a sense of frustration in their perceived failings of the UoB in progressing a change agenda.

d)   Staff development and capabilities

- *We are asking 'traditional staff' to think about new courses, but have they got the mindset and experiences to enable them to do this? For example, a recent ADA for a BA in PE & Community Development was proposed as a full-time, three year Bachelors degree. Although possibly a good idea, this was an inappropriate mode of study and qualification – surely a distance/blended, part-time, Foundation degree would have been more appropriate.*
- *Low levels of staff professional reflection on performance data.*
- *Is curriculum development is constrained by staffing – one of the reasons we look to partner colleges to deliver. Can staff at Bolton adapt their learning, teaching and assessment strategies to meet the needs, or are we stuck! What do we recruit staff to do?*

ii) Focus Groups

The selected and paraphrased comments below indicated the spread of views expressed by UoB staff during the workshops: and are analysed through broad categories a-e.

a)   Course development & curriculum design:

- *Are we able to design outside of the box or are we restricted by what we already know - are we are prisoners of tradition? Academic language can constrain thinking about curriculum design.*
- *New courses and reviews should support multi-mode formats - traditional, blended, online, distance.*
- *In WBL the curriculum is in the work undertaken but this can be difficult to capture and direct.*
- *The customer designs the course, we provide the tools and the quality assurance.*
- *Are courses developed to match staff skills or student needs?*
- *How do we 'kill' courses that aren't recruiting?*
- *What is the shelf life of a course?*
- *Appears to be change by stealth - incremental changes without a view of the whole.*
- *Investigate the decline in modular framework - more courses are closed without choice.*
- *There is duplication in provision of information at various stages for ADA/validation process.*
- *Validation events offer the opportunity to see the real possibilities / challenges behind the paperwork.*
- *Curriculum design should be enjoyable, creative, encouraging, motivating as it is the UoB lifeblood.*
- *The ADA system works well, we could always do better, tweak it, use technology to make things easier but 'if it isn't broken why fix it'. The role*

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*of quality PL is pivotal as they are needed to interpret a complex set of rules
and processes so that others can bring courses to the market.*

- *Increased connection with professional bodies and accreditation stimulates
thinking around teaching practice and exclusivity.*

b) Market intelligence:

- *Market intelligence is poor which makes it hard to develop courses that
meet market needs (employers and students) and completion of ADA1
business plan is difficult to undertake with any degree of confidence.*

c) Communication and effective organisation:

- *Bureaucracy gets in the way of creativity as the requirements are heavy
handed with too much 'expensive' monitoring by the centre. Schools should
be devolved more responsibilities for their own quality processes and the
monitoring through central committees reduced and focussed on areas
evaluated as being of high risk.*
- *For some reason (possibly by specialisation in roles, overwork,
management structure that encourages not taking responsibility for change,
culture that is risk averse) UoB staff in general are less likely to take a
'leadership' role in the development of new curriculum.*
- *The use of technology for distance learning is not appropriate for many of
the health students because of their expectations or in the case of those on
foundation degrees an ability to use it.*
- *The funding and commissioning nature of health work makes it a-typical for
UoB. One instance when they attempted to develop a programme outside
of this has proved problematical with many of the issue expressed generally
around UoB such as recruitment.*
- *Do we need different validation and course development regulations and
practices for different parts of the university?*

d) Staff development and capabilities

- *UoB staff need reinvigorating and increased self-confidence. This can
come about through increased research belief, sabbaticals, new blood, and
better connections around the university.*
- *Within the core provision of health, the curriculum on offer (assessment &
teaching strategies) and the responsiveness to market is good. If anything,
the university agendas (retention) tended to deflect efforts.*
- *What should a higher education HE course provide? The perception is that
students want simply to get the certificate, but lecturers believe that it
should be more that that with an experience that required reflection and
application of theory to practice and ideally collaborative activities.*
- *Communication between different levels, hierarchies and units within the
university is poor which makes cross-institutional approaches difficult.*
- *It would be useful to be able to consult current modules on a fully
searchable website*

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- *Need easy access to current staff up-to-date cvs*
- *Need to share common modules, e.g. research methods*
- *From initial idea to course availability takes too long*
- *Principal lecturers see innovation as their responsibility, but may not be receptive of others ideas, sometimes there are blockers in key positions.*
- *What are the resource requirements to enable change?*

e) Philosophical

- *Can a university be both a business and a public service? In placing the emphasis on identifying more income streams we are in risk of reducing diversity in terms of student profile and courses by not catering for groups without funding.*
- *How do we prepare people for careers/industries that don't yet exist – who will their employer be?*
- *As a university, we should be critical of the assertions made in the strategic plan. For example, we shouldn't necessarily buy into the idea of practice/professions as superior or unproblematic arbiters of what courses we should be developing as we run the risk of forgoing what it is that a University education should provide and instead 'dumb down' our offer. For example, competency verses inquiry!*
- *UoB is moving into a new paradigm, what kind of HE experience does UoB want for its students?*

Reflection
Buy-in to the UoB strategic direction is weak although staff do have clear ideas and observations about challenges they face and some of the solutions required.

iii) Vignettes

Ras al Khaimah
In the academic year 2008-9, the University of Bolton entered into a franchise agreement with a private educational provider in Ras al Khaimah, UAE (United Arab Emirates). The agreement allows for students to register with the UoB and be taught on a campus by staff employed by the company located in RAK. The campus has over 150 registered students.

The model of delivery requires that students receive the 'Bolton Educational Experience' and as such module delivery patterns map onto those at the UoB, including assessment and quality assurance processes.

For this model to work, UoB staff were required to share with RAK staff the module curriculum and teaching resources in such a way that staff in RAK could prepare learners for a common assessment. This enabled second marking and moderation to be undertaken by UoB staff in preparation for results to be fed into the UoB quality assurance processes.

Although on paper this is a relatively straightforward process, in reality it has

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proved to be a disruptive process. This is because much of the curriculum wasn't codified in course handbooks or lecture notes but was in fact maintained and developed on an individual basis, much remaining tacit knowledge in the heads of the lecturers.

Linked to this, is the challenge around assessment and the inability of UoB to get exam scripts, etc. to teachers in time. This can result in student's learning the 'wrong stuff' for examination.

Staff visiting RAK reported an academically strong and motivated student body and a receptive teaching force that are willing to embrace technology (i.e. all students on Facebook). The students have a clear idea about what they expect of UK HE, and much of that expectation is for a traditional experience.

Reflection
Can we move to a model whereby the curriculum is captured and described in such a way as to be deliverable by someone else independently and that enables the learners to have an equal and fair opportunity of successfully attempting the assessment?

Other HEI make extensive use of detailed module handbooks and other approaches used include 'team teaching', and more extensive use of technology to share experiences.

Perhaps most significantly, UoB staff do not trust RAK staff in particular around sharing assessments as they believe that they will unfairly shape their teaching to ensure students pass their assessments.

IDIBL
The Interdisciplinary Inquiry-based Learning project started in September 2007 with the aim of developing new approaches to work-focussed study. At the projects heart was the development of a framework of generic modules where learning outcomes and assessment criteria enable learners in different work-places and contexts to personalise their learning through negotiation within each module. Rather than specifying a syllabus of discipline knowledge the curriculum describes processes that lead to the development of student capabilities.

In trying to engage colleagues at UoB we have used this 'innovative' approach to teaching and learning. The explanation of the ideas behind the model have generally been received with enthusiasm, staff can see that for certain groups of work-based learners there are different and more appropriate ways for them to study using inquiry-based approaches. However translating this interest into concrete action has proved more difficult. Where it has occurred four distinct ways of adoption have taken place.

Illustrative Courses	Degree of adaptation

1. Postgraduate Certificate, Diploma & Masters Degree in Professional & Clinical Education. Iqbal Memon, Nov 2009	High – ideas taken and re-used
2. Foundation Degree in Management of Administration for Education and Training. Marie Norman, AME, Sept 2009	Medium – modules adapted to fit a particular context
3. Full suite of programmes in BEE: Regeneration & Sustainable Communities. Margaret Nelson, BEE, Sept 2009	Low – modules and learning and teaching methodology adopted in line with framework
4. Pilot course: Masters in Learning with Technology. IEC, Running	Framework demonstrator

Table 7. Take-up of IDIBL

Reflection

To what extent does the desire of teaching staff to 'own' a curriculum make cross-institutional initiatives difficult to coordinate? In all of the examples where IDIBL has been used to a greater or lesser extent, there has been an impact on the project. However, are initiatives like this scalable?

Similarly, there are countless anecdotes about the number of repetitive modules within schools, the most often quoted being those on research methodology. A rational approach would appear to be that there could be significant consolidation and a greater degree of collaborative working to deliver common modules. This approach appears to meet with significant resistance from academics who defend the special attributes of a particular approach.

The development of a cross-school approach for regeneration programme was problematic as substantive cross-school working didn't materialise.

Professional Development Framework
The re-designed Professional Development Framework (PDF) is designed to give a high degree of flexibility in the assembling of courses without the requirement to validate. This approach sits well within EBTA and the desire to credit smaller chunks of learning that can then be combined into an award. For work based learners in particular, it also allows a greater degree of flexibility in designing programmes of study as their needs may not fit easily with the pre-determined modules on a course and would suit students likely to be using the GMSA advance catalogue of modules.

Reflection
This could be a significant and transformative vehicle for developing new approaches to work-based provision at the UoB. Staff would need to be equipped to rapidly develop courses in collaboration with employers and individuals with a high degree of confidence that they could be delivered. This

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includes the running of modules, renaming / naming of modules and awards, costings, high level competencies that would be developed, etc. Technology could provide a vehicle for doing this.

The negotiated route of study is not new and although some institutions appear to be successful at it, there are additional costs that would threaten its viability especially when working at the level of an individual student.

Central to this approach is the ability to use APEL to credit students with prior learning. There is only limited experience of this at UoB and it poses a particular challenge in that APEL may not conform to the same academic norms as would be expected of students following traditional approaches. As it stands, it is not clear how the potential of the PDF will be significantly realised to radically transform work-based provision at UoB.

Postgraduate Certificate in Teaching and Learning in Higher Education

A good example of cross university collaboration is the development of a course comprising of 3 x 20 credit modules successfully involving staff from teaching, research and support units.

Within this process however, two different emphases on the approach to delivery of the modules could be identified around the ends of a continuum of training verses inquiry with the model validated sitting closer to a model of inquiry.

Although receiving widespread support from departments, there was unease from educational specialists at their level of involvement in the development process.

The group involved in the design process had an in-depth understanding of course authoring and broad agreement over the nature of the course. However, there were still substantial and different interpretations of how the documentation should be completed including the structure of learning outcomes, the nature of the Programme Specification, the relationship between course and module learning outcomes, etc.

Reflection
There is a real tension within the institution to innovate in approaches we take to design, teaching, and assessment of modules. Equally, we are a university and adopting a training approach to staff development fits uneasily with this approach as there are few strong coordinating or controlling mechanisms to hand.

Dissolving the silo mentality whereby people guard their 'patch' is one of the significant barriers to cross-institutional working and possibly one where technology can help.

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To what extent is it possible to create documentation that accurately articulates a curriculum in HE?

v) Process Modelling

This work is ongoing as the university trials different approaches and languages with the aim of adopting a consistent approach for all change projects and initiatives. Models of key processes of direct relevance to curriculum development are included in the appendices and are undergoing ongoing development and include:

- Validation process – based on stakeholders perspectives developed through interviews
- ADA flowchart – based on interview with staff who validated programmes
- University systems – based on interview with head of Information Systems and Technology
- Rich picture – pictorial representation of the curriculum design problem

In comparing the models developed to COVARM, there are many similarities although our approach has been to not model the detail as extensively accepting that there are 'black boxes' of activities.

Issues identified

- Limited opportunity for effective feedback from across university of ADA proposals
- Role of Vice Chancellor as gatekeeper reduces wider institutional participation in portfolio overview
- Different technological systems hold course descriptions: module databases, marketing database and are not tied into student data management system
- Market intelligence gathered too late in the development process
- AQAS do not see school /centre development plans so have little overview of what is upcoming
- Huge set of requirements on staff to change practice with regards to technology, pedagogy, communication skills, relationship building, etc.

vi) New Course Development

The starting point of new courses are summarised below. Although there are some examples of courses developed with employers, most ideas for courses at UoB are generated internally.

Initiated by partner colleges	UoB strategic interventions
In response to national agendas	Suggestions from associates of the UoB
Individual student negotiation	Identification of opportunities at subject group and departmental level
Individual staff passion	Professional associations
Employer led	Externally commissioned
Re-purposing existing provision	Groups of staff with passion for a subject

Table 8. Origins of ideas for new courses

Over the two years for which data is available, shown in the table below, validation activity for new courses has remained constant. For the academic year 2005/06, 18% of courses validated failed to recruit any students. For the following year, 2006/7 this figure is significantly higher with 43% failing to recruit although it may be that in subsequent years these courses do attract students.

Academic Year 2005/06	(A) Courses Validated (05/06)	Courses with no enrolments 06/07 (from A)	Courses with no enrolments 07/08 (from A)	Courses with no enrolments both 06/07 & 07/08
Total	22	10	5	4
	Percentage	45	23	18
Academic Year 2006/07	(A) Courses Validated (05/06)	Courses with no enrolments 06/07 (from A)	Courses with no enrolments 07/08 (from A)	Courses with no enrolments both 06/07 & 07/08
Total	21	19	9	9
	Percentage	90	43	43

Table 3. Activity of validated courses

Reflection
A question posed by such data is the extent to which it is possible to 'pick winners' before active recruitment and the amount of resource required to validate and the opportunity cost of courses are not successful.

6. Discussion

At the outset of the Coeducate project, it was anticipated that much of the effort required would be around the work of the Quality Assurance and Standards Unit. However, it now appears that the focus of activities will be less in that direction and more around the Business Development & Partnerships Unit and the building of staff capacity, the responsibility of the Educational Development Unit.

It is evident from the data gathered that there is significant divergence between the priorities of senior management and lecturing staff. Although there was general agreement around the points raised in the university's strategy, their urgency was viewed differently. Senior managers see the development of employer led or professional curricula as key to the long term viability of the university, requiring immediate action, whereas lecturing staff see the immediate demands of their existing cohorts as their main priority. A minority of staff are very active in developing professional or work-based provision, but these are not viewed as mainstream activities.

The university has established a number of initiatives that address the challenge of work-based learning, including the IDIBL framework and related activities, the Professional Development Framework, the GMSA Advance Catalogue and the work-based PhD by publication or portfolio. Each of these are founded on the idea that the curriculum should grow out of the workplace context, with the university providing supervision, guidance and facilitation.

However these are diametrically opposed to majority teaching practice, which mainly involves the delivery of heavily content-based modules. Because of the long history of this approach, curriculum design processes are oriented towards supporting the development of programmes that are constructed from mainly content-based modules; and the systems for organising the delivery of these programmes assume a stable content-oriented model. The assumption is that modules need to have a reasonably long shelf life, and so curriculum development can be slow as long as it is rigorous.

These polar opposites create a challenge for any intervention seeking to improve curriculum design processes in the university. Several questions need to be addressed:

1. Should there be a major effort to streamline validation processes to allow a more rapid turnover of modules and programmes?

2. How effective will this be in enabling the creation of more work-based programmes?

3. To what extent can work-based courses be constructed from a portfolio of re-usable content-based modules?

4. Should more effort be made to develop more flexible process-based frameworks (like IDIBL) for wider application?

5. Can these frameworks be relevant for the traditional university intake?

6. What would this mean for how curriculum delivery is organised?

7. Does the university need to accept that it needs to maintain both approaches, and what does this mean for its organisation?

8. Should effort be made to develop an online resource for course authors and build the community of those interested in teaching, learning and curriculum development across the university?

9. What will the relationship of these new groups of learners be to the UoB, for example, are they students, customers or workers?

10. What will the relationship be of employers with UoB?

11. How might the role of the HE teacher need to change, for example, are they coaches, mentors or consultants?

The answers to these questions will determine the future actions of the Coeducate project. It may result in a bifurcation of its activities, on the one hand seeking to improve the efficiency of existing approaches through technological intervention, while on the other hand developing new models, frameworks and processes to enable work-based learning that is sensitive to the needs of both the workplace and the individuals involved.

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To support the decisions around the questions above, key issues and approaches identified include:

Different and accessible ways of representing a curriculum for different purposes and audiences is needed.

- The curriculum development process includes a range of people across the university and should do so in a way that stimulates new, creative and imaginative courses.
- Employers need be able to easily contribute in ways that are relevant to their particular contribution.
- Potential students need to be able to readily understand what it is that courses are offering and what their experience of studying will be like.

Validation of new courses

- Ownership is a key issue with staff keen to develop their own courses and modules.
- Establishing a business case – can we pick winners from losers?
- Significant cross school working on delivery is difficult because of the operation of costs centres and rivalry between schools over control of boundary subject areas.
- Assessment practice needs to change to increase formative and reduce overall amount of summative assessment and use different approaches to evaluating what students know and can do without the use of examinations.
- Listen up as well as direct down.

Coordination across related initiatives at UoB?

- Senate Committee for Innovations & Employer Engagement and the Business Support and Development Unit (BSDU).
- The Learning activities group of the e-Strategy whose purpose is to raise the profile of good practice.
- VLE developments that need to provide an online University experience, not simply replace the face-to-face delivery of taught modules.
- The GMSA advance catalogue, how will the initiative be taken forward?
- The Employer Based Training, how does this fit into the overall portfolio of activities?
- Use of the Professional Development Framework to develop new courses for individuals and cohorts.
- Technology development across central units and support for e-learning across departments.
- Widening Participation, Employer Co-funded numbers, Economic Challenge Investment Fund.
- Contribution to the review of the UoB institutional strategy

- Coordination of activities with E-strategy and Teaching, Learning & Retention Strategy.

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Appendices

Validation process– stakeholders perspective

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AQAS - Course SetUp

SCHOOLS

Demand for course from external body

DoS and Mgmt team

Ideally 18 months from inclusion in plan to recruitment

Included in Plan or actioned if outside of planning cycle

Idea for course from individuals

ADA1 submitted

Question on ADA1 – what are the innovative elements on the module

Exec should be directing innovation – *all new programmes should have x amount of innovation assessment methods etc

Maybe needs to go to Directors of Schools and Centres to help synergy – may feel nervous about docs being visible

DVC

AQAS do not see School/ Centre Plans

Decision to send to validation

This is automatically updated

AQE

Lack of market intelligence

ADA 1 sent out for comment by relevant Heads of Support Units

Included in validation schedule

Marketing and Communications

Market intelligence often takes place when course is advertised – need to be better at picking winners or have a strategy of casting a thousand seeds to get some successes

How many comments are received – is this process affective?

Possibly open this up to a web based ADA process – concern quality control

PM1 and PB3 meet with Jo Bell prior to prospectus entry

Problems/ Comments

Question on ADA1 has this been in the plan – often has not because need to be responsive

Is the planning process the best place for Academic Planning – planning meetings tend to concentrate on financial performance and recruitment

Possibly revert to Academic Review type committee with Director of Planning involvement

If validations from partners are not successful or do not recruit costs of event are not recovered

Overseas validations high risk and need more info before process – two costs – lost opportunity costs and the cost of validation

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ADA Flowchart

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University systems

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Rich picture

P30 [38]

1. Curriculum design/delivery stress through RAK initiative

Relative small size UoB limits scale of initiatives

Management Team develop Strategy

Employer supported

Leitch report- workforce skills development

£ HM Treasury

£ DIUS

Hefce Funding rules encourage WBL / EBTA

2. Staff skills, ability & experience not necessarily matched to the task

Strategy to reduce Hefce dependency through growth in WBL / Employer Led Learning

University of Bolton

NHS commissioned

5. Academic regulations

6. Validation Processes

7. Enabling Technology

£ Reduction in undergraduates with knock on effect for fees and Hefce grant

University Staff charged with operationalising UoB strategy

8. Staff confidence to implement change

Individual students enroll for WBL

engage employers through approaches like the Professional Development Framework

SME & other businesses

Changing demographics 18 year olds

Number

2000   2009

3. Traditional model of curriculum development is one of 'push' rather than 'pull'

4. Professional bodies requirements

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Technological interventions in module life-cycle

Technological interventions in the course development life-cycle

Gather intelligence & evaluative feedback
Interrogate module database
Online representations to enable sharing with employers, professional bodies & potential students including market rsearch

Marketing & Advertising
Representation of courses through descriptions including module database & learning activities

Rejuvination
Gather intelligence from students, course staff, employers & external examiners for review & relaunch

Conception → Gestation → Emergence → Adolescence → Maturation → Retirement → Interment?

Programme specification & module design
Form based design reducing unauthentic labour and offering pedagogic support & connection to a social network within UoB

Implementation & adaptation
Capture and share tutors & lecturers interpretation of the course & learner experience & evaluations
Re-purposing of components for use in new courses

Archive
Database for interrogation and idea mining

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Coeducate problem! Cartoon developed for face-to-face meetings to explain the project aim (October 2009):
http://www.youtube.com/watch?v=Woq09e9lElM

University of Bolton

coEducate

Organisational control

Professional identity

Personal values and beliefs

Professional associations

Organisational culture

Prescribed unit of learning

Existing models of delivery:

- campus based
- face-2-face
- content driven
- institutionally determined
- teacher as authority
- one-size-fits-all content curriculum

Some key findings:

The idea that curriculum can grow out of the workplace context is diametrically opposed to current UoB practices or dispositions

Focus required is on building of staff capacity to take forward new approaches

Significant divergence exists between the priorities of senior management and lecturing staff

?

Some research questions:

1. Should there be a major effort to streamline validation processes to allow a more rapid turnover of modules and programmes?
2. How effective will this be in enabling the creation of more work-based programmes?
3. To what extent can work-based courses be constructed from a portfolio of re-usable content-based modules?
4. Should increased effort be made to develop more flexible process-based frameworks for wider application?
5. Can these frameworks be relevant for the traditional university intake?
6. What would this mean for how curriculum delivery is organised?
7. Does the university need to accept that it needs to maintain both approaches, and what does this mean for its organisation?
8. Should effort be made to develop an online resource for course authors and build the community of those interested in teaching, learning and curriculum development across the university?
9. What will the relationship of these new groups of learners be to the UoB, for example, are they students, customers or workers?
10. What will the relationship be of employers with UoB?
11. How might the role of the HE teacher need to change, for example, are they coaches, mentors or consultants?

Work-focussed learning:

- inquiry-based
- facilitative
- problem solving
- adaptive
- organisational improvement
- teacher as consultant
- learning individually & frequently re-negotiated to meet needs of student **and** employer

Project idea!

The starting point for curriculum development and design for work-based courses must be the needs of the learner and their organisation. As a part of its overall portfolio, the university intends that its academic practitioners will become more adept at delivering professional higher education in partnership and in negotiation with employers and learners.

http://coeducate.bolton.ac.uk/

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A cybernetic analysis of a university-wide curriculum innovation

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Abstract

Purpose – This paper seeks to describe and analyse an approach to course design as part of a strategic, technology-inspired, cross-university intervention to widen participation. A curriculum framework was developed for students who wished to make their work the focus of their study and could not readily access current university provision. A deliberate assumption was made that this would require a technologically inspired response to teaching, learning and assessment.

Design/methodology/approach – The approach taken was one of action research, by planning the curriculum framework, validating a course, delivery and review through interviews. Cybernetics was applied *post-hoc* to analyse the data generated.

Findings – Staff found the framework a useful source of inspiration and critique for current practices, although established practice and preconceptions could render the framework meaningless. The ideas in the framework are not enough to change the institution – authoritative sanction may be needed. The cybernetic concepts of variety and its absorption proved useful in analysing the framework, and highlighted weaknesses in the design of the framework regarding the organisation of teaching.

Research limitations/implications – Clarity about strategic purpose when making a change intervention is vital – in this instance raising the level of critical debate was more successful than recruitment. The establishment of an independent unit may be a more successful strategy than embedding university-wide. Further work is required to understand how to market novel approaches. The action research shows that the university has the capability to develop curriculum designs that offer new groups of students access to higher education while improving their work practice.

Originality/value – The findings from interview confirm the value that peers attach to this development. Although the pedagogical design in this action research is based on previous work, the cybernetic analysis and conclusions are new.

Keywords Cybernetics, Curriculum design, Curriculum framework, Work-focused learning, Work-based learning, Online distance learning, Universities

Paper type Research paper

Introduction

The Interdisciplinary Inquiry Based Learning (IDIBL) project uses an action research approach within the Institution with the aim of raising the capability of teaching staff to develop and deliver new programmes based on the IDIBL Framework. The framework followed the "Ultraversity" work-focused approach to learning (Millwood *et al.*, 2008a) developed by Ultralab at Anglia Ruskin University. The approach was intended for students who cannot easily attend university and who wish to make improvement in the work that they do the focus of their study. The approach was developed over the past seven years and offers a personalised experience based on a combination of action research methodology, online community of inquiry for support, and patchwork text for assessment with an exhibition replacing the "traditional"

dissertation. In the late 1990s, after pioneering on-line learning (Goodfellow, 2003), Ultralab developed two large-scale projects, which exploited the online learning community of practice (Bradshaw *et al.*, 2005; Wenger, 1998) for learning. The first of these was called "Talking Heads" which facilitated informal learning online for the headteachers in the England, in the years immediately prior to the establishment of the National College for School Leadership. It proved successful in offering new forms of frequent access to knowledge for busy professionals, unable to readily make use of face-to-face courses to fit their changing needs. The second project was Notschool.net which developed pedagogy and practice to reach adolescent learners "for who school did not fit" – their challenges ranged from illness, to mobility and truancy. The project became successful in the early years of the first decade of this century and the online approach developed proved to transform the participants lives. Each of these projects provided inspiration for the Ultraversity project, begun in 2003, which was designed to offer degree level study to prospective students who felt that the current offering from universities did not fit their lives. The IDIBL initiative began in 2007 after 150 students had graduated from Ultraversity.

The IDIBL initiative was funded by the university and it is also supported through the JISC Curriculum Design programme and as such is integral to the strategic direction set by the university to develop new streams of income based on different models of higher education (University of Bolton, 2010a, p. 9). In this context, the IDIBL project can be seen as a cross-institutional initiative with support from the senior management team as one of their strategic responses to changing and repositioning the business of the university. One of the key actions of the project was to develop the IDIBL framework that could be, "readily adapted by departments to their own subject disciplines and professional contexts of potential students" with the key project aim "to stimulate development across Bolton University of successful models of e-learning and inquiry-based learning where appropriate" (University of Bolton, 2007, p.1).

In the following sections, we will describe the framework and explain its dependence on the use of online technology. The approach to teaching using the framework is analysed from a cybernetics viewpoint, a position adopted at a recent review stage of the project. The paper will conclude with some observations about the potential of frameworks such as this for supporting institutional change initiatives.

The proposed framework

The IDIBL framework consists of a curriculum and a pedagogic approach to learning and teaching which are closely-linked in their design. The curriculum was defined by set of linked module definitions at HE levels 4-7 and the pedagogic approach by a set of practices of teaching, learning and assessment. The approach, was designed, to be highly personalised, to allow students in different work contexts to use it to structure action-inquiries that they identify as a part of their daily work. This paper argues that the creative idea behind the framework, defined by Robinson (2010) as an original idea that has value, was that it was intended for re-use and re-purposing to make the practice of validating new courses a less onerous process across the institution. These resources are published under a creative commons licence on the project web site (http://idibl.bolton.ac.uk) with the following aims:

The course will widen participation by satisfying students whose need is for flexibility with time, place and pedagogy. More specifically this could be because:

- they need to continue in full-time paid employment while they study;
- they wish to make their study directly relevant to their work;
- family commitments prevent their on-campus attendance;
- geographical location or poor transport links makes campus attendance difficult;
- they seek to develop further their communicative creativity and technological understanding as a complete professional;
- traditional examinations and academic essay writing are either intimidating or uninviting;
- they seek the company, support and intellectual challenge of fellow students rather than studying alone; and
- they seek the advantage offered by technology to enjoy the possibility of work on joint ventures and studying collaboratively (University of Bolton, 2008a).

Bosanquet and Fraser (2006) explore the understanding of the meaning behind the term curriculum in higher education and identify a series of very different understandings or definitions having different foci and requiring different student/teacher responsibilities. The model that we developed can be identified as emancipatory:

> From this perspective, students are active creators of knowledge. Learning is a social act, which consists of a dialogical relationship between the teacher and student. The educational experience is negotiated, and the curriculum "emerges from the systematic reflection of those engaged in the pedagogical act" (Bosanquet and Fraser, 2006, p. 281).

The importance of identifying this stance is not only in stating our values and beliefs that led us to develop such a curriculum, but also in recognising that for many it is a view of curriculum that will be unfamiliar and challenging. In terms of the focus of the curriculum and the roles and responsibilities of teachers and students, there was likely to be an uphill struggle to persuade others of the framework's value.

Curriculum
The module components of the IDIBL curriculum can be seen in Figure 1, which offers a coherent set of modules through level 4 to 7. A key feature is that it is a fixed set of modules with no choices or options, the course is designed to offer progression and students can find choice through their individual learning plan, negotiated as an inquiry proposal for each module.

The extract from a module definition in Table I is given to illustrate the configuration of the modules designed. In the era of mass produced higher education, the learning outcome has become adopted as the basic, assessable building block for the description of the curriculum (QAA, 2007, p. 13). This is attractive as a tool of management, but from the practitioners standpoint can be quite problematic, in that it over-simplifies what are complex attributes of a higher education that are difficult to describe and in so doing falsely claims to objectify the process of assessment (Hussey and Smith, 2002). In writing our learning outcomes and assessment criteria we have taken great care to construct them in such a way as to non prescriptive about a person's work context and instead sought to describe future academic and professional capabilities we anticipate they will develop as a result of undertaking the module, but also adhering to established practice (Moon, 2003; Baume, 2010). The associated assessment criteria describe how the behavioural requirement of the learning outcomes will be evidenced and both elements are designed to reinforce the pedagogic approach

level 4	level 5	level 6	level 7	level 8
Certificate of Higher Education	**Diploma/ Foundation**	**Bachelor's**	**Master's**	**Doctorate**
Year 1	Year 2	Year 3	Year 4+	Year 6+
Investigating the Professional Context	Organisational Impact	Review and Planning	Analysing the Professional Context	PhD by Practice or Publication
Understanding Reflective Practice	Reflection on Practice	Action Inquiry Project Preparation	Organisational Improvement	
Technology for Communication and Organisation	Independent Lifelong Learning	Implement Action Inquiry Project	Action Research	
Understanding Action Inquiry	Action in the Work Context	Exhibition, Validation and Synthesis	Action Research Preparation	
			Action Research Exhibition, Validation and Synthesis	
120 credits	120 credits	120 credits	180 credits	360 credits

Source: University of Bolton (2008b)

Figure 1.
IDIBL framework module
components

Learning outcomes – when you have successfully completed this module you will:	Assessment criteria – to demonstrate that you have achieved the learning outcome you will:
Locate your chosen field of practice relative to professional domains, specialisms, subject disciplines	Show the inter-professional and inter-disciplinary connections of your work and identify bodies of knowledge that extend these and contribute to your professional development
Analyse key issues of professional argument, debate or controversy of broad interest within your chosen field of practice in debate with peers with historical perspective and foresight	Produce a critical account of consensual and competing ideas in your professional context using illustrative examples to support your interpretation, drawing from your contributions to debate with other student researchers
Critically evaluate professional requirements for your chosen field of practice in relation to your skills set and experience and your organisation's priorities for development	Synthesise different sources of information and carry out a gap analysis to identify in systematic way foci for your professional development
Identify and critically evaluate opportunities for professional development within your work-context/chosen field of practice	Produce a personal development plan that integrates work-based opportunities for learning with future module requirements providing justification from an analysis of the professional context

Table I.
Learning outcomes and
assessment criteria from
the module "analysing
the professional context"

rather than specific reference to disciplinary knowledge or skills. The curriculum design set out to ensure that the student could develop an individual learning plan in a professional context or discipline relevant to the student's work that addressed the "intended" learning outcomes.

Adaptation of the framework by validation of new courses based on it
At the IDIBL framework validation event, two sets of documents were submitted. The first described and explained the IDIBL framework and identified where programme specific additions and amendments would be required when seeking specific course approval via the minor modification regulations, a less onerous route to validate a course than a full validation (University of Bolton, 2008b). Second, a first instantiation of the framework in the Masters in Learning with Technology was validated as a proof of the concept of both the IDIBL curriculum design and the agile validation of new courses based on the framework. It was envisaged that subsequent uses of the framework would be able to use this experience to give the University confidence in allowing new programmes to only require minor modifications of the framework.

Pedagogic approach
The pedagogical elements of the framework are based on previous work (Millwood *et al.*, 2008a, b) and the key elements are briefly described in the following.

Student support
It was anticipated that students who were geographically and chronologically separated from each other and from staff would need new arrangements for supporting their study. The framework proposed that this should take place through an online community of inquiry, including learning sets for smaller group work. Online asynchronous dialogue would focus on their "practitioner-based enquiry or research" (Bradshaw *et al.*, 2005, p. 1). This is a tried and tested approach with different roles clearly identified including:

- staff as learning facilitators, "team-teaching";
- expert guests to provide process, subject, professional or disciplinary knowledge in response to students' contextual inquiries; and
- students taking responsibility to develop their own peer-to-peer support networks.

One of the key strengths that students report through this approach is the support and encouragement they can offer each other to continue with their studies (Millwood *et al.*, 2008a, p. 76).

Personalisation
The IDIBL framework has a fixed set of modules, but allows for personalisation to be achieved through negotiation of a set of learning activities and assessment product for each of the module learning outcomes in each module. Each module focuses on process in an action research cycle. This is in contrast to other approaches to personalisation, such as:

- modular content frameworks, that allow students to chose modules across subjects and disciplines to construct their own pathway;
- negotiated awards, where prior and experiential learning might be a key component; and
- shell modules, where negotiation about the learning outcomes is undertaken on a one-to-one basis and where the learning outcomes themselves can be negotiated.

What the IDIBL framework aims to achieve is personalisation and choice for the students about their inquiry, but at the same time ensuring that they follow the pedagogical design of taking actions for improvement in the workplace.

Assessment
Assessment through patchwork media (Arnold *et al.*, 2009), a development of Patchwork Text (Winter *et al.*, 2003) is an approach to assessment born out of frustration with perceived limitations of the essay as a form of assessment in higher education. The approach aims to unlock students' skills and creativity by encouraging them to use their choice of a range of genre and media, not limiting their forms of expression to that of academic writing which early on in their academic career, may for some, be off-putting and difficult to master. Students construct a "patch" for each learning outcome as they progress through the module. These are negotiated to tie in with their work-focussed action in the workplace and relate to the learning outcomes and assessment criteria. Finally the student produces a summative piece, called the stitching that gives an account for their learning journey.

Efficiency of the pedagogic approach afforded by technology
The ideas mentioned previously are central to the framework developed. In operationalising the approach there are challenges in ensuring that it is viable in terms of the resources required to offer a good learner experience, but not seen as inefficient and expensive from the institutional perspective. The evidence of the Ultraversity project (Millwood *et al.*, 2008a) indicates that as student numbers increased a new balance was found between staff activities of content delivery, facilitation and marking such that the approach was economically viable for the institution.

The affordances offered by ICT's make possible the approach described previously. These affordances include:

- the potential through the VLE to carry on asynchronous dialogue, thus permitting learning at a time and place of the learners choice through learner-paced conversations and activities, and the possibility to offer each-other mutual and moral support without physically meeting up;
- the potential to upload files so that learners can submit work remotely;
- the creative potential to combine text, visual, and dynamic multimedia which offers the opportunity to use alternative media to compose assessment work for the patchwork media described earlier; and
- the potential through the internet to search for and access information, allowing timely and low-cost access for students to read, quote and analyse authoritative information, journal articles and professional bodies.

Technology has not only made it possible to embrace these pedagogic ideas, it has made it possible to be more efficient, lowering the cost and raising the creativity and productivity for learners.

From the students' perspective, the fact that they can work full-time and also gain credit at a full-time rate made this an efficient and cost effective way to study. The section on findings addresses the balance between staff and student efficiency in more detail from cultural and cybernetic viewpoints.

Methodology for evaluation

This evaluative case study draws on empirical data collected from semi-structured interviews of stakeholders in the IDIBL project, documents produced for the validation process (University of Bolton, 2008a), and an evaluation of activities by the project team (University of Bolton, 2010b) working with academic and administrative staff and employers using e-mail and other evidence from personal communications.

It is worth drawing a key distinction between programme evaluations that simply seek to ascertain the worth of an action and evaluations that seek to also understand the how – a research led approach, "The idea is not just to discover whether a programme works, but to explain how it works" (Clarke, 1999, p. 4). With the latter approach there is the explicit aim to generate findings that are of value beyond the programme or project being evaluated, that is the evaluations purpose is not just to help the decision makers of the programme or project under study. Further, our aim is to identify the underlying mechanisms that are at work along the lines of Realistic Evaluation, "it is not actual programmes which work but the reasoning and opportunities of the people experiencing the programmes which make them work" (Pawson and Tilley, 1997, p. 2), extracting stakeholder views, theories, distinctions and experiences of the IDIBL framework.

The original theoretical proposition put forward by the IDIBL project was:

The framework describes an approach to teaching, learning, and assessment including generic modules will enable staff across the University to readily develop new courses along particular themes without the need to undertake a full-validation event or author new modules (University of Bolton, 2007, p. 1).

The evaluation activities were designed to elicit stakeholders' judgements about the validity of this statement and the ways in which they themselves see the university responding to curriculum initiatives.

Framework analysis and evaluation

Staff and the framework

The characteristics of the framework proposal presented challenges to the validation regulations and quality processes at the university that they were at least partially able to cope with. Although the IDIBL framework and its instantiation were approved, two subsequent course validations based on the framework were required to go through the full validation process, which defeated one of the project's aims. It is likely that this is because although validated, the idea of re-using such a framework was not fully enculturated in the University nor explicitly promoted by the Quality Assurance and Enhancement unit.

Practitioners did find that the framework was useful, although in ways that were not always as initially intended. For example; to support thinking beyond the current confines of HE practice, development of their ideas and persuasion colleagues. All this in the face of deeply embedded practices and beliefs about higher education that in practical terms make the framework's adoption and use a challenge.

I am not sure I would change it. Because I used it as a starting point and modified it from there. It is a useful tool and people could use it when practices accommodate it better [course developer].

I think it is valuable particularly as a thinking tool, even if practically you do not adopt it. It gives you an opportunity to re-think [course developer].

Yes. I myself feel more comfortable with the less specific but other people were not. They were not quite sure what we were asking for nor how it would be measured even though we had tried to create very detailed briefs that would make people feel better about it, but there was something people really didn't like. And also the mangers didn't like because they couldn't pin people down to things. There was a notion that it would all tun into some terrible liberal nastiness! [course developer].

Some people were apprehensive about it and it's because it's different and not sufficiently tied down, as far as they are concerned [quality unit].

Individuals found the IDIBL framework attractive when the educational philosophy offered by the framework mapped onto the individual's beliefs about higher education and the work they were trying to achieve.

It wasn't so much the IDIBL framework but the work that you were doing [...] So this idea that we could have a flexible system that could relate to the changing notions of and demands of the industry. That's where I came from I think. But I also thought it was exciting, there was something exciting about it, it saw education in a more flexible way. Putting the onus on the student and less on this is what we are going to deliver to them. The idea that a student could move around easily and decide the focus of their study that was also attractive [course developer].

Marketing the framework to employers and students
Marketing the IDIBL framework fell into two parts. First, to invite employers (including professional associations and development agencies) to consider take part in creating a bespoke instance of the framework as a course and second, to recruit students to the Masters degree in Learning with Technology and Undergraduate and Masters in Regeneration.

Letters proved to bear little fruit, but face-to-face meetings with employers' representatives produced enthusiasm and encouragement; one project leader in school innovation reported that:

the course features in our bid documentation for [a Local Education Authority] as an example of how we might develop Continuing Professional Development capacity [course developer].

Other members of staff met with less understanding:

the industry couldn't understand it, even though it was a way to make it easier to do what the industry wanted to do because they had all been educated in a hugely hierarchical scenario

they couldn't understand it. They couldn't grasp it and so they were against anything that you couldn't pin down, it was against their experience [course developer].

Others were concerned that the framework should include direct content delivery – the step to fully negotiated learning was a step too far, and the action research progression through the framework not fully understood. Where a trusted relationship with an employer already existed, proper engagement did take place although not on the scale hoped for.

Whether the enthusiasm or trust existed or not, little significant development came from these contacts.

For recruitment, the marketing department of the university was similarly enthused by the framework and the courses, but while offering good advice and support for developing leaflets, the courses and approach did not figure strongly in the marketing activity of the university – the project team felt that the push needed would have taken a more significant involvement from the marketing department which was already heavily committed selling the existing university offer.

Again, few students were recruited through the traditional processes of distribution of leaflets and web site advertising. Most of those who enrolled were by word of mouth and personal contact.

It seemed that the materials created for marketing were difficult to make sense of and there was a failure to effectively communicate. Challenges include the apparent emptiness of the framework, the strangeness of its central concept and the absence of a clear statement of what would be learnt, all of which are more easily conveyed through dialogue.

The cybernetic viewpoint

The use of cybernetics theory to explain the workings of HE institutions is not widely exploited although Birnbaum (1998), pp. 177-200) does provide a holistic analysis and practical explanation of the organisation of the university from a cybernetic viewpoint. In addition, Britain *et al.* (2007) offer an explanation of the application of the Viable Systems Model (VSM) to e-learning in HE which usefully covers the main features of the VSM. This provided the starting point for our analysis, conducted in retrospect in order to reflect on and evaluate the IDIBL framework.

Cybernetic explanations are based on a systems analytical approach and can be applied at the micro and macro levels, to mechanical, biological and social systems. They are concerned with feedback loops between a system and its environment rather than identifying every constituent part. This avoids the necessity to understand every detailed causal relationship, which might lead to an over elaborate model which was ineffective as a predictor of real world activity. In turn, this means accepting that we many remain ignorant of the features of the processes within a sub-system and see these as a "black box" (Jackson, 2003, pp. 86-7).

A key concept in Cybernetic theory is that of variety. "Variety is a measurement of complexity originating in information theory. It refers to the number of states of which a system is capable of attaining" (Britain *et al.*, 2007). This idea was developed by Ashby (1956, p. 207) as "The Law of Requisite Variety" which states that "only variety can destroy variety" and interpreted by Stafford Beer in his Viable System Model (VSM) as "only variety can absorb variety" (Beer, 1985, p. 26). The VSM identifies amplifiers and attenuators as mechanisms for control, constituting a feedback loop. An

amplifier enhances influence by increasing variety, while an attenuator reduces the variety experienced.

A key principle identified by Beer was that the steps taken to absorb variety in an institutional system should be "designed to do so with minimal damage to people and to cost" (Beer, 1985, p. 35). Choices made will have intended and unintended consequences that will determine the success or otherwise of the organisation, impacting on factors such as human happiness, creativity, efficiency, productivity, innovation, the capability and capacity of an organisation to adapt to changing environments, etc. (Britain *et al.*, 2007, p. 11; Jackson, 2003, p. 100).

In addition, a VSM analysis, would anticipate that there needs to be opportunities for adaptation and self-organisation within sub-systems of the whole:

> "parts must be granted autonomy so that they can absorb some of the massive environmental variety that would otherwise overwhelm the higher management levels" (Jackson, 2003, p. 107).

Getting an appropriate balance between the different feedback and control mechanisms is a key challenge of the designer of a system.

Cybernetic analysis applied to IDIBL

Focusing on the IDIBL course, environmental variety can be found in the range of states seen in students' employment context and creative skills to communicate ideas. In the context of assessment this presents a variety problem for staff organising and marking assessment. This kind of problem is often managed in higher education by attenuating the variety. For example assessment through written exams on fixed questions enables the institution to treat all students as if they were identical, hiding the variety of their individual personalities, histories and learning journeys. This imposition may be costly in the context of widening participation and retention since some students will be put off by these conditions or not perform to their potential. An alternative solution, adopted by the IDIBL project, is to make available to students more options in the ways that they can produce assessment products. This necessitates a amplification, in the variety offered by the staff body, in terms of protocols and effort to enrich their response, marking and feedback to students. This approach reduces the potentially inhibiting "costs" to students (becoming an examination expert, studying seemingly irrelevant examples rather than their own, time spent producing assessment products separate from authentic work tasks), but at the same time increases the costs to the staff body (more difficult marking task, more varied and time consuming than for marking an exam, moderating issues of comparability, understanding student's work context to provide appropriate feedback), and in turn this diverts them from other teaching tasks.

Another example is the personalisation of the curriculum in IDIBL. The challenge is to amplify variety in "management" to match "operations", as seen by students in the states presented by staff. One solution is to offer a wide selection of modules, each with a particular narrow curriculum focus that students can select from. The IDIBL framework chooses a different solution – a fixed number of compulsory modules but with learning outcomes written in such a way that they can be used in a wide variety of work contexts. We argue that this amplification matches these particular students' needs better.

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The discussion about the struggle to innovate, persuade and sustain the IDIBL solution in traditional UK higher education is beyond this cybernetic analysis – although not discussed in this paper, in summary, the authors have found that the innovations in "teaching and learning regime" [ref] necessitated by the IDIBL framework, the re-invention of the identity of the HE tutor required and the strategic marketing and promotion approach are three key areas for attention.

In both of these cases the choices made have costs for each part of the system, and this raises the question: which choice overall produces the "best" results, does the "least" damage and maintains a viable solution?

In Table II we use a cybernetic viewpoint to explain how the implementation of the framework components can meet its challenges. In particular, addressing the needs that the framework was designed to meet outlined in the Proposed Framework section; time and place, the affordance offered by technology to vary the parameters under which we organise learning to that we can offer personalisation and choice – that is what, when and how students study. We also identify organisation of teaching, not explicitly addressed by the framework, as worthy of significant attention.

As well as identifying attenuators and amplifiers in the system, we also identify where self-organisation, that is students coordinating themselves in support of each other, is an important aspect of the design. This self-organisation could be analysed as a sub system – a "recursion" of the analysis (Beer, 1985, pp. 2-6) – but our system focus for this paper is at the level of the course as a whole.

This analysis, based on a partial VSM analysis, is presented in Table II is based on the following classical cybernetic diagram, interpreted for the "system in focus" and which the authors would wish to make "viable" – that of the teaching context of staff and students when undergoing an IDIBL designed course. Thus the diagram does not include the institutional context: in the analysis in Table II, it is mainly the feedback loop between operations (students) and management (staff) that is discussed (see Figure 2).

Conclusions and recommendations

Although the IDIBL framework proved useful to curriculum designers, this was not always in the way anticipated when it was created. Some staff found the framework valuable as a thinking tool to systematically critique current practices, exposing rigidity and assumptions behind curriculum design in the university's existing practice.

The framework had a particular view of how new courses could be created which worked best when staff had already identified the problem of relevance to the students' employment and were in ill-defined subjects that were newly emerging or fast changing. For these staff the framework was a valuable source of inspiration and of practical help in validating their own courses.

However, the approach does not fit well with the practice of academics developing new courses in a piecemeal way, either around an area of specific interest to them or by re-working old modules and courses. For colleagues who have a very different view of what a curriculum is and what it is to study at higher education, the framework approach can be almost meaningless.

Although validated as a framework by the university, this did not accord it with the status of a regulation or even guideline. If the framework is to be established in the

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Aspects of organisation addressed by the IDIBL framework course design:	Students' needs (as listed in the earlier section "Proposed Framework")	Variety challenge: the problems presented by mismatch in states of management (staff) and operations (students)	Amplifier: increase in the number of states of the management (staff) presented to the operations (students)	Attenuator: decrease in the number of states of the operations (students) presented to the management (staff)	Self-organisation: variety absorbed within the sub-system of operations (students)
Assessment	5. They seek to develop further their communicative creativity and technological understanding as a complete professional 6. Traditional examinations and academic essay writing are either intimidating or uninviting	How to assess a wide range of products derived from authentic work activity and offer choice in creative student expression	More options in the ways that students can produce assessment products (following the Patchwork Media approach) and a greater range of responses to students when marking and giving feedback	There is no attenuation in this case – we match variety in the operations through amplification and suffer the cost in increased labour	Students are encouraged to share and critique drafts – each is unique, so plagiarism is unlikely
Student support	7. They seek the company, support and intellectual challenge of fellow students rather than studying alone 8. They seek the advantage offered by technology to enjoy the possibility of work on joint ventures and studying collaboratively	How to offer moral and academic support without face-to-face contact	Team teaching enables different staff to offer support to groups of students	Hotseat protocols of topic-focused, time-limited conversations Staff monitor selected forums and conversation threads, making considered interventions rather than responding to everything	Different online forums provide opportunity for self-organisation of support between students. Students discuss hotseat responses between themselves and accept answers from questions "near enough" to their concern

(continued)

Table II.

Aspects of organisation addressed by the IDIBL framework course design:	Students' needs (as listed in the earlier section "Proposed Framework")	Variety challenge: the problems presented by mismatch in states of management (staff) and operations (students)	Amplifier: increase in the number of states of the management (staff) presented to the operations (students)	Attenuator: decrease in the number of states of the operations (students) presented to the management (staff)	Self-organisation: variety absorbed within the sub-system of operations (students)
Personalised curriculum	2. They wish to make their study directly relevant to their work	How to offer a personalised curriculum effectively and efficiently to students in an "infinite" variety or states, that is each having their own interests, work contexts, career aspirations	Individual learning plans negotiated between tutor and students at the level of the module specifying learning activities and assessment products	Peer support through learning sets where critical feedback is offered on plans and work produced given and received between students soaking up potential workload in responding to every individual concern Limited number of modules with learning outcomes written to be applicable to a wide range of work contexts	Students act autonomously in their workplace to undertake their inquiries accessing professional support from work colleagues
Access	1. They need to continue in full-time paid employment while they study 3. Family commitments prevent their on-campus attendance; 4. Geographical location or poor transport links makes campus attendance difficult	How to be flexible in terms of time and location for students who have family and work commitments	Asynchronous forum communications mean staff are able to take advantage of the affordance of many-to-many communications		Asynchronous communications allow students to determine when and from where to interact
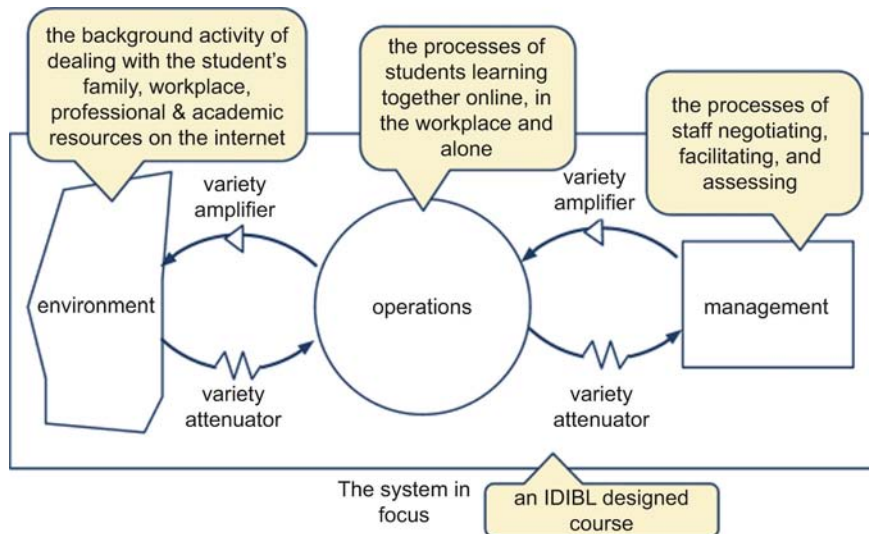
Source: After Beer (1985, p. 27)

"fabric" of the institution and to be more than an experiment to develop inquiry-based forms of learning, then more effort would be required to ensure the framework was "officially" adopted. This highlights a gap between the university's strategy and implementation.

The framework omitted to explicitly address the organisational approach implied by the framework. For example, the notions of team teaching, online community of inquiry for teaching staff and new productivity and management arrangements, which were present in the earlier examples of the approach, were not addressed.

This suggests the following analysis (see Table III): Cybernetic analysis is useful to course designers, in particular the notion of "absorption" of variety, when considering the impact of choices they make on students and teachers. This involves seeking to minimise the negative impact on both groups and making better use of internal, self-organising, mechanisms for absorbing variety as well as attenuators and amplifiers.

For cross-institutional initiatives that seek to promote a particular pedagogical approach, it is vital that at an institutional level there is clarity about what is trying to be achieved. If the purpose is to better understand an organisation and stimulate new ideas and thoughts widely, the framework approach is worth replicating. If however, the immediate imperative is to recruit significant numbers of students, then such activities probably need to be located in a dedicated unit. In cybernetic terms, this unit is it own "organisation" on a level containing the course organisation as analysed previously – designed to amplify variety in the university's managerial structures ("management") and attenuate variety in the course ("operations"). This simpler environment insulates the innovation from the conservative effect of the existing university organisational design.

Finally, this paper has not explored fully the problems of explaining the approach to potential students and employers, whose preconceptions of what it is to study in higher

Aspects of organisational approach not addressed by the IDIBL framework course design:	Variety challenge: the problems presented by mismatch in states of management (staff) and operations (students)	Amplifier: increase in the number of states of the management (staff) presented to the operations (students)	Attenuator: decrease in the number of states of the operations (students) presented to the management (staff)	Self organisation: variety absorbed within the sub-system of management (staff)
Teaching	How to avoid the inefficiency of asynchronous and geographically separate activity by following the expectations of the "standard" productivity arrangement in UK higher education	Opportunity to access advice from all members of the staff Team questions from individual students answered publicly. Clarity about the expectations of responsiveness from staff	Creation of frequently asked questions code of conduct for online behaviour-reduced personal response, emphasis on self-organisation through online community of inquiry	Self-organisation and team teaching allows for new, flexible working practices such as sharing the responsibility to respond to students and modelling desired behaviours through discourse between staff

Table III.
Proposal to match variety issues related to teaching

education were found not to match the IDIBL framework as we communicated it, despite the learner-centred motivation in our design. This is a challenging problem that the success or failure of the approach ultimately rests on.

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Project Information	
Project Title (and acronym)	Coeducate
Start Date	1st September 2008 — **End Date** — 30th July 2012
Lead Institution	University of Bolton
Partner Institutions	None
Project Director	Professor Bill Olivier
Project Manager & contact details	Stephen Powell (stephenp.powell@gmail.com, 07854864124)
Project website	http://coeducate.bolton.ac.uk/
Design Studio home page	
Programme Name	*Institutional Approaches to Curriculum Design*
Programme Manager	Sarah Knight

1. Summary

The JISC Curriculum Design Programme funded 12 projects over a four-year period with the aim of supporting Higher Education Institutions (HEI) to transform their approaches to curriculum design through the innovative use of technologies. This report explains the work of the Coeducate project including the projects achievements, findings, recommendations and what might be valuable to other Higher Education Institutions (HEI's). The context in which the project operated is explained including the University technical systems.

The Coeducate project was conceived to support the development of new approaches to higher education for students in full-time work, paid or voluntary, who are unable to take advantage of face-to-face on campus provision, and who wish to complete a degree at a full-time rate, thus addressing an *unserved* market segment. To meet this market segment, a curriculum model for delivery online, based on inter-disciplinary, inquiry-based approaches to learning (IDIBL) was developed and the IDIBL Framework validated for use at the University. The approach described by the Framework enables people to obtain a certificate, diploma or a degree, whether undergraduate, or Masters, *while remaining fulltime at work, by making their current work the focus of their study*. It enables learners to study at a time and place convenient to them, supported wholly online. Students are required to undertake projects for improvement for the benefit of their workplace, using an action research approach, to gain academic credit from the scholarly practices used to inform and evaluate their activities.

The pedagogical approach of work-focussed learning used for the IDIBL Framework was based on the work of the Ultraversity project at Anglia Ruskin University (Powell, Tindal and Millwood 2008a; Powell and Millwood 2008b; Powell, Millwood and Tindal 2009). The Coeducate project also aimed to support staff to embed this curriculum model across the

University and to promote the use of technology in enabling, 'streamlined, dynamic and responsive curriculum development'.

This was an ambitious aim, and in seeking to make transformational impact in the capability of the institution it was necessary for the project to address: technical systems and business processes impacting on course development; and staff capability and capacity building focussed on adopting new approaches to teaching, learning, and assessment.

The report's key findings are:

1. **IDIBL Framework**
   The approach successfully provides a way for delivering a higher education that is highly personalised, enables learners to continue to work and leads to improvements in their working practices and the effectiveness of the learner's organisation. The Framework introduces a set of innovations: it is work and process focused, rather than content focused; it is work, rather than campus based; it is online rather than face-to-face; and the teacher's role is facilitator rather than source of knowledge. Any one of these makes adoption difficult, but taken together present a considerable challenge to existing practices. Our findings suggest that adoption of such a radically innovative approach, beyond pockets of innovation, would require investment in an autonomous business unit with the express aim of supporting the full involvement of learners, teachers and administrators to develop the new supporting systems, processes and practices, required to implement these innovations;

2. **Workflow and Document Handling Tool Deployment**
   The 'challenge' of deploying workflow and document handling tools and their ongoing support and development for the validation process alone, does not offer sufficient benefits to justify the resource required for what is a relatively low frequency activity. However, the implementation of generic document and process support technology, able to support a wide range of university processes, is attractive to institutions but requires a significant effort and cross department support; and

3. **Course Business Planning Tool**
   There is an increasing emphasis on providing a robust business plan, for both new and existing courses, alongside the development of an attractive curriculum for learners. Technology to support planning activities and focussed staff development can provide a sustainable capacity raising approach for an institution.

We have created a story line that provides an overview of the Coeducate project, setting out the main activities and events in the project, the University and the wider national and international context in which it is embedded. Each entry has a link to further information. Something unique for those who want a different interpretation of and way to find out about a project!

2. Headline achievements

2.1 Development, validation and use of the IDIBL approach

The project team developed and validated an innovative framework for interdisciplinary, inquiry-based learning (IDIBL) described in the approved academic proposal document and revised and revalidated in academic year 2011-12. The Framework enables staff to adopt, and adapt if required, the approach to create new courses, with subsequent validation only needing to evaluate the arrangements for delivery and the business plan. The IDIBL Framework, available under a creative commons licence, presents a holistic curriculum including module descriptions, an approach to teaching, learning and assessment that is radically different from the current ways of working in the University.

It describes an approach that is highly personalised, enables learners to continue to work full time, to study at a time and place convenient to them and is delivered and supported wholly online by largely asynchronous communications through the institution's VLE, Moodle in this case. The approach requires students to undertake projects for improvement for the benefit of their workplace and to gain academic credit from the scholarly practices used to inform and evaluate their activities - work focussed learning. Learning facilitators support students through the inquiry process with expert 'hotseat' guests proving addition subject, specialist or discipline expertise.

Figure 1 IDIBL Framework

It was a significant achievement to get the Framework validated and then used as the basis of three further course validations. A key value of the validation of the Framework, beyond providing different route for learners to access higher education, is that it demonstrates what is allowable within University regulations and provides a valuable source of inspiration to course developers and teachers.

Under this project, staff have then used the approach described by the Framework to develop their own programmes and have recruited and taught students successfully on a Masters in Learning with Technology and a suit of programmes around Regeneration and Sustainable Communities. This project also carried out a detailed evaluation of these courses and the IDIBL Framework itself, for more details read the peer reviewed paper Evaluation of IDIBL Framework as a university-wide curriculum innovation.

2.2 Raising capacity and capability around curriculum design & development

In keeping with the Coeducate project's aims of making a systemic impact around curriculum design across the University, a raft of related activities were undertaken that were both planned in advance and also responded to the changing context within the University. The significant achievements and valuable approaches for other Universities to consider adopting included:

1. using Moodle as a vehicle for coordination and as a shared repository alongside a series of workshops addressing key issues to support a cross institutional re-validation process to align with a new University curriculum framework. See an evaluation of the workshops and the Moodle site;

2. connecting the Postgraduate Certificate in Teaching and Learning module on Curriculum Design and Assessment with the curriculum development initiatives in the University through project staff teaching on the course including sharing of curriculum design software developed and online activity design workshop;

3. bringing to the fore the organisation-wide debate around the deployment of generic enterprise tools to support business processes and document flows rather than implementing bespoke technical solutions for the activities of different organisational silos;

4. developing the Innovation Support Networks as a recognised university process to support staff around particular issues; and

5. developing open courses and resources for students and staff to build the skills needed for Patchwork Media Assessment Effective Social & Digital Media Storytelling Blog.

2.3 Developing generic tools for the HE sector

Two tools have been developed and released as open source software that we hope will be of widespread use:

1. Generic Canvas Modelling toolkit that allows the easy creation of templates with context specific help for recording workshop activities or for individual and small group problem solving; and

2. based on workshops using physical cards, we developed a Design Widget that allows virtual cards to be drawn from 'decks' to be placed on a design canvas, annotated and shared for curricula evaluation and design purposes.
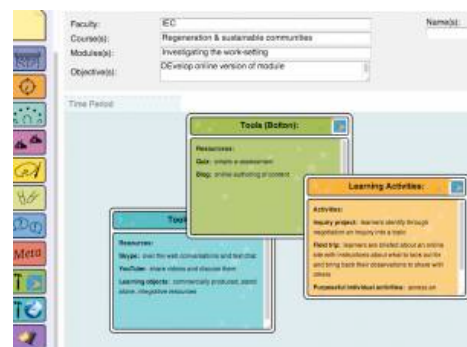

Figure 2 Design Widget

3. Key drivers for undertaking the project

For a small, relatively new Higher Education Institution there is an ongoing business imperative to sustain and grow student numbers to remain a financially viable organisation within the changing constraint of student control numbers on full-time undergraduates. The Coeducate project set out to develop ways in which new types of learners outside of control numbers, unable to access current provision, could be catered for. This fits well with the UoB mission and strong and proudly held tradition of widening participation and serving the needs of the local and regional community. There was, therefore, the opportunity for the project to support this drive for process renewal while at the same time making way for courses of this more flexible kind to be more easily validated.

A baseline review activity undertaken across the academic year 2008-9, found that the UoB strategic plan was generally well understood by staff at the University. However, there was a significant discrepancy between the senior management's sense of urgency and university staff attitudes with respect to the need to develop new curricula that directly addressed the needs of new groups of learners to ensure the medium to long-term viability of the institution.

The majority of teaching staff prioritise the incremental development of current provision based on their experience of running courses to meet existing demand from students. Some staff were actively developing professional or work-based provision, but these represented isolated pockets of activity with departments and were not viewed as part of the mainstream.

Five key findings of the baseline activity were:

1. many courses were heavily reliant on a content delivery model and associated teaching practices to support this, with ownership of a curriculum by the teaching staff being a key issue. Because this approach was well entrenched, curriculum design and quality assurance processes were oriented towards supporting the development of programmes that were constructed from mainly content-based modules and the systems and processes for organising the delivery of these programmes assumed a stable, content-oriented mode. The assumption is that modules need to have a reasonably long shelf life, and so curriculum development can be slow as long as it is rigorous;

2. cross-departmental development was inhibited by anticipated complexity in delivery and financial issues arising from the operation of costs centres and rivalry between schools over control of boundary subject or discipline areas;

3. the challenge in developing a credible business case was substantial, that is identifying winners from losers in terms of recruitment. This was believed to be significantly more difficult because of the lack of market intelligence;

4. amongst senior managers there was a belief that assessment practice needing to change to increase formative and reduce the overall amount of summative assessment.   This could include different approaches to evaluating what students knew and could do without the use of examinations; and

5. many staff had been at the University for a significant period of time and the job they were now being requested to do was significantly different to that when first employed and to their capabilities and predisposition.

In summary, there were some valuable qualities identified in the University that meant it was a receptive place for new ideas and approaches to courses and their design. However, any proposal that contained radically new ways of delivering higher education that were significantly new to the majority of university staff would be challenging to operate.

As explained previously and shown by the storyline, there have been dramatic changes in the Higher Education landscape brought about by the international economic turmoil from Autumn 2008 and the change in national government in spring 2010 and resultant changes to funding arrangements. There have also been significant developments since the baseline activity within the institution with changes to personnel, organisational structure, and, perhaps most significantly, the business model of the University from September 2012.

However, it is probably the case that of the five key challenges identified by the baseline activity they remain valid and in this time of increased stress on the institution they are even more pressing concerns.

4. Educational & organisational & political context

The University of Bolton is a relatively small HEI (302 FTE academic staff, 54 research staff, and 251 support staff and 5151 FTE students at the start of the project, 2008). It has a stable staff profile with many academics having extensive industrial experience. Compared with other HEI's (Baseline review 2009), we found the University is relatively agile in bringing new courses to the market although there are challenges around the viability of some of the new provision developed.

In 2008, in response to developments such as the Leitch review (2006), the University of Bolton had a strategic aim; to be a "Professional, Employer and Community Facing University where the needs of employers and learners drive both curriculum content and mode of delivery" (UoB, 2006). The University intended that its academic practitioners would deliver professional higher education in partnership and in negotiation with employers and learners. This model of higher education has as the starting point for curriculum development and design the needs of the learner and their organisation, negotiated and delivered in partnership with full recognition of in-work and experiential learning determining the time and place in which it is delivered.

The University identified that traditional models of curriculum design at Bolton are predicated upon the notion of the educational professional as expert. The curriculum is therefore usually

'handed down' to employers and employees as fixed and non-negotiable (Baseline review 2009).

This analysis oversimplifies what is a very complex picture, in fact there are many good examples of academic with close links to employers working in the way envisaged above. However, at this time the long-term sustainability of the Institution was seen as being underpinned by a growth in student numbers through working more closely with employers.

The above context at the outset of the project has now significantly changed. In September, the first cohort of students will be recruited who will largely pay all of their students fees albeit supported through the Student Loans Company. The total numbers of students that Bolton is allowed to recruit is restricted by a Student Number Control that has built in an 8% reduction in numbers from 2012. The assumption held throughout the previous government of increasing student numbers is now replaced by a reality of decreasing numbers and income. In the light of this, university efforts are focussed on streamlining provision, reducing costs and a major effort reviewing and enhancing the existing curriculum offering in an attempt to make it more attractive to students by increasing their employability.

It is anticipated that by demonstrating enhanced added value the university will attract a higher calibre of student (as measured by A Level results) and as a result, retention and progression will improve. In addition, it is the case that there will be a wholesale re-alignment of part time and postgraduate course fees to approximately equate to the same cost per credit. As with many Universities, this would lead to large increases in fees for Continuous Professional Development modules and level 7 qualifications that will significantly impact on the marketability of these products as discussed in the IDIBL re-validation planning documents.
 Representing courses such as these in Key Information Set (KIS) data will pose challenges around measures of contact hours. We are concerned that KIS requirements may unintentionally inhibit the development of online provision.

The response to the above analysis are manifested in the UoB by the Curriculum Review which has required all undergraduate courses to demonstrate their viability and undergo a re-validation process. Although not anticipated at the outset of the project, over the past two years the Coeducate project has adapted and offer support and expertise to help the University through this process. The downside for the IDIBL model is that the university has become more risk averse and is pulling back on the development of radically innovative ideas, and instead is now focusing on incremental innovation through its policy of 'Platinumisation' of courses to improve existing offerings, as it adjusts to the new climate.

5. Technology context

5.1 Overview
Following the baseline activity at the start of the second year of the project, we expected to develop working software solutions as part of the project. The issue of sustainability of solutions for the University was also a question we wanted to address and from the outset, engaged in conversations with the Information Services team. Reflecting on these conversations and the findings from our baseline activities lead us to the conclusion that there

is a systemic issue in the way that technological innovations are initiated, developed and then moved through to a sustainable service within our institution. This issue isn't yet solved, but the activities of the project have contributed to better planning and consideration of technological issues through newly established infrastructure and management information groups on which the Coeducate project is represented.

The activities of the Coeducate project in the technological space discussed below helped us develop our understanding of how technology is introduced into the University and the challenges that this results in.

5.2 Use of Wookie Server

To support course using the IDIBL Framework, we initially used a tailored version of Wordpress.com. While this worked well, it was judged that to encourage wider adoption within the university, it would be necessary to use the institutional VLE, which at that time was switching from WebCT to Moodle. As one of the first serious users of Moodle in UoB, it was necessary for it to be linked with the Student Information System[1], SITS, so this was an early action undertaken by project programmers.

We wanted to avoid developing special software for IDIBL-based courses. However, there were features implemented in Wordpress.com that made use of the Wordpress.com widgets approach which we wanted to re-implement in Moodle. We therefore explored the recent integration of the Wookie widget server with Moodle.

Wookie implements the W3C widget specification which allows this type of widget to be deployed on a wide variety of platforms, including smartphones, so developments made using it can be made widely available. This work is in its infancy, but it or other similar approaches offer much by way of interoperability of tools between different platforms.

5.3 Technology for course design and validation

5.3.1 Course Design

We also sought to provide generic support for course design and validation and seeking closer integration between the two processes. With background experience in IMS Learning Design and tool development, this was a natural starting point. But we were equally aware that it was too 'fine grained' as starting point for most teachers. Arguably, it is necessary for academics to have first developed a higher-level design, possibly based on no more than intuition and previous experience and not necessarily codified. It is then possible to set out the design for a series of learning activities and resources at the IMS LD level (LD).

Thus, when invited to become involved in the LDSE project, we accepted, both as a board member and as evaluators. This highly ambitious project sought to provide the kind of higher-level tool which might provide what we needed. Using a typology of learning activities, it set out to present learning designers with an analysis of the types of activity they were proposing

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[1] *The Integration of Moodle with Bolton University's Systems:* 1. Technical Perspective & 2. Technical perspective of the Category Structure

that would let them adjust the balance between them to provide an improved experience for learners.

We evaluated the Learning Design Support Environment (LDSE), or Learning Designer (LDer) as it is now called, at Bolton with a number of staff. Overall while finding it interesting, staff felt that the effort required would not be repaid by the benefits, unless they were planning a major new course or an existing course was to be redesigned as an online course. So it had potential in specialised applications. But a more serious consideration was that, although the user interface improved towards the end of the project, the software was still unstable and, with uncertainty regarding future support for the software as a complex product, it was not possible to recommend it for adoption by the university.

It became apparent that part of the difficulty with developing technology to support course design is that there is significant complexity, with at least three 'pedagogical' levels including:

1. the fine grained IMS LD level, with activity sequences, resources and roles;

2. the mid level, as addressed by the LDer, described by lesson plans and schemes of work ; and

3. the higher level of pedagogical choices, as addressed by the Ulster Viewpoints project, described by module and programme specifications.

It is in this higher level where our own efforts in this space have focussed. We began by running a set of workshops for the PGCHE course using various sets of physical cards, refining their design in the process. However the aim was to provide online support and this has resulted in a pedagogical Design Widget. While this can support a variety of card sets, we have started with the Viewpoints cards based on the Eight Learning Events Model (8LEM) 'activity cards' to support curriculum design processes and activities, closely modelled on those developed by the Viewpoints project. The tool developed can be used both to record and share the results of a face-to-face session as well as for planning purposes.

5.3.2 Course Validation

A key purpose of the validation process is the establishing of a business case for a proposed new course, something that is widely recognised as being very difficult to do and not well supported by the institution as identified by the Coeducate baseline report. To this end, we identified the Business Model Canvas as providing a set of categories that already mapped quite closely to aspects already taken into account in course design. With relatively small modifications the original Business Model Canvas wording could be adapted for the purpose of setting out the factors needed to feed into a course business plan. Typically this is provided as a large sheet with the canvas framework. Groups can place post-it style ideas, evolve and link them to produce the outlines of a business model. Estimates of numbers, costs and revenues can then be made to produce the input needed for a business model spreadsheet. We trialled the business model canvas in two face-to-face workshops with a positive response, and used this as the basis for developing a supporting tool.

In this we had the advantage of the separate development in IEC of Archi, and Enterprise Architecture visual modelling tool. This already had a very simple lightweight post-it style modelling tool which could be used as a foundation for developing a canvas tool. Although provided under a Creative Commons license, we early on received some emails about IP issues from its lead authors. This was enough for us to decide to create a generic tool that would allow any canvas to be created and subsequently used, resulting in a much more powerful and useful tool with a wide range of a potential applications.

The generic canvas generator was produced which enables anyone to produce their own canvas templates with the ability to add context specific help. This was trialled with staff at Bolton to help establish the viability of such planning activities for course teams. In addition, the Business Model Canvas Template was adapted to provide a bespoke template for Course Business Model planning in the University, which, as well as adapted headings for course design, included rich context help for each of the categories on the canvas. This application is available as a part of the Archi, Archimate Enterprise Architecture Software and as such has the potential for widespread take-up and has a reasonable sustainability path.

5.4 Enterprise tools

Developing and deploying a bespoke document-handling tool to support the validation process is a relatively straightforward thing to do. However, The 'challenge' of deploying workflow and document handling tools, whether internally developed, open source stacks, or cloud tools, was something, informed by the baseline report, the Coeducate project intended to do. However, this has proved to be significantly more of a challenge than we anticipated. This isn't a technical challenge, but more one of the institution having the capacity to take an organisational wide view of technology and resource requirements so that real benefits and gains can be realised at an institutional level. This is rising up the University agenda with now widening interest in technology to support process and document flows. This was helped by the work of the Coeducate project that demonstrated that much can be achieved through appropriation of existing technology, such as Moodle, to support validation activities. The challenge over the coming months will be to coordinate all of this activity and interest so that solutions that are implemented are not piecemeal but instead are sustainable and support the enterprise as a whole.

6. Project approach

6.1 Project design and stakeholder engagement

The Coeducate project was designed as a collaborative action research. The development and use of the IDIBL Framework provided a context within which the other project activities could fit, even though they themselves had wider implications for course design and development. For our institution, the Framework was an innovative and challenging approach to delivering a higher education that exposed the systems, processes and working practices of the institution to critical inquiry.

6.2 Tools and techniques

Soft Systems Methodology (SSM) – the approach developed by Peter Checkland (Checkland and Poulter 2006) is essentially a form of participatory action research that relies heavily on the development of models of the systems in focus. As such, its strengths lie in the joint identification of a shared issue and the changes required by individuals to bring about an improvement in an organisation. This overall approach was used throughout the project where possible although the rapidly changing context made this difficult for some aspects of our work – as a practice action research is often messy, complex and imperfect. Ideally, iterative cycles of actions make improvements on those that went before and inherent in this approach is the evaluation of and reflection on actions taken by problem solving participants.

Once underway, the project undertook a complete review of the curriculum development process across the university. This included the initial identification of curricular need through to validation and was designed to enable us to implement targeted interventions to result in a streamlined, dynamic and responsive curriculum development approach across the University.

The review involved modelling academic, departmental and whole university processes, and provided our baseline data to allow comparison with other institutions. Following the review, we worked with staff and schools to develop processes and adapt technologies. These processes included support for developing new ideas for courses, examining their fit with existing provision, and course planning. As the project progressed, we made increasing use of the Arch tool to develop Archimate models of specific processes and technology that we were concerned with.

Not wishing to re-invent the wheel, we were keen to evaluate existing tools based on JISC funded work including Phoebe and more recently the next iteration of the London Pedagogic Planner, the Learning Design Support Environment and approaches developed from other Curriculum Design projects.

6.3 Changes in direction during the project and reasons behind this

The discussion in section 4, the organisational context, and section 5, the technology context, explain how at the tactical level the Coeducate project had to adapt to meet the unfolding organisational context and to take account of our better understanding of how and why technological change comes about within the institution. However, at the strategic level the project aims remained broadly the same; that is to develop the IDIBL model and to work towards more efficient and effective course development and design supported through the use of technology and to build staff capability and capacity to adopt different approaches to learning, teaching and assessment.

6.4 Project evaluation

The project evaluation is dealt with in a separate report but the main goal of the evaluation was to try and offer some indicators to external parties about *what is likely to happen and in which circumstances* if interventions similar to those on the Coeducate project are undertaken. This is informed by a Realistic Evaluation approach (Pawson and Tilley, 2002).

The evaluation process has involved focus-group activities with over 50 staff involved over the life-time of the project, stakeholder interviews, and other methods of extracting stakeholder views, theories, and experiences of curriculum design.

7. Benefits and beneficiaries

At the outset, the Coeducate project sought to bring benefits to a wide range of stakeholder groups and these are dealt with, each in turn. It was the intention of the Coeducate project to:

1. provide access to higher education to groups of students unable to take advantage of existing provision. This has happened, although the numbers of students recruited on courses based on the IDIBL framework have been fewer than hoped for;

2. make the activity of course design easier in the areas of planning activities for teaching, learning and assessment and creating validation documents. This has been a partial success with course developers reporting the advantages of having such a framework to support their thinking around curriculum design and also as a practical starting point for documentation that could be adapted such as Programme and Module Specifications (Powell and Millwood 2011, p265);

3. allow lecturers the freedom to teach in different ways that support the needs of their learners rather than follow a rigid syllabus because of the assessment requirements at the end of a course curriculum (some video evaluation of the experience);

4. support the institution re-validation activities, as indicated by the evaluations of this work, and through the development of a Staff Teaching and Learning Portal in Moodle to showcase innovation practices such as those supported by the Coeducate project; and

5. offer to the wider HE community through the release on either Creative Commons for open source of the IDIBL Framework, Widget design tool, and the Generic Model Canvas generator (currently being evaluated).

As well as the intended benefits outlined above, our activities around the university have had an impact in many other areas as we have engaged vigorously with departments and other individuals who are interested in making change for the better. Examples include:

1. work with school office managers to help them adopt action research and modelling approaches to improve their working practices around curriculum issues;

2. work on the Technology Infrastructure and Management Information group;

3. exploring Course Data Analytics and using that work to successfully bid for further funding to explore this avenue of work in the university; and

4. developing a culture of Enterprise Architecture around the institution.

8. Outputs

Output	How it can be used	What we got out of it
IDIBL model	As a basis for the development of new courses with a particular approach to teaching, learning and assessment that supports work-focussed learning.	We have found this resource useful in two ways: 1. as intended to develop new courses that adopt the model in full; and 2. as a way of encouraging staff to think about their current practice and adopt parts of the model such as patchwork media assessment that address their particular needs.
Generic Canvas Generator for staff development and other workshops. Read about it here and then download.	These are additions to the Archi enterprise architecture tool and are designed to be used for high level planning activities that would benefit from templates that are easily developed and customised. The project has created a Course planning Business Model Canvas Template.	The canvas generator tool has been used to analyse the business case for courses through the Business Model Canvas framework. This work was exploratory as the changing context at the University means that new courses have been largely put on hold for the past couple of years as re-validation activities have dominated.
Design Widget including 'activity cards' to support curriculum design processes and activities.	This generic tool can be used for a wide range of planning activities such as those developed by the Viewpoints team either simply to record the outputs of face-to-face sessions or to work individually or in groups in a distributed way.	The Online Activity Design Cards developed by the project have been used extensively with colleagues to enable them to think about the design and delivery of online courses that are currently delivered by face-to-face means.

9. Unexpected consequences

It is difficult to identify specific unintended consequences as the project context was very fluid. It may be useful, however, to reflect on the changes to staffing over the life-time of the project as these were unexpected and significant to the project. The retirement of the project director, Deputy Vice Chancellor and ill health of the Director of the Quality unit posed significant challenges to the project. The effect of these changes was to reduce the understanding and representation of the project at the higher levels in the University. This wasn't so much a barrier to project activities, but was a 'loss of enablers' that could of made the project activities more effective. This risk was identified and steps taken to mitigate against it by actively engaging with staff new to post. To some extent this was successful as shown by the Coeducate projects involvement in the undergraduate re-validation.

10. Sustainability

The cornerstone of our sustainability plan was to embed the project work within the University Learner Experience and Professional Development Unit through the development of the

Learning and Teaching Portal to showcase and share innovative practice (including the IDIBL model). In addition, through the development of an Ongoing Innovation Support Network we planed to take forward various ideas and activities that staff believed had merit. At the end of March 2012, this unit was unexpectedly closed down although some of the activities that it undertook are being maintained by other parts of the University. The Coeducate project has put forward a Capability and Capacity raising proposal to the University as a new innovation development strategy, but with an approach to change based on Teaching and Learning Regimes (Trowler, 2008).

The sustainability of the generic canvas generator is bound into the plans for the development for the Archi tool. In this respect, it is less prone to the vagaries of the University decision making and has a good sustainability route for some time to come.

The IDIBL Framework itself has been re-validated and is in use by one university faculty and the IEC research centre. The work of the Coeducate project has demonstrated that this is an uneasy fit within current University and although one sense it has been adopted by the university take-up is limited. Examples of issues identified include: staff cost centres when interdisciplinary working is being developed; admission processes that are geared towards full-time undergraduates starting only in September; and teaching practices that are at odds with common practices. Therefore, in collaboration with staff in the faculty currently using the model and other colleagues we plan to put forward a proposal for the establishment of a separate business unit with the freedom and flexibility to develop new working practices required for such innovative curriculum design.

11. Summary and Reflection

Looking back over the Coeducate project much was achieved through a combination of an opportunistic approach combined with following through on our planned interventions within the institution. We also think that it was important that we engaged at different levels within the organisation; the individual lecturer, learning and teaching regimes, committees, senior managers, and central support centres.

The IDIBL model was a bold attempt to re-model the curriculum in a particular way. It was initiated by the then Deputy Vice Chancellor as a strategic response to the post Leitch context and his analysis of how curriculum development needed to change. However, for adoption, it relied on academic staff 'buying into' the project. Subsequently this, and other initiatives, were overtaken by the mandated re-validation of all Undergraduate provision, the new strategic response to the post Brown changes in funding arrangements from September 2012. This dominated the curriculum agenda across the institution for last two years of the project, creating a period of consolidation rather than innovation.

When the consequences of these changes become clear, we believe that there will then be further opportunities for the IDIBL approach, opening up access to significant, but currently unserved market segments through work-focussed learning.

11.1 Lessons learned
Gathering the project experience together, the key lessons learned are itemised below.

11.1.1 Introduction of IDIBL Framework:

1. the introduction of the proven, but, to the institution, radically new model of interdisciplinary, inquiry-based learning, was a significant challenge to current ways of working because it requires the simultaneous adoption of a number of significant innovations;

2. the institution was capable of adopting interdisciplinary, inquiry-based approaches where there was sufficient autonomy of a teaching group who were philosophically committed to the ideas and approach; and

3. the validation of a radical curriculum model that included modules and an approach to teaching, learning and assessment had a positive impact on learning and teaching beyond the specific intentions of the project.

11.1.2 Supporting Course Innovation and Validation:

1. difficulties around developing courses: the gaps between course design and validation, session design and learning activity design, and delivery in practice (students' experience);

2. identifying three levels of tool support: Pedagogic Design, Course design and Session design (8LEM, Learning Designer, LD).

3. the development of 'light weight' widget technology to support the professional development of academic staff in formal and non formal contexts was effective; and

4. producing robust business models for new courses has become increasingly important part of the validation process and so software to help academics develop them would be useful.

11.1.3 Course Validation Support:

1. the introduction of bespoke software solely to support University validation processes was not justified in terms of the effort required to maintain it sustainably;

2. the introduction of generic document and process support technology is attractive to the institution but requires a significant cross department and functional effort; and

3. the appropriation of existing and embedded technology such as Moodle to provide information and coordination to support the revalidation process proved effective and relatively easy to implement.

11.1.4 The Wider Context:

1. the national and international, and consequently the structure and operation of the University has changed continuously through the latter half of the project, requiring parallel adaptation of plans and activities.

11.2 What is of value to other institutions

We believe that other institutions will find value from the:

1. idea of developing their own self-contained models of teaching, learning and assessment and validating them as a way of giving permission to staff to adopt new ways of working and as starting points for planning their own courses either by adopting something wholesale or taking bits as and when required;

2. using the IDIBL model as it stands for in the way described in point 1 above;

3. using the Generic Canvas Modelling toolkit for course business models;

4. ease of use of Moodle to coordinate and support a cross-institutional re-validation process or other large scale initiatives;

5. design widget to support thinking around curriculum design and development; and

6. thinking around innovation in curriculum design outlined below.

11.3 Considerations Setting up an IDIBL-based Programme

11.3.1 Structure
Given the radical and potentially disruptive nature of this innovation, the most important advice is to make provision for this by setting up a separate unit, with its own start-up resources and relatively independent of the operations of the main body of the university. At best, it has unique needs that are typically not well supported by existing processes and systems; at worst existing processes will block its progress as it doesn't enhance existing processes and practices and other established units will seek to cannibalise its allocated resources.

11.3.2 Staffing
Specific, non-traditional skills and attitudes are needed to facilitate programmes, so staff will need to:

1. Have an interdisciplinary, rather than a single discipline focus

2. Support process - rather than subject/topic-based learning

3. Support online rather than campus-based learning

4. Provide facilitation of inquiry activities, rather than lectures

5. Work in a facilitation team, rather than a solitary lecturer

6. Be adept at negotiating learning plans with learners

This will probably require specific recruitment of new staff. Both new and existing staff will probably require training in one or more of the above areas.

11.3.3 Marketing and Communications

It (initially) targets those who for various reasons do not or are not able to attend a traditional university course and who are in a position to innovate or make a change in their work, whether paid or voluntary. This is in contrast to many Undergraduate courses that are designed to develop subject or discipline specific knowledge.

There is a need to communicate clearly the nature of this type of programme as it is differs from all traditional courses.

11.3.4 Finance

The real costs of running this kind of course are typically significantly lower than running traditional courses, with all students working remotely, resulting in lower campus overheads. The actual costs need to be worked out as a baseline, and then set against a range of fee points and projected student numbers, with a break even point established.

Fees need to reflect the real costs, rather than carry the overheads of more expensive face-to-face campus based teaching.

11.3.5 ICT Platform

The provision of an appropriate ICT platform is needed. This should include facilities to handle admissions and enrolment without attending the University; the learning support system with: discussion forums; multimedia blogging with commenting; a portfolio element to draw out achievements against required outcomes; linking of assessments with a student record system; a student record system that links with the administrative, finance and learning support systems.

11.4 What we would have done differently and future plans

11.4.1 Disruptive innovation reflection - IDIBL where next?

In reflecting on the project experience, the introduction of a complex set of innovations targeting currently unserved customers or clients provides a classic example of disruptive innovation theory (Christensen, 2003). In particular, the theory provides a credible explanation of the contrasting experiences of the Ultraversity (the inspiration for the IDIBL approach) where it initially worked well and the Coeducate project where adoption has proved difficult.

In his work on business innovation, Christensen makes a distinction between 'sustaining' and 'disruptive' innovations. 'Sustaining Innovations' may be radical in nature or incremental in the way they develop a product, but in either case enhance existing products along a trajectory that would be recognised and valued by existing customers. Disruptive innovations on the other hand, bring a new 'value proposition' to the market and it is arguable that technologies that make online, distance learning are a potential enabler for disruptive innovation in the educational field (Christenson, et al., 2011, p.3).

However, according to the disruptive innovation theory, the reason why market leaders can be overthrown by new upstarts, is that they have strong in built filters that weed out any

innovation proposals that do not directly enhance existing products or services being offered to existing markets. Those that do manage to get by are quickly deprived of the resources needed to get to market for more 'important' existing products. In the cases where a company has succeeded in introducing a disruptive innovation, it has been done by setting up a separate and largely autonomous business unit with adequate start-up resourcing.

The IDIBL approach fits the disruptive innovation model well in that it is designed for an 'unserved' market segment. Its first instantiation as the Ultraversity at Anglia Ruskin proved successful with 148 graduates from its first cohort. However, it was set up as an autonomous unit, with its own enrolment and significantly reduced fee structure, with its own dedicated staff, wholly focused on supporting students online, and it addressed students in full time employment who were unable to stop working and devote the time needed to get a degree and were looking for a more convenient, and less expensive route to gaining a degree. In contrast, at Bolton, the IDIBL Framework was provided as a way of enabling existing staff, teaching existing courses, to take on a different kind of work-based and work-focused student. As outlined above, it has met with more limited success.

The Disruptive Innovation theory thus appears to provide a good explanation of the contrasting results between the two, as well as suggesting how best to take it forward. The IDIBL approach challenges existing modes of working, requiring staff to abandon much of their current knowledge and skills and develop new ones. It does not enhance their existing ways of working or address their current student segment. Further, it did not offer a separate course fee structure, nor were there administrative procedures in place to handle this kind of student. It therefore has all the characteristics of a disruptive innovation. Given this, the fact that it has actually made some degree of headway, is probably due to there being existing members of staff already in tune with its way of working and willing to take it on

In general, institutions can be expected to be hostile to these types of innovation since they are challenging to ideas of quality, the assumptions and the practices embedded in the organisational culture. In turn, this implies that, at an institutional level, a separate business unit will be required for these types of innovations to be adopted (Christensen, 2011, p.3).

This reflection needs more work to establish its validity, but the IDIBL model is arguably a classic example of a disruptive innovation, with the University internal filters (such as objections to its lack of discipline focus as a reason to reject it), but the overall approach has been proven to work at Ultraversity when it operated as separate unit. Knowing what we know now, we would not have tried to spread the innovation across the whole institution - instead we would have worked with a small group who would take it forward as a generic mechanism, with the goal of establishing it as a separate working unit as a key aim of the project, and this is what we are now working towards.

11.4.2 Institutional process support

It is impossible for IT Services to support different software products for every process, so as far as possible we require a single platform for all processes. This may not be popular approach as process owners like the idea of something tailored to their specific requirements.

In our institution we already have but MS SharePoint 2007 although it is very little used and has a poor reputation for usability, but its strength is that it integrates well with other systems.

Starting again, we would have first established an agreed platform for all process support across the institution with senior management and heads of functional departments and are now investigating an upgrade to (the more usable) Sharepoint 2010 as the default platform for process support as it is can integrate well, which allows a greater degree of user control over the way in which processes are supported.

11.4.3 Workshop support software

We would now have focused more on creating collaborative widget-based web tools which could be used by a group in a face-to-face workshop for creating and capturing activities, but also, as it became more established, in a synchronous and asynchronous but distributed activity. Widgets are a good way to go as they offer portability across devices.

12. Future progress

We believe that the two original ideas embodied in the IDIBL Framework including the work-focussed approach to learning and the approach to enable 'light weight' validation of courses by re-using and re-purposing documentation designed for that purpose are valuable.

In the current climate, there is little appetite for radical innovation, but finding an institutional context that is able to respond to these ideas would, we believe enable the development of viable provision of courses that meet the needs of currently unserved and underserved market segments.

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