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Learning from the early adopters: Web 2.0 tools, pedagogic practices and the development of the digital practitioner

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A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of Doctor of Education

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Copyright statement

Abstract

The radical and transformative potential of Web 2.0 tools to impact on learning has been widely discussed. Their promise is of participative, collaborative learning in which students are producers of knowledge, connected in learning communities. This thesis examines Web 2.0 tools in use in teaching and learning in a 'post 1992' university in the United Kingdom between 2009 and 2012. The focus is on how lecturers make use of the tools in their teaching; how the radical potential of these tools is harnessed in practice and how tensions and contradictions between Web 2.0 and traditional ways of learning are mediated. This phenomenological in-depth study utilises a small sample of lecturers, the 'early adopters' of Web 2.0 technologies, and focuses on their personal journeys in relation to making changes in their pedagogic and broader academic and professional practices.

The study concludes that early adopters have similarities, independent of the subject that they teach, in terms of their beliefs and attributes: they are willing to experiment with change: they are confident in their approach to Technology Enhanced Learning: they understand the radical pedagogical possibilities of the application of Web 2.0 tools: they balance risks associated with adopting new practices with an understanding of their potential: they are willing to invest time in exploring and evaluating Technology Enhanced Learning. The motivation that drives the early adopters to adopt new Technology Enhanced Learning practices is their commitment to enhancing their students' experience by making the learning more participative and collaborative. They believe that Web 2.0 practices have the potential to support this objective. Whilst change can be ontologically challenging when adopting practices which are disruptive to existing norms and routines, these early adopters do not experience adoption of Web 2.0 tools in this way. This thesis argues that this is because the changes are concomitant with the early adopters' orientation to teaching and learning. The study also highlights the complexities of the decision to adopt new practices which can be emotionally challenging, associated with feelings of uncertainly or liminality, and involve juggling conflicted notions of the self and ideas of 'giving up'.

The study adapts Sharpe and Beetham's Digital Literacies Framework and proposes the *Digital Practitioner Framework* depicting lecturers' characteristics in relation to the adoption of Technology Enhanced Learning practices. The model is holistic, in that it represents not just the skills associated with being a digital practitioner, but also beliefs and values, practices and access. The model is used to understand the process of adoption of technology mediated learning by the early adopters in this higher education institution. The implications for lecturers' development are also discussed.

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Bennett, E. (2012) *The early adopters on the verge of giving up* Losing momentum? Paper presented at the Current challenges in learning and technology University of Oxford, Oxford

List of abbreviations

BECTA	British Educational Communications and Technology Agency
CCSF	Conceptual change/student focussed
CLEX	Committee of Enquiry into Changing Learning Experience
CPD	Continuous Professional Development
DIUS	Department of Innovation, Universities and Skills
ELIR	Enhancement Lead Institutional Review
FE	Further Education
HE	Higher Education
HEA	Higher Education Academy
HEI	Higher Education Institution
HEFCE	Higher Education Funding Council England
ICT	Information and communication technologies
IPA	Interpretative Phenomenological Analysis
IT	Information technology
ITTF	Information transmission/teacher focussed
JISC	Joint Information Systems Committee
LLiDA	Learning literacies in a Digital Age
LMS	Learner Management System
MOOC	Massive Open Online Course
MSN	Microsoft Network
NSS	National Student Survey
NUS	National Union of Students
ODL	Online and distance learning
OU	Open University
PCK	Pedagogical Content Knowledge
PLE	Personal Learning Environment
PLN	Personal Learning Network
QAA	Quality Assessment Agency
RAE	Research Assessment Exercise
REF	Research Excellence Framework
RSS	Really simple syndication
TA	Template Analysis
TEL	Technology Enhanced Learning
TLRP	Teaching and Learning Research Programme
TPCK	Technological Pedagogical Content Knowledge
UCISA	University and Colleges Information Systems Association
URL	Universal Resource Locator or web address
USP	Unique selling point
VLE	Virtual learning environment

Glossary

Aggregator	A web service which collects the RSS feeds chosen by a user into one place and sends them to the user. The service is a way of simplifying the many places that a user might want to visit to get information from the web.
Blog	Web-log, an web diary. Each diary entry can be tagged so that entries can be grouped together. Often blogs can be controlled so that they can be controlled so that they can be private, or viewed by a group of people or can be public.
eportfolio	Online tools for collating students' work to evidence their study.
Folksonomy	The process of organising the web through use of 'bottom up' user generated taxonomy rather than a hierarchical or 'top down' one.
Instant messaging	Service by which users chat to each other using text over the internet.
Mashup	The incorporation of one web service into another web site. For instance where a Google map is incorporated into a page giving contact information.
Microblogging	A web service based on short messages. Users follow other users people's postings.
Podcasts	Audio files which are syndicated.
Social bookmarking	Allow a user to save web site URLs in one place. URLs can be tagged enabling groupings. Because the URLs are stored on the web they can be shared with other people and enable others to explore.
Syndication	Placing a RSS feed on a web service which enables users to subscribe to the service via an aggregator.
Tag	A word or phrase used to label web entries. Tags are then used by the web tools to group entries tagged with the same word.
Tweet	Short (up to 140 character) message sent to the microblogging site Twitter
VLE	Virtual Learning Environment, a collection of tools and services provided by an institution to support teaching, learning, and assessment eg Blackboard.
Web 2.0	Tools and services which are web based and are participatory and or collaborative in nature.
Wiki	A web page that can be easily edited, often by a number of people. The history of edits is stored and thus it is possible to see who has contributed to the page's development.

Chapter 1 Introduction

This study explores the experiences of lecturers in one 'post 1992' university in the north of England, as they adopt Web 2.0 tools in their teaching and learning practice. It is concerned with what can be learned from listening to the 'stories from the field' of those who are grappling with the technology and the challenges that it presents. The premise is that these 'early adopters' have a wealth of experience of the practical, philosophical and pedagogical challenges in the use of new elearning tools in teaching and learning and by capturing their stories, that is their personal and professional journeys, we can learn about what motivates them and how their teaching and learning practices are changed by using Web 2.0 tools. In particular, the focus is on the potential of Web 2.0 tools for radically altering the structures and form of learning.

The study explores lecturers and their responses to change. Of course there are many types of change shaping the practice of HE lecturers. On the one hand institutions are subject to national and international influences such as globalisation, massification of HE, an increase in non traditional students (Bradwell, 2009, p.18), reduction in funding in real terms (Bradwell, 2009, p.24) and more flexible modes of delivery (Bradwell, 2009, p.20). On the other hand, within institutions change can be initiated from the top down, that is a localised strategic directive (for instance the adoption of an institutional VLE). This study is concerned with exploring the lived experiences of lecturers in response to one particular change, that of the adoption of new technology.

Web 2.0 and the broader technological context

The focus for the study is on Web 2.0 tools in teaching and learning. The definition of Web 2.0 is contested. The original developer of the web, Tim Berners Lee, considers it to be lacking any coherent meaning (2006). The term was coined by Tim O'Reilly in 2004 and he characterises seven principles[1] behind Web 2.0 tools that make them successful (O'Reilly,

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[1] These are the web as platform, harnessing collective intelligence, data is the next 'Intel inside', end of the software release cycle, lightweight programming models, software above the level of single device, and rich user experiences.

2005). However, O'Reilly's characteristics do not constitute a definition and are drawn from the impact on businesses rather than how they can be applied to education. Becta, the government funded organisation that promoted the use of ICT in schools[2], describes Web 2.0 as:

> a catch-all term to describe a variety of developments on the web and a perceived shift in the way the web is used. This has been characterised as the evolution of web use from passive consumption of content to more active participation, creation and sharing – to what is sometimes called the read/write web. (Becta, 2011)

The term encompasses both technologies and services. Examples of technologies include blogs, that is an online diary, or a wiki, a web page and examples of services are photo sharing and video sharing sites (such as Flickr and YouTube). The critical defining feature of Web 2.0 is that it allows users to participate and collaborate in activities over the web. As Crook says:

> Web 2.0 is a set of internet services and practices that give a voice to individual users. Such services thereby encourage internet users to participate in various communities of knowledge building and knowledge sharing. (2008, p8)

The term 'Web 2.0' comes from the software industry where the integer value indicates a step change in functionality. Thus 'Web 2.0' suggests a significant change in functionality over 'web 1.0'. Hence 'web 1.0' is the term associated with passive use of the web, that is reading web pages, whereas Web 2.0 enables users to contribute, create and share material via Web 2.0 tools and services. There are a number of ways of grouping Web 2.0 tools and services. Both Crook (2008, p.10-13) and Armstrong and Franklin (2008, p.7-9) identify the following categories;

- Blogs;
- Wikis;
- Social networking;
- Social bookmarking;
- Aggregators/syndication services;
- Media sharing.

Armstrong and Franklin (2008, p.7-9) have a further group that they call 'other' which include mash ups, conversation, games and virtual worlds, collaborative editing, whereas Crook

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[2] Up to its demise in 2010

(2008) separates each of these into separate categories and in addition has categories trading and recommender systems. In a nascent area such as Web 2.0 the categories are evolving. For my study I used the following list as a prompt to participants, which is similar to the categories identified by both Crook (2008) and Armstrong and Franklin (2008):

- blogs
- wikis
- collaborative editing sites; e.g. Google Docs
- tagging and social bookmarking; e.g. del.icio.us
- multimedia sharing services; e.g. Flickr, Youtube
- content syndication, podcasting e.g. iTunes
- Social networking sites and social presence; e.g. Facebook, Ning, Twitter
- Discussion forum;
- Instant messaging; e.g. MSN, Skype
- Massively multiplayer online games; e.g. SecondLife.

The features of Web 2.0 tools and services are worthy of some consideration. Crook (2008) has summarised these as:

1. Scaling up participation, where quality of the service is improved with greater number of participants;

2. Sharing and joint knowledge building functions i.e. user collaboration;

3. Using a range of formats, not just text e.g. video and picture and audio;

4. Rich and democratic forms of participation means there are novel frameworks for research and inquiry (p.9).

These four characteristics provide the basis for understanding the potential for these tools to change ways of communicating and to allow for 'radical' changes in teaching and learning practices. Technology has always heralded change and often been accompanied by over exaggerated or inaccurate claims for its potential. Thus terms like 'radical' need to be treated with caution and scepticism. Chapter 2 discusses the potential of Web 2.0 and provides a discussion of the philosophical understanding of Web 2.0 tools as socially mediated practices rather than merely tools and services.

The terminology associated with Web 2.0 tools needs clarifying. Language is not fixed and this is even more apparent in a fast moving subject such as technology. Fashion affects

terms and their usage too. This thesis was written during autumn 2011 and spring 2012 when the terms most frequently used to refer to the collaborative and participative nature of web services and tools is Web 2.0 but they are also known as social media or the social web. Within this thesis I refer throughout to Web 2.0 tools, by which I mean tools and services, however in the vernacular language of the interview data, lecturers have often used 'Web 2' as a shortened version of the term.

The rise of Web 2.0 is paralleled with other changes in society in relation to technological familiarity and uptake. These factors include the rise in levels of technical competence in the population, the rise in ownership of technological tools and easier access to the internet via broadband (Bradwell, 2009, p.25). In addition, recent years have seen a growth in the popularity of social networking (Bradwell, 2009, p. 25) and a familiarity and acceptance of the web particularly amongst young people who have grown up never knowing the pre-internet era. Whilst these are not the focus of this study they are part of the context for the study.

Impact of Web 2.0 on higher education in UK

Higher Education, both at the level of an individual institution and the sector as a whole, is coming to terms with the impact Web 2.0 technologies can, will and should have on its practices. Web 2.0 tools have the potential to affect not just teaching and learning, but also marketing and reputation management, the geographical reach for courses, research and scholarship, and the relationship between formal and informal learning. Some of the changes that Web 2.0 tools and services portend for HEIs include:

- A rise in open content where HEIs are making available their course materials e.g. Massachusetts Institution of Technology's open learning, OU's Open Learn, iTunesU (Bradwell, 2009, p.45);

- Possibility of working collaboratively across institutions to create courses (Bradwell, 2009, p.45);

- Ability for students to talk publically about aspects of their university life has impact on the reputation of individuals and institutions (eg ratemyprofessor and Twitter). Bradwell calls this an environment of transparency (2009, p.40);

- The involvement of stakeholders in course design is made possible by collaborative tools. Technology also enables universities to understand their students' world more readily;

- Universities can also make their knowledge more readily available to the public through use of the web and a commitment to openness through sites such as Scribd (Bradwell, 2009, p. 44);

- Changes to ways libraries operate is possible through Web 2.0 with user recommendations, networking across institutions (Bradwell, 2009, p.44).

- New forms of institutions with affiliations between institutions (Facer, 2009, p.4);

- New types of courses and need for lifelong learning opportunities (Bradwell, 2009, p.47; Facer, 2009, p.6).

The focus here though, is on teaching and learning practices rather than the other facets of an HEI. (Although in practice the functions of an HEI impact on one another. For instance, the case study institution's decision to develop a continuous professional development (CPD) programme to try to capture the potential for accrediting work based professional learning also led to increased focus on elearning practices.)

Focussing on teachers' practices

There have been a number of studies of Web 2.0 from students' perspectives. For instance, the SPIRE project (White, 2007) surveyed students to find out their levels of use of Web 2.0 tools, Creanor et al. (2006) examined students' attitudes to using technology and Conole et al. (2006) and Ipso Mori (2008) explored students' expectations of using technology in their studies. In addition, a national enquiry into the impact of Web 2.0 tools on the behaviour and attitudes of learners entering higher education was set up in 2008 and reported in 2009 (Committee of Enquiry into Changing Learning experience). However many academics have commented on the paucity of literature which focuses on the tutors' perspectives; see for example Crook (2008, p.54), Attwell and Hughes (2010, p.5), Kop (2010, p.278), Vogel (2010, p.3). Where there has been attention given to the impact of Web 2.0 tools on teaching, learning and institutional practices in HE, little of this is empirically derived. Examples of work that is not empirically derived on this subject include Bridges (2000); Cope and Kalantzis (2008); Dohn (2008); and Jones, (2008).

Support for focussing on tutors' practices is outlined in Rebbeck and Ecclesfield (2008) who argue that e-maturity, that is "the extent to which organisations, within the education system within the UK use technology effectively to support learning, teaching and other business processes, including management" (p.1) is dependent on the skills of the teaching staff:

It is now widely appreciated in the sector, that whilst having equipment and networks is important it is the change in approach to utilising technology and the resultant changes that brings to the working practices, that enables practitioners to get the most from equipment that is the most important factor. In other words, the issue for providers is the ability to adapt and change practitioner behaviour and the sophistication of that adaptation – that is, as human potential or capability of the staff -– linked to the capacity of the College in terms of hardware, software and networks that more fully describes organisational e-maturity. (2008, p.2)

The need to focus on the lived experiences of lecturers is supported by Crawford (2008, p.141) who argues that it is necessary to understand from academics themselves the way that continuing professional development is thought of and how they integrate the activity into the other aspects of their working lives. Jephcote and Salisbury (2009, p.967) agree saying that their focus on FE teachers' biographies can "shed light on the interactions between professional identity and agency and how this impacts on their professional practices in times of change". Of course there are limitations of taking a 'bottom up' view of the world in that the structural issues and the way that they valorise or control innovation may be obscured (Jephcote and Salisbury, 2009, p.969). This notion will be explored in the conclusion (Chapter 10).

Focussing on 'early adopters'

Rather than explore a wide range of lecturers and their views on technology, this study will instead focus on the early adopters (of Web 2.0 tools in their teaching and learning practices). The term 'early adopters' is taken from Rogers' (1983) work on the spread of an innovation based on his synthesis of over five hundred studies of innovation in organisations and individuals. He characterises people in a social system into one of five categories according to their innovativeness; the 'innovators', 'early adopters', 'early majority' 'late majority' and 'laggards'. A summary of the characteristics of these five types is given in Appendix B. Figure 1.1 shows the relative proportion of each category and Figure 1.2 shows how the uptake of the innovation progresses with time.
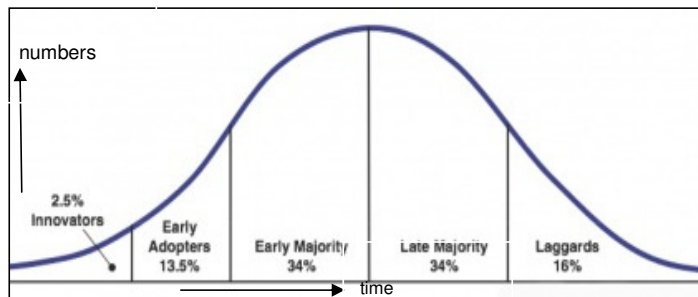
Figure 1.1 Rogers' Diffusion Curve (Source: Rogers, 2003, p.281)
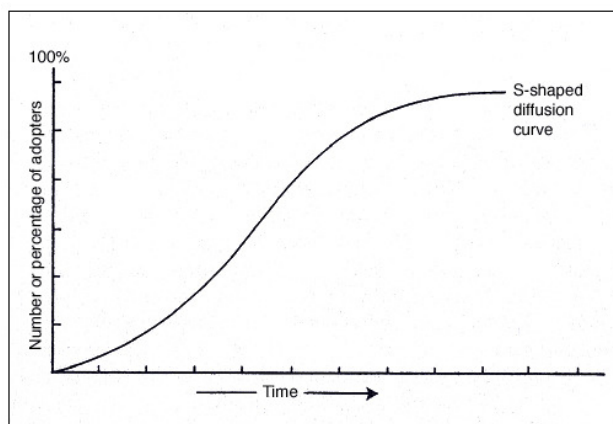
Figure 1.2 Rogers' S shaped diffusion of innovation curve (Source: Rogers, 2003, p.113)

Rogers provides some generalisations of the characteristics of innovators and early adopters compared to the later adopters. In particular, he suggests that innovators and early adopters have:

- a more favourable attitude toward change than later adopters;

- more ability to cope with uncertainty and risk than later adopters;

- a more favourable attitude toward science than later adopters;

- higher aspirations (for education, occupations, and so on) than later adopters;

- more social participation than later adopters;

- more highly interconnected in the social system than later adopters;

- more change agent contact than later adopters;

- more favourable attitude toward change than later adopters;

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- greater exposure to a wide range of influences including mass media;

- wider range of interpersonal communication channels through which they seek information about innovation more actively;

- a good knowledge of innovations;

- a higher degree of opinion leadership;

- are more likely to belong to highly interconnected systems (1983, p.257-259).

In this thesis I use the term 'early adopters' to incorporate both categories of early adopters and innovators for the sake of brevity. The reason for examining the perspectives of early adopters is that they hold the lived stories of practical implementation of Web 2.0 tools. As Armstrong and Franklin (2008, p.1) note "usage to date has been driven primarily by the particular interests of individual members of staff rather than institutional policies". Chapter 2 identifies a series of challenges and possibilities associated with Web 2.0 tools. My study aims to identify how lecturers in the categories early adopters and innovators, responded to these challenges and opportunities in practice.

In terms of the case study institution, Jenson and Folley (2011) in their report exploring the use that lecturers make of new technologies show low usage of Web 2.0 tools such as blogs, wikis, social bookmarking. Figure 1.3 shows that there is a high proportion of lecturers at the University who have never used any of the Web 2.0 tools: 72% have never used blogs, 81% wikis and 87% social bookmarking. It also shows a tiny proportion of lecturers who use these tools all the time or most of the time. This suggest that in the case study institution that progress in terms of the uptake of Web 2.0 tools is at the left end of Rogers' S shaped innovation curve (Figure 1.2).
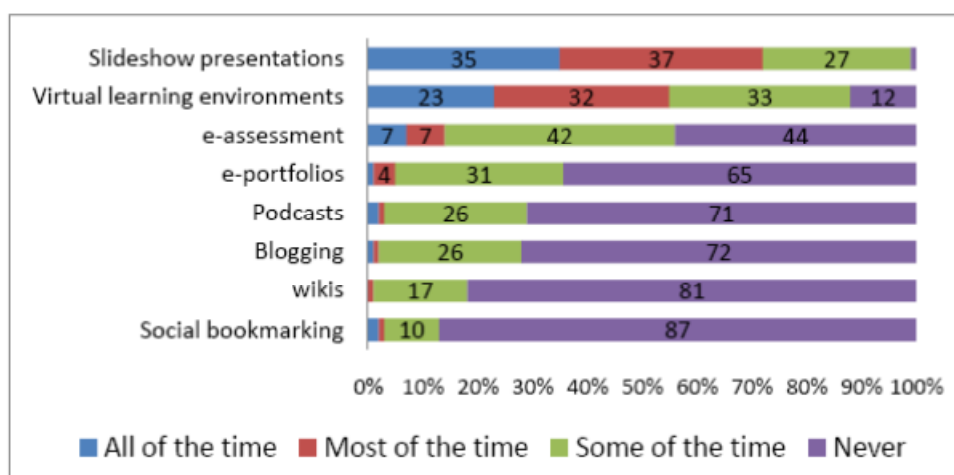
Figure 1.3 Usage of Technology Enhanced Learning (TEL) tools within the case study institution (Source: Jenson and Folley, 2011, p.9)

Table 1.1 provides data on the proportion of courses using Technology Enhanced Learning (TEL) for the particular purposes or approaches for all HEIs in UK. This data shows a much higher take up of TEL than is shown in the data in the case study University, Figure 1.3. This may relate to the data being over exaggerated by those responding the survey reported by Browne et al. (2010), or it may suggest that other institutions are making greater progress in terms of their adoption of TEL and active learning approaches.

	Discussion boards	Access to multimedia resources	PDP	Enquiry based learning	Collaborative working
100%	0%	1%	3%	1%	3%
99-75%	3%	8%	4%	14%	3%
74-50%	3%	13%	2%	58%	23%
49-25%	9%	37%	19%	4%	59%
24-1%	59%	30%	53%	22%	0%
0%	13%		7%		13%
Don't know/not answered		6%	13%		

Table 1.1 Proportion of courses that use Technology Enhanced Learning (TEL) tools for teaching and learning purposes in all HEIs in the UK (After Browne et al., 2010, pp.10-26)

Origins and orientations

My interest in this area is because I work with lecturers to develop their use of technology. In particular, I am course leader for a masters programme in elearning. Fundamental to this role is the belief that technology has the power to improve teaching and learning practices, although I also believe that its use does not guarantee this. The notion of what it means to improve teaching and learning, often called 'good practice', is something rarely defined. The Quality Assurance Agency (QAA) (2008) define good practice as:

a process, a practice, or a way of handling matters which, in the context of the particular institution, is improving, or leading to the improvement of, the management of quality and/or academic standards, and learning and teaching. (2008, p.2)

They go on to comment on the situated nature of these examples of good practice and how they should be seen as a "stimulus to reflection" rather than a "model for emulation" (2008, p.2). I agree that it is important to recognise the situated nature of 'good practice' which has imbued in each example a range of factors including the students' prior skills and knowledge and experience of learning, the tutor's characteristics including skills, knowledge and experience and the institutional context (including values, norms and practical issues such as what support is in place). Notwithstanding this proviso of the situated nature of good practice, the QAA's use of the term emphasises the move to learner-centred pedagogy (2009, p.8) which can be facilitated by Web 2.0 tools. Franklin and Van Harlem (2007) say Web 2.0 allows:

greater student independence and autonomy, greater collaboration, and increased pedagogic efficiency. (2007, p.1)

Although technology has potential, there is also a danger of technocentricity, highlighted by Vogel (2010, p.12), whereby academic developers look for quick returns from Technology Enhanced Learning (TEL) to comply with a particular policy agenda.

Van Lieshout et al. (2001) theorise the introduction of technology into education. They outline two well-established positions. The first is technological determinism where technology is seen to have a 'natural trajectory' based on economic models of product life cycles. The other position is the social construction of technology, in which technology is part of the social world and developments in use of technology need to be seen as inextricably linked to other social phenomena (Murphy and Rodriguez-Manzanares, 2008, p.41). My orientation to this topic is one of an enthusiastic sceptic aware of the charges of technocentricity and of technological determinism. Instead I see technology as being socially mediated. Chapter 2 page 29 returns to these issues.

Comment [EJB1]: page

Significance of the study

A number of national studies have highlighted the need for an understanding of the pedagogy of online learning. White et al. (2010) in their report to HEFCE, *Study of UK Online Learning,* conclude that:

> Pedagogic innovation is crucial to developing high-quality ODL courses...
> consideration should be given on how best to support new professional roles, such
> as online tutors and ODL programme managers. (2010, p.3)

HEFCE's Online Learning Task Force made six recommendations in relation to the development of online and distance learning in the UK, one of which is that training and development should be realigned to enable the academic community to play a leading role in online learning. In particular they note:

> There needs to be a stronger understanding of the potential of web-enabled learning
> and the use of social media, greater prioritisation of teaching partnerships between
> technologists, learning support specialists and academics. (Online Learning Task
> Force, 2011, p.7)

Ron Cooke (2008), chair of JISC, in his report to the Department of Innovation, Universities and Skills (DIUS) on the future of online learning, focussed on the need for institutions to be able to use ICT flexibly and imaginatively and that this requires staff to have appropriate online and support skills in exploiting open learning content (2008, p.9 and p.15). In addition, a national survey of Directors of IT Services in UK HEIs showed that one of their principal concerns was for "the use of Web 2.0 technologies and systems to supplement the official VLE" (Browne et al., 2010, p.5).

Nationally the uptake of Web 2.0 tools within teaching and learning practices is reported as low. Armstrong and Franklin (2008, p.1) talk about their use being in 'hot spots' where 'early adopters' are trying out new things rather than being widespread. Likewise the *2010 Survey of Technology Enhanced Learning for higher education in the UK* showed low levels of use of TEL practices which involved active engagement with the learning (i.e. enquiry based learning; Personal Development Planning (PDP); collaborative working) (Browne et al., 2010, p.26).

The Committee of Inquiry into the Changing Learner Experience (CLEX) published a major report into the impact on higher education of students' widespread use of Web 2.0 technologies. It identified staff skills in using Web 2.0 tools as a "critical issue" for the sector (CLEX, 2009, p.7). The skills they refer to are in both mechanical operational skills in using Web 2.0 tools but also the ability to apply the tools to effective teaching and learning practice. They also identify the need for lecturers to develop skills in information literacy in the light of the burgeoning array of online media available. Indeed they talk about the role of the tutor as being the "single issue which is fundamental over time" (2009, p.9).

National context

During the period of the study there was considerable change at national level that had an impact on the climate in higher education institutions in England. In May 2010 the Labour government was replaced by a coalition of the Liberal Democrat and Conservative parties. The incoming Coalition Government sought to reduce public spending and the comprehensive spending review in autumn 2010 and the Browne Report into the funding of HE (An independent review of higher education funding and student finance, 2010) heralded some radical changes to funding of HEIs. This resulted in the removal of HEFCE funding for many courses and with an increase in the proportion of funding coming via students' fees. In addition the coalition government intensified the marketisation of higher education by allowing other providers, such as colleges of further education and private institutions to deliver courses (An independent review of higher education funding and student finance, 2010).

These forces have had an impact on different parts of the sector. Academics are likely to feel under increased pressure in terms of the security of their jobs and a focus on their individual performance. At the level of the sector, Gourley described the coalescence of factors as a "perfect storm" (2008, p.1) that is, setting up the conditions for radical and disruptive change.

The local context and timing of the study

This study is set in a 'post 1992' university in the north of England. The institution has around six hundred permanent full time and one hundred permanent part time academic members of staff (including its senior staff). It has around twenty four thousand students studying (including full time and part time, undergraduates and postgraduates). The current Vice Chancellor took up post in 2007 and introduced a strategic plan driven by some critical data including National Student Survey (NSS) data.

Data gathering for this study took place between June 2009 and April 2011 with the majority being gathered in early 2011. The date is of relevance because in a fast moving area, that of Technology Enhanced Learning, TEL, attitudes and skills are mutable. In addition, it is useful to note the national and local context which will have had an impact on the study. The case study institution, along with other HEIs, is seeking to reposition itself to cope with the changes in the HE funding landscape mentioned above. There is an increased priority on

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income streams other than the undergraduate HEFCE-funded numbers. This includes research income, international students and 'third stream' activity. There is an increased focus on external measures of success such as the National Student Survey (NSS). In addition the institution is pursuing an agenda to encourage more lecturing staff to gain doctoral qualifications and to become fellows of the Higher Education Academy (HEA).

Terminology

I have already discussed the term 'Web 2.0' and how it is used in this thesis. However there are other terms that need clarifying. I have used 'lecturer', 'tutor' and 'teacher' interchangeably. Although the terms might be contested, in that a lecturer's function is arguably broader than that of a tutor or a teacher because it covers research as a key component, given the focus of this study being on teaching and learning practices the variety gives more stylistic freedom. Likewise, I have also used the term colleague to refer to lecturers and this reflects how I perceived the participants in the study. Further discussion on the nature of my relationship with participants is given in Chapter 3 Section *Reflexivity.*

Throughout my study I have referred to the general practice of the adoption of technological tools to support learning as 'elearning' or 'Technology Enhanced Learning' (TEL). These terms are used interchangeably. Although as Bayne (2012) has commented, the term 'Technology Enhanced Learning' is problematic as it implies that the current educational paradigm is in need of improvement rather than radical overhauling. The institutional virtual learning environment (VLE) is referred to frequently in interviews by its trade name Blackboard.

Throughout this thesis, I define my study as concerned with 'bottom up' innovation and contrast this with 'top down' approaches to refer to the institutional directives. However, as Manches et al. (2010, p.37) note, these terms are not used universally in this way. From the perspective of national policy makers 'bottom up' may be used to refer to institutional initiatives and 'top down' is used to refer to government and its agencies.

As I noted above, for the sake of brevity, I use the term 'early adopters' to incorporate both Rogers' (1983) 'early adopters' and 'innovators' categories.

Aims of the study

The aims of the study are:

1. to explore how HE teachers make use of Web 2.0 tools within their teaching and learning practices;

2. to consider how lecturers are supported and/or hindered by the institutional context in which they work in terms of innovating their teaching practices;

3. to examine any changes in lecturers' identity and role brought about through the adoption of Web 2.0 tools and techniques;

4. to examine the skills and practices needed and how these are acquired when teaching using with Web 2.0 tools;

5. to theorise the underpinning relations between data collected and thus to contribute to knowledge in these areas.

Organisation of the thesis

The thesis starts with a discussion of some of the literature that is pertinent to the study and its design. Chapter 3 covers the rationale underpinning the methodology. It also addresses the approach taken to the analysis of the data and the characteristics of the sample. Chapters 4-9 present the findings, with the data integrated with a discussion and theorisation of the findings. Chapter 4 focuses on Web 2.0 tools and how they are being used in practice. Chapter 5 examines Web 2.0 tools and their impact on pedagogy. Chapter 6 focuses on how the impact this sort of change has on lecturers emotionally. The theme covered in Chapter 7 is the impact of these changes on lecturers' identity and role. Chapter 8 is called *The Digital Practitioner* and explores the characteristics of lecturers who are confident in the use of Web 2.0 tools and Chapter 9 examines how lecturers gain the skills, practices and attributes of a confident digital practitioner. Finally, Chapter 10 concludes the thesis by synthesising the themes that have been explored in the findings, clarifying the thesis' unique contribution to knowledge and discussing the areas for further development suggested by the thesis.

Chapter 2 Exploring the ideas driving the study

Introduction to the chapter

This chapter focuses on the ideas that underpin the design of the study. The study is concerned with the adoption of new technological tools made possible through the emergence of the web. It is concerned with how these tools are translated into teaching and learning practices in one HEI. It is also concerned with the challenges that individuals experience as they undertake to make changes to their teaching and learning practices. There is a focus on the skills lecturers need and how these are acquired, and the institutional structures and practices and how they mediate change.

This chapter takes some of these topics to explore in more detail. In particular, the way that tools are conceptualised within human activity is explored. This situates my discussion of technology as socially mediated practices rather than focussing on the technology distinct from its application. The concern for Web 2.0 tools is that they have the potential to enable something different and radical to occur in the classroom. The chapter then explores new pedagogies suggested by use of Web 2.0 tools and the ways that these might be considered to be radical. The focus on the role of the teacher within these pedagogies is discussed. New pedagogies throw up some challenges for teachers and learners and the study will explore how these are experienced and accommodated in practice. The chapter reviews the literature related to these tensions. The notion of students' digital literacy is an important concern which relates to the uptake of technology in learning and this is addressed in particular. Likewise the notion that the teachers' authority is challenged with use of Web 2.0 tools is a tension which is a particular focus. Teacher identity and how they cope with change is a theme which is explored. It includes the idea of liminality, used in relation to lecturers' personal developmental journey. Finally, some of the literature which addresses teacher development is considered with a particularly focus on issues of structure and agency.

This chapter does not address all the literature which has been used in the findings chapters (especially Chapter 6, *The emotional journey*, and Chapter 8, *The Digital Practitioner*). Some of the literature used to inform the analysis are introduced alongside discuss of the findings.

The chapter is structured around six headings:

- The nature of Technology Enhanced Learning literature;

- Technology as socially mediated practices;
- Web 2.0 affordances and pedagogies;
- Role of the teacher in Web 2.0 pedagogies;
- Tensions in use of Web 2.0 tools in teaching and learning;
- Digital literacies;
- Authority and Web 2.0;
- Teacher identity;
- Change and liminality;
- Teacher development and technology.

The nature of Technology Enhanced Learning (TEL) literature

The nature of the literature in the field of TEL is problematic in some regards. Much of the literature is supported by funding bodies such as JISC and BECTA. This literature is referred to as 'grey' and is characterised by having not been subject to the conventional processes of peer review required for an academic journal. However, it can have some merits in terms of its currency and, like all literature, needs to be treated critically. In addition to 'grey' literature, I have drawn from other, less conventional sources, predominately blogs. I have been mindful of the provenance of the blog's authors and have only drawn from writers whose authority is established through their conventional publication record. In using blogs I am aware of the limitations of this medium for academic scholarship. Weller (2011, pp.155-165) makes two arguments related to the scholarly value of using Web 2.0 sources; firstly that the web has a tendency towards superficiality compared to the detail and in depth analysis that one gets from a journal article. Secondly, he notes the danger that the source may not have any robust claim to reliability and validity in the way that arguments are constructed. I would add that there is another danger, that the web over amplifies the significance of some people's contributions through popularity which may not be based on scholarly principles. (Although Eysenbach's (2011) study revealed that in fact the number of tweets about an academic article was linked to how frequently it was cited in conventional academic ways, thus suggesting that social media may be able to predict academic credibility.)

My decision to draw on blog sources is, in part, because knowledge in the field of TEL is fast moving. This has a number of implications: firstly, that interesting ideas do not always get written up into fully articulated, nuanced discussions. As Crook argues "researchers may be deterred from entering – lest their findings seem irrelevant by the time they come into public

view" (2008, p.54). Secondly, during the course of the writing this thesis ideas that originally appeared as blog postings have been translated into more scholarly publications. For example White's (2009) blog post about his ideas on the Digital Residents and Digital Visitors Principle which has subsequently been published in *First Monday Journal* in September 2011 (White and Le-Cornu, 2011). The ability to accurately identify postings of worth is a judgement and the fact that some of the blog postings used to inform my discussions have subsequently been published in more conventional academic sources enables me to demonstrate that I have made sound decisions about the validity of the less conventionally academic sources that I have used to frame the development of my thesis.

In creating this literature review my focus has been driven by using literature that is generic rather than discipline focussed. I have also emphasised both currency and provenance of the literature in my selections but have used judgement in terms of the limitations of 'grey' literature compared to more academic sources.

Technology as socially mediated practices

Inherent to my study is a danger of over emphasising the technological Web 2.0 tools rather than considering them as artefacts being used to carry out particular functions. This concern comes to the fore when discussing the affordances of Web 2.0 tools. The term affordance was adopted by Gibson (1979) as being a fixed property of the technology and how it is applied in practice. Oliver argues that the term "is now too ambiguous to be analytically valuable" (2005, p.402) and concludes his discussion of the term by saying "we should just avoid calling what we study 'affordances'" (2005, p.412). However McCrory Wallace (2004, p.451) provides a helpful reinterpretation of the term as the "possibilities for what the technology can do". As McCrory Wallace (2004) explain an affordance lies between 'features' – the objective functions or properties of a technology – and 'use' of a tool, that is, the uses that the user makes of the tool. McCrory Wallace's definition of affordance emphasises the socially constructed nature of the term and addresses the concerns raised by Gibson's definition.

Understanding technology as an artefact applied to a social practice is a perspective derived from a Marxist view that the relationship between technology, attitudes and practices is a dialectical one. Hence technology is developed out of and in relation to certain human practices (Engeström, 2001; Kaptelinin and Nardi, 2006). Activity Theory has offered a particular perspective on understanding tools as artefacts used in the service of human

actions and it places the attention not on the tool but rather on the macro and micro contexts and on practices and systems using technological tools (Bennett, 2009). Luckin's (2010) work on the learning context is drawn from Activity Theory and recognises the importance of the task being undertaken, the environment and the technological tools (see Figure 2.1). The arrows on her diagram indicate the influences between the components and show that these influences are bidirectional in that elements influence and are influenced by other parts of the system.
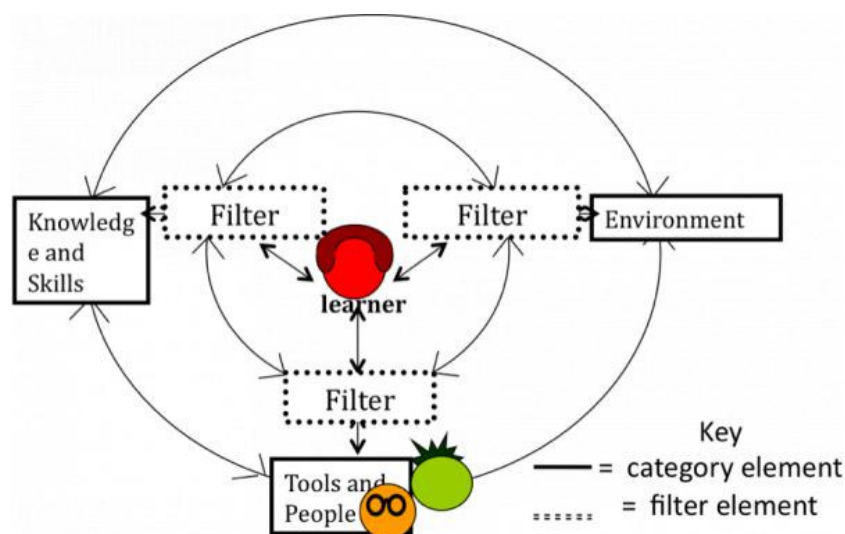
Figure 2.1 Luckin's Ecology of Resources Model (Source: Luckin, 2010, p.94)

Luckin (2010) also emphasises the mediating role of filters: so knowledge is mediated by factors that affect a learner's access to knowledge (and likewise the environment and resources). Thus, for example, a knowledge of number is a form of knowledge but the way that it has been taught and learnt through the delivery of the curriculum is a knowledge filter. Figure 2.2 illustrates how this applies to a project which explored and modelled the interactions between a learner, the home context and the school.
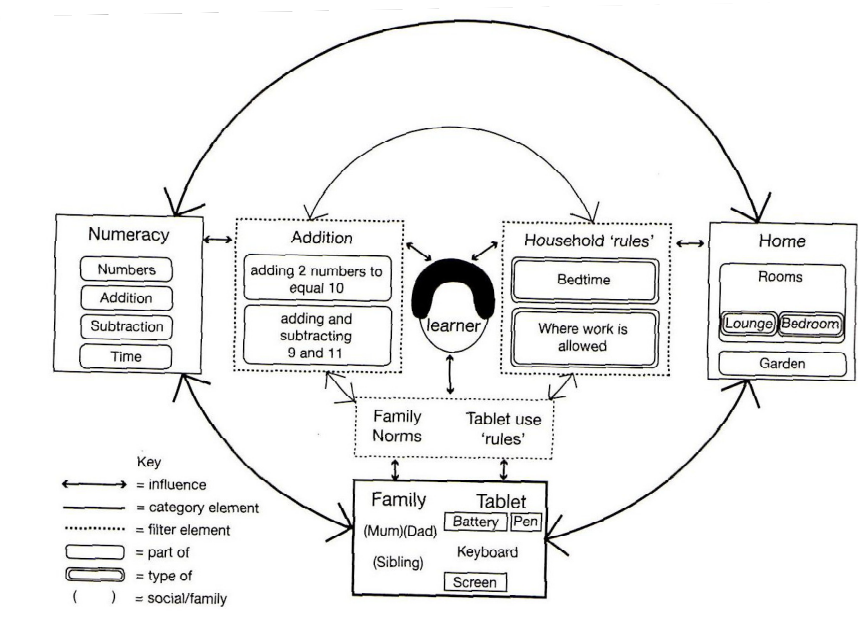
Figure 2.2 Luckin's Ecology of Resources model for homework (Source: Luckin, 2010, p.126)

Whilst not explicitly derived from Activity Theory, the Capital Project (Curriculum and Pedagogy in Technology Assisted Learning) explored and theorised the potential for using technology in schools. It proposed a Generative Framework which identifies four contextual themes: the environment, the learning context, agents and tools. They suggest that these provide a language to help reflect and act upon practice (Manches et al. 2010). These map closely onto Luckin's (2010) three 'context elements': environment, knowledge and skills and tools and people.

Contextual Theme	Description	Key Influential factors
Environment	The different settings (e.g. home, museum, school) and how the setting space is designed	Home –School setting Learning Spaces
Learning Content	The knowledge and skills that learners are taught e.g. the curriculum	Curriculum Flexibility Assessment Culture
Agents	Teachers and educational leaders but also other people involved such as assistants, parents, technical support	Leadership Teacher skills/confidence
Tools	Tools refers to materials to support learners, in this context the technology- important who designed it and for whom and how well it works in different contexts	Reliability Appropriation of available tools

Table 2.1 Generative Framework showing Contextual Factors and related factors associated with the adoption of technology in schools. (Source: Manches et al., 2010, p.31-33)

Rather than focussing on Web 2.0 as tools or services, Dohn (2009) argues for them to be considered as practices or activities for which most or all of the following characteristics apply:

- collaboration and/or distributed authorship;
- active, open-access, 'bottom up' participation and interactive multi-way communication;
- continuous production, reproduction, and transformation of material in use and reuse across contexts;
- openness of content, renunciation of copyright, distributed ownership;
- lack of finality, 'awareness-in-practice' of the 'open-endedness' of the activity;
- taking place on the WWW, or to a large extent utilising web-mediated resources and activities. (Dohn, 2009, p.111)

Drawing on the work of Dohn (2009), Luckin (2010) and Manches et al. (2010), Web 2.0 can be seen not just as a tool, but as a set of practices used within a particular environment, in order to help to achieve certain learning tasks. This is the perspective that has informed the thinking in this thesis.

Web 2.0 pedagogy: what is radical?

The literature is littered with discussion of the possibilities of Web 2.0's affordances in relation to pedagogy. Crook (2008) discusses their fit with current dominant educational paradigms:

> the affordances of Web 2.0 seem to harmonise well with modern thinking about educational practice. In particular, they promise learners new opportunities to be independent in their study and research. They encourage a wider range of expressive capability. They facilitate more collaborative ways of working and they furnish a setting for learner achievements to attract an authentic audience. (2008, p.4-5)

Crook was writing about the use of tools in schools but the same values of learner-centred, activity based learning are defined as 'good practice' in the higher education sector. The Committee of Enquiry into Changing Learning Experience (CLEX) (2009) suggests that one of the values of Web 2.0 tools is that they "offer a sense of being a contributing member of a learning community" and this, they assert, is one the defining features (hallmarks) of HE. The CLEX report states:

Web 2.0 technologies fit perfectly with a particular pedagogic approach – the constructivist approach – which holds that learning is most effective when active – by doing; undertaken in a community; and focused on the learner's interests. (2009, p.36)

Other writers have noted the potential of Web 2.0 tools to support constructivist approaches to teaching. Bradwell (2009) argues that there are radical new forms of teaching that are active and engaging, and which promote skills in managing and analysing information, to engage and work with networks of people. He argues that these new forms of teaching are not yet the norm (2009, p.42). Deng and Yung (2011, p.441) suggest that the affordances of blogging tools support constructivist learning activities focussed on self-expression, self-reflection, social interaction and reflective dialogue.

A raft of new types of pedagogy have been suggested that capture some of the ways that Web 2.0 can be used in learning (and teaching). Table 2.2 summarises some of the new pedagogies. They have some common features: all make use of the possibilities of technology to connect with other people, to build a learning community and to contribute to discussions through online participation. They place emphasis on the role of the learner as the agent in the learning process. As such they fall within Sfard's participation metaphor of learning (rather than learning as acquisition of knowledge) (Sfard, 1998). Epistemologically they locate knowledge as being fluid and participatory. Hence the focus is on learning how to do things, and how to learn with other people, rather than about transmission of knowledge from the institution to the learner. Indeed, there is a blurring of the distinction between teacher and learners, between knowledge makers and knowledge users (Cope and Kalantzis, 2008), for Downes "collapse of the distinction between teacher and student altogether" (2005), for Davidson and Goldberg "flattened out contributions to knowledge making, too, making them much less the function of a credentialed elite and increasingly collaboratively created" (2009, p.25). Willey has suggested that the potential of the digital medium and its application to learning has several new aspects; from being isolated to being connected in the learning process, from being generic to being a personalised experience, from being about consuming knowledge to creating knowledge and from learning in a closed environment to being open in the learning process (Wiley, 2008, np).

Table 2.2 Web 2.0 pedagogies (After Beetham et al., 2009, p.12).

Name	Summary	Role of tutor	Originators
Emergent	Learning which arises out of the interaction between a number of people and resources, in which the learners organise and determine both the process and to some extent the learning destinations, both of which are unpredictable (2011, p.3).	Learners are self organising. Moderation occurs through constraining negative behaviours. Encourages resilience ie learning from mistakes rather than robustness. Emphasises retrospective coherence in the learning, rather than forcing compliance.	Williams et al. (2011)
Connectivism	Development of network of trusted people, content and tools. Knowledge is distributed across an information network and can be stored in a variety of digital format.	There is no overarching tutor. Knowledge resides in the network and is produced by interacting nodes. Emphasis is placed on the extent of one's network.	Siemens (2004) Downes (2006)
Participatory Learning	Participatory learning includes the many ways that learners (of any age) use new technologies to participate in virtual communities where they share ideas, comment on one another's projects, and plan, design, implement, advance, or simply discuss their practices, goals, and ideas together (2009, p.12).	Breakdown of conventional modes of knowledge creation. Knowledge is verified through collective checking.	Davidson and Goldberg (2009)
Rhizomatic learning	Knowing is a long process of becoming (think of it in the sense of 'becoming an expert') where you actually change the way you perceive the world based on new understandings. You change and grow as new learning becomes part of the things you know.	Knowledge validated through peer review.	Cormier (2008)
Learning 2.0	Learners' familiarity with online spaces opens up new spaces and styles of learning focussed on collaborative knowledge building, shared assets, breaking down distinction between knowledge and communication Learning is characterised not only by greater autonomy for the learner, but also a greater emphasis on active learning, with creation, communication and participation playing key roles, and on changing roles for the teacher, indeed, even a collapse of the distinction between teacher and student altogether.	"changing roles for the teacher, indeed, even a collapse of the distinction between teacher and student altogether" (Downes, 2005).	Downes (2005)
Networked learning	Learning in which ICT is used to promote connections: between one learner and other learners; between learners and tutors; between a learning community and its learning resources (2004, p.1.).	Teacher as learning designer. Knowledge is validated through critique in communities of practice.	Goodyear et al. (2004)

Ubiquitous learning	Seven 'moves' characterise ubiquitous learning; changes in time and place for learning, shifting the balance of agency so that there is a 'blurring distinctions between teacher and learners, between knowledge makers and knowledge users', recognising and valuing learner differences, broadening the range and mix of digital representations, developing conceptualising capabilities, access to information and needing to build learning communities.	Learners and teachers are collaborative co-designers of knowledge, teachers' power is in their expertise and not in their control or command routine, teachers engage a members of learning communities with learners, of their learning pathways. Teachers are masterful users of new meaning making tools and support learners in their use. Evaluate learners' development. Teachers have skills in building inclusive learning communities.	Cope and Kalantzis (2008)
Communities of Inquiry	Building on Wenger's notion of communities of practice, (higher) learning conceived in terms of participation, with learners experiencing social, cognitive and pedagogic aspects of community.	Tutoring is about the supporting less experienced others.	Wenger (1998), Garrison and Anderson (2003)
Pedagogy of Abundance	Educators need to reposition their teaching activities to make best use of the abundance of information brought about by adoption of the web and to equip their students to cope with it.	Role of the tutor is to take advantage of the abundance in their teaching, and equip learners to make use of it. Hence there is a focus on learning literacies.	Weller (2011)

In Chapter 1 four features of Web 2.0 tools and services that enable these radical changes were presented. These are:

1. Scaling up participation, where quality of the service is improved with greater number of participants;

2. Sharing and joint knowledge building functions, i.e. user collaboration;

3. Using a range of formats, not just text e.g. video and picture and audio;

4. Rich and democratic forms of participation means there are novel frameworks for research and inquiry (Crook, 2008, p.9).

The pedagogies in Table 2.2 make use of one or more of these features. For example Connectivism, where the student builds their network of connections via the web and then learning occurs through their use of these networks, relies on all these features and, in particular, on the scale of participation, where the potential for learning and being supported in that process is enhanced through the scale of the web. Hence Connectivism proposes that whatever one wants to learn about there will be knowledgeable others on the web who can form part of one's learning network. Another example is rhizomatic learning, which draws from the biological metaphor in which plants rather than having a centre are made up of a number of semi-independent nodes, each of which is capable of growing and spreading on its own. In rhizomatic learning, the social construction of learning is through engagement in networks. More fundamentally radical is the notion that the curriculum is changing to reflect the community that it consists of (Cormier, 2008, p.3).

The notion of post-humanism has been applied to learning in virtual worlds and is a different sort of radical again. This sort of pedagogic practice explores non textual representations of learning. Bayne (2010) explains how she assesses students through their 'LifeStreams' or aggregations of multiple online social sites and assessments in which the dynamic forms of the internet shape the work (for instance through inclusion of data mashups, data analytics and creation of students' own virtual worlds to represent and demonstrate their learning). Bayne (2008) describes the value of virtual worlds for teaching and learning in terms of the ontological challenges where the learning process is not mediated by text or speech but by the interactions with disembodied avatars or bots (Bayne, 2008).

For my study radical features of pedagogic practices are defined as those which enable users to create knowledge, to challenge existing forms of knowledge construction/distribution, which allow for student agency in determining the content, direction

and structure of the curriculum, learning through conversations/engagement with ideas, and involve the metaphor as learning through participation rather than learning through acquisition. However, radical aspects of pedagogy need to also be understood in the context in which they are applied. For instance, the idea of learning as becoming, associated with Wenger's (1998) Communities of Practice, considered radical in some contexts, is part of a conservative paradigm in Early Years philosophy where the more radical approach is not to promote children *becoming* grown up, and thus to privilege the value of adult hood, but rather to value children in their current state of being.

The role of the teacher in Web 2.0 pedagogies

Given that the focus of my study is on how teachers mediate these changes, rather than exploring the similarities and differences between these models, instead I will examine the role that they suggest for the teacher in the learning process. There is generally little focus given to the role of the teacher in the discussion of these new Web 2.0 pedagogies. Rather the focus is on how these new models of learning challenge traditional notions of knowledge as being transmitted from the teacher to the student. The learner is largely characterised as self directed and self managing. The processes by which the learner gets validation for their participation in learning are often not made particularly clear. Cormier (2008) mentions the process of peer critique. Williams et al. (2011) discuss the need to design for emergent forms of learning in which there is feedback, openness and constraint in managing learners' behaviour, although they do not address the role of the teacher in any specific way. They provide a case study, based on Mitra and Dangwal's (2010) experiment in rural India, to illustrate how emergent learning works in practice. However, in the case study there is some 'fudging' of the role of the teacher in that the Mitra and Dangwal (2010) as the designers of the experiment, provided children with the computer access and gave them the assessment tasks. Hence, rather than being autonomous and self organising, there was quite a high degree of planning in the experiment's design. In reality, Mitra and Dangwal's experiment appears to be little more than an application of a resource based learning activity using the web, rather than an example of autonomous, self-organised learning.

In contrast, Cope and Kalantzis (2008) have provided a relatively comprehensive discussion of how their seven moves of ubiquitous learning impact on the skills and role of the teacher. Their discussion illustrates that far from being a non role, as suggested by some of these theories, instead, the changing paradigm to Web 2.0 learning is a different, but still highly

skilled one for the teacher. Paraphrasing Cope and Kalantzis (2008), the teacher's role in ubiquitous learning involves:

- learners and teachers collaborativing as co-designers of knowledge;
- teachers' power is in their expertise and not in their control or command routines;
- teachers engage as members of learning communities and are co designers with learners of their learning pathways;
- educators understand the various grammars of the multiple modes of meaning making that the digital has made possible;
- teachers are masterful users of new meaning making tools and support learners in their use;
- teachers evaluate learners' development;
- teachers have skills in building inclusive learning communities.

Likewise, Garrison and Anderson (2003) have a well developed role for the online tutor. Garrison and Anderson's work dates from the early 2000s and their work emerges out of their vision for learning as based on a community of inquiry (based on eight principles) (p.18). They take a more proscriptive view of the learning process arguing that "coherent knowledge structure (schema) facilitate purposeful and integrative learning" and that "learning is confirmed through assessment". They suggest that the teacher has a well defined role for both formal and informal learning situations. Garrison and Anderson's framework for tutor's online role is similar to that proposed by Bonk et al. (2001) see Table 2.3.

	General Components	Questions	Examples
Pedagogical role	Assume role of facilitator or moderator	What activities might foster greater interaction?	Create problem based learning
Social role	Create a friendly and nurturing environment	What is the general tone of the course?	Employ online cafes, Student profiles
Managerial role	Coordinate assignments Manage online discussion forum	Do students understand the course structure?	FAQs, Post online calendar of events
Technical role	Assist with user technology and systems issues	Do students have the basic skills?	Orientation tasks

Table 2.3 Summary of pedagogical, social, managerial and technological roles of the online instructor (After Bonk et al., 2001, p.78)

Thus there is some variation in the perceived role of the tutor when using Web 2.0 tools, from a complete absence of role, to a much more well defined function. However the importance of the role has been commented on by CLEX who state:

> Tutor's role has always been multifarious – authoritative source, facilitate, mediator, mentor...Tutors are central to the design of courses and hence of learners' experiences. The critical question seems to us to be the selection and practice of the pedagogy appropriate to the learning objectives being pursued, and also, at this juncture in particular, the communal, participative and creative spirit of the Web 2.0 age. (2009, p.38).

Likewise, the critical finding in Kop's (2010) doctoral thesis which explored an application of Downes' (2006) and Siemen's (2004) Connectivism theory to an adult learners programme was that of the importance of the role of the 'knowledgeable other' to the learners:

> The role of adult educators was seen as crucial for all learners, and for those displaying higher levels of autonomy, the educator was perceived as a trusted "human filter" of information. The research... challenges the notion that knowledge and learning are revolutionized by new social media. It shows that a trusted "knowledgeable other" is still at the heart of a meaningful learning experience. (Kop, 2010, p.i)

Kop (2010) reports that the technology enabled connections to be made to enhance the learning but it was the tutor that provided the key learning interventions that enabled learners to feel confident about their learning journey:

> the tutors were the ones to make these interactions explicit and visible by providing feedback in words, pictures, through metaphors and by using videocasts. These were the moments in the course that learners had their 'Eureka moment' that gave them confidence to move on to the next stage and level of learning. (2010, p.234)

The key aspects of the tutor role, identified by Kop, were building up learners' understanding of the material and subject area, using videos to enhance their presence by clarifying concepts, and supporting students, to raise levels of confidence, and to lessen anxiety at particular moments (2010, p.237). The high level of presence of the tutor was very important for the learners (2010, p.244). Kop (2010) contrasts the challenge for the learner in a self directed learning network where he or she has to find their own information and manipulate it and make connections and synthesise ideas and find their own 'knowledgeable others' in this process. By contrast, in a traditional education this role is provided by the teacher who is "always available to provide the opposing point of view and to challenge the learner" (2010, p.250). Thus, Kop shows from her empirical study that for many learners the teacher's role in Connectivist learning is of paramount importance and lacks the recognition that it needs from those who have theorised Connectivism.

Tensions

A recurrent theme in the literature is that of tension when adopting Web 2.0 into teaching and learning practices (Bridges, 2000; Owen et al., 2006; Crook, 2008; Dohn, 2008; Land and Bayne, 2008; Dohn, 2009). The term tension is generally used without much discussion although Crook (2008) explains that his focus for exploring tensions is to examine the demands and constraints of the context in which an innovation occurs (p.33). The nature of the tensions explored in these sources is broad and far reaching in their implication. They include philosophical and epistemological challenges, alongside and overlapping with more practical issues of safety and skills. The most comprehensive discussion of tensions is provided by Crook (2008) who lists eleven different ways in which Web 2.0 practices challenge HE teaching and learning. I have summarised Crook's list below in the order that he presents them and using some of the labels (e.g. walled garden) that he uses. Support from other authors for Crook's (2008) analysis is indicated where relevant.

1. Teaching and learning; a learner-centred approach is a dominant feature of teaching and learning practices using Web 2.0 tools and this requires teachers to have skills in managing these sorts of learner-centred activity (such as orchestrating and supporting independent research) (Crook, 2008, p.35).

2. Walled garden versus open areas; a key feature of the web is that it is uncensored and open medium. For educational practices this raises issues and practical questions such as: should students' work be made available to the wider world? Without this the key feature of Web 2.0 is not present. However making students' work public clearly raises issues of duty of care and managing productive exchanges and of reputation, as well as debates about censorship. There is a trade off with authenticity provided by a wider sense of audience and the potential for exchanges on the open internet compared to security and control of VLE (Crook, 2008, p.37). This tension was also identified by Bridges (2000) and by Land and Bayne (2008) who comment that teachers experienced blogs as a compromise; on the one hand a private blog created safety and sense of security for students, yet on the other, a public blog gave benefits of collaboration and networking, but felt more constrained by needing to develop and maintain a more public style of writing.

3. Private learning versus individual learning: Crook (2008) discusses the focus on collaboration that Web 2.0 tools afford and contrasts these with the personalisation agenda which is currently being promoted in schools, arguing that personalisation

implies that students should have the choice about working in groups. In addition assessment of group work is often a challenge to educators.

4. Digital natives/digital divide issues: there are two aspects to this tension outlined by Crook (2008): firstly, students' access to the technological tools and whether they possess the skills to use the tools; secondly, the contrast between the skills of the students with those of the teacher.

5. Risks of antisocial behaviour on the web e.g. cyber bullying and importance for students' safety.

6. Cutting and pasting culture: Dohn (2008, p.658) identifies that the activity of cutting and pasting is part of internet Web 2.0 practices. Crook (2008) extends cutting and pasting to other forms of digital amalgamation such as mashups. The challenge that arises here is teaching students about using other people's materials creatively and within academic (and legal) codes of acceptability.

7. Permanence of web contributions: things posted to the web can remain there in perpetuity and this leads to a number or tensions. For the students, there is a question about their awareness of this level of exposure and whether it is the teacher's responsibility to make this clear to the student? In addition, it raises the question whether this exposure inhibits students' contributions and how teachers manage students' reluctance to write publically. There are overlaps between the second tension identified above in that the reputation of individuals and the institution are at stake due to the permanent and public nature of web postings.

8. Print literacy versus digital literacy; this tension expresses the conflict between the value of new forms of representation (multimodal media) and the value of traditional print. Kress (2010) argues for the importance of multimodality or the ability to express ideas across a wide range of representational systems and says digital literacy is in part about having confidence in reading these systems (p.6). However Crook (2008) suggests that reading and writing deliver considerable cognitive impact and that these skills (of reading and writing) in traditional print form should not be devalued by overly promoting new digital literacies.

9. Serial or parallel processing: Crook (2008) argues that academia values linear forms of reasoning based on language rather than the new modes of analysis based on more informal, pattern-based methods of reading such as folksonomies and tag

clouds. He talks of a loss of formalisations and taxonomies in the Web 2.0 world (p.45).

10. Successive attention versus simultaneous attention: Crook (2008) argues that multitasking is a phenomena encouraged by technological services (e.g. MSN) and that students appear to have higher rating on distractibility if they spend time on MSN (p.45). However this is quite contrary to the sustained focus expected of formal study.

11. Authorised knowledge versus distributed knowledge: Web 2.0 culture recognises a different way of producing and validating knowledge to that of academia. The ease with which one can publish on the web and the wide geographic and demographic reach that the web facilitates enables a more democratic form of knowledge production and validation. Crook outlines three points based on Keen's arguments of the 'cult of the amateur' (2007) against the effect that Web 2.0 has had on knowledge promotion and publication of cultural knowledge. First, that contributions on the Web 2.0 are dominated by offerings that are trivial or narcissistic. Secondly, that the knowledge discussed on Web 2.0 services (e.g. blogosphere) are poorly evidenced so make it hard for the reader to make a judgement on the validity of the knowledge being presented. Land and Bayne (2008, p.681) agree, arguing that a blog is a public, fragmented and 'slippery' form of writing and does not lend itself to being subjected to formal assessment based on the traditional criteria applied to academic writing (for instance line of argument, use of references, structure, coherence, grammatical precision etc.). And thirdly, that the quality control mechanisms of print are missing with the web. In addition, Crook identifies problems with the value of knowledge available through Web 2.0 services that is that they are hard to reference precisely e.g. YouTube video and they do not have persistence. (For example URLs can become out of date.)

Crooks' list of tensions is the most extensive out of the writers identified within this literature review. However, other writers have identified some further tensions. Dohn (2008) discusses the value that Web 2.0 places on contribution per se without reference to the quality of the contribution. This valuing of participation over contribution is a feature of Web 2.0 practices (for instance where recent contributions are highlighted) and thus she suggests has an impact on the expectations that students have of using Web 2.0 tools in learning and teaching.

Land and Bayne (2008) suggest that another of the tensions when using Web 2.0 in teaching is the distinctive temporalities of print compared to digital cultures (p.679) whereas academia traditionally works on the 'slow time' of print (facilitating and encouraging deliberation and contemplation) digital media works on 'fast time' with immediacy of response being dominant.

Kelly (2010, p.139) identifies that the transitory nature of Web 2.0 services provides a further tension. This is experienced in terms of a lack of stability of services needed to deliver robust teaching. There are many examples of Web 2.0 services which have suffered a demise, for example etherpad. There are also examples of services which have changed significantly, for instance Ning, the social networking platform became a paid for service. This volatility challenges the stability of teaching and is critically important in relation to the need to maintain reliable auditable records of assessment practices.

Beetham et al. (2009) have summarised some of these tensions which they describe as clashes between academic knowledge practices and internet knowledge practices (see Table 2.4).

Exploring tensions in the use of Web 2.0 tools and how teachers negotiate these tensions forms a significant focus of my study.

Academic Knowledge practice	Internet knowledge practice
Individual authority	Shared ownership
The individual occupies a stance/position from which a judgement can be made	The individual is "a node through which various kinds of message pass" (Lyotard, 1984)
Philosophy	Design
Truth value	Use value
Quality of method	Quantity of links/citations/uses
(Disciplinary) tradition of what knowledge matters, and how it comes to mean	The eternal 'now' of what technology makes possible
How I come to know	Who I know
Synthesis (in a dialectical sense)	Aggregation, re-use
Dialogue, disputation	Comment
Discipline/profession as resources (of methods, codes of practice, etc)	Multi-modality, interdisciplinary as resources
Copyright	Digital commons
Qualification (followed by reputation)	Reputation/recognition first
Research	Problem-solving
Subject knowledge and know-how	Generic skills and aptitudes 'just in time' knowledge and know-how
Text-based communication of ideas	Multiple media used to express ideas
Sharing within scholarly communities, according to established roles and rules	Sharing without boundaries, across ephemeral and unregulated networks

Table 2.4 Potential clashes of academic and internet knowledge practice (Source: Beetham et al., 2009, p.72)

Digital literacies

Some of the tensions identified above relate to a set of skills and practices that have been called digital literacies. Whilst there is some debate about the term, one interpretation, based on work at Oxford Brookes, is that digital literacies are:

> The functional access, skills and practices necessary to become a confident, agile adopter of a range of technologies for personal, academic and professional use. (Beetham and Sharpe, 2011, np)

The nature of digital literacies is discussed by Gillen and Barton (2010) who highlight some of the particular reasons why Web 2.0 tools bring digital literacy to the fore. They note that "human judgement, or criticality is involved in most understanding of digital literacies" (2010, p.4). Kress (2010, p.19) argues that developing digital literacies is about enabling students and teachers to make connections between the other aspects of learning and the application of tools to this learning process. In particular and throughout the Teaching and Learning Research Programme Research Briefing (TLRP) *Digital Literacies* (Gillen and Barton, 2010), the emphasis was on digital literacies as embedded social practices rather than discrete individualised skills sets.

Digital literacies are traditionally associated with library skills and Sconel's seven pillars of information literacy (Bent, 2007) but also include other elements. JISC's Digital Literacy programme has grouped digital literacies into five categories of practices; academic practice, techno-literacy, information literacy, media literacy, techno-social practice. Figure 2.5 identifies and elaborates on the nature of these five practices. The figure shows that they are based on the central hub that is the functional access to devices, networks, software etc. Students' skills provide the link between the access and practices.
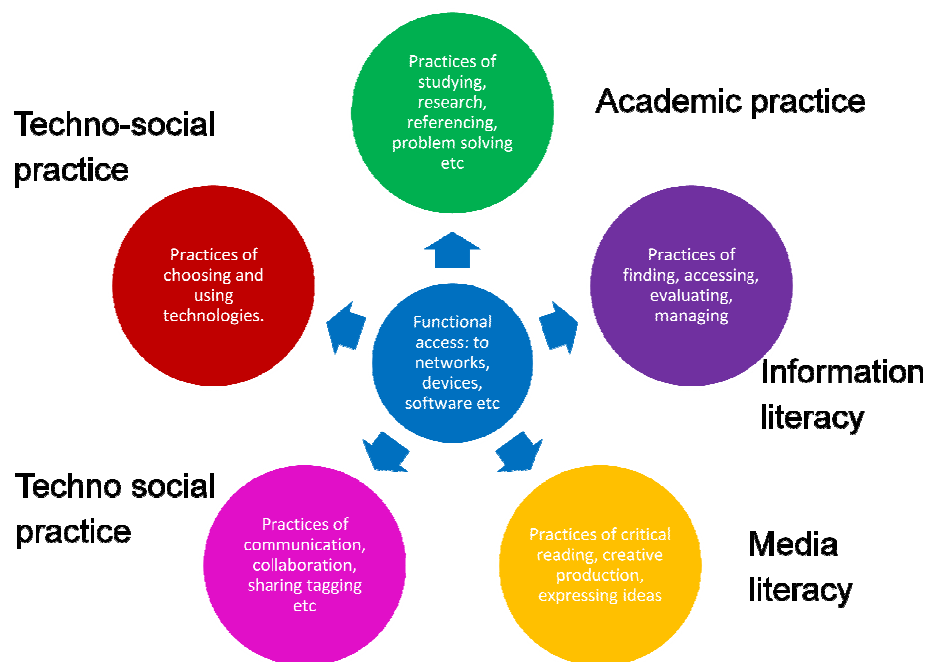
Figure 2.3 Digital literacy anatomised (Source: JISC, 2011, np)

The importance of the institution in valorising through validation aspects of digital literacy practices have been identified by Lea and Jones (2011). They showed that institutions are focussing on the product submitted for assessment and miss the opportunity to engage with learners and to support learners in the process of generating the assessment. They argue that there is considerable potential for institutions to improve the way that they understand and engage with students' development of literacy practices (2010, p.391). Likewise Beetham et al. (2009) argue that institutions need a strategic approach to embedding digital literacies into the curriculum and assessing them. The overlap between digital literacies and the aims of my study is a boundary that has proven challenging to demarcate. I refer again to this boundary in the Chapter 10, *Conclusions, page 179*.

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Authority and Web 2.0

A significant tension identified by Owen et al. (2006), Dohn (2008), Land and Bayne (2008), Beetham et al. (2009) is the different values and ways of knowing inherent in forms of knowledge production enabled through Web 2.0 services. There are many components to

this, some of which are outlined in Table 2.4 above. The issue of authority can be viewed from two contrasting lenses that of the teacher and that the student: for the teacher there is a question of the way their authority can be undermined. Crook asks - will the adoption of Web 2.0 practices in learning, which are accompanied by greater student autonomy and control, undermine teachers and their implicit authority? (2008, p.35) From the student point of view, Owen et al. (2006) argue that providing a teacher-led approach to a subject is valued by learners. They state "expert generated ontologies and taxonomies for newcomers to a knowledge domain is actually very helpful" [3](p.44). Thus while the multiple and dynamic representations of knowledge to which Web 2.0 tools are suited has value in some circumstances, for teaching and learning, some would say, that it is more important for knowledge to be stabile and organised by a knowledgeable expert (Owen et al., 2006; Dohn, 2008). Dohn describes the impact that this phenomenon has on students who wait for the teacher's contributions rather than respond to and edit one another's contributions when using a wiki tool (2008, p.656).

Teacher identity

Identity, or what teachers feel about themselves in their professional world, is mutable and variable. It is derived from the interactions with many factors including the external environment, the local environment, as well as aspects of one's home life and self belief. Ball discusses the variations in responses to the agenda of performativity:

> The new performative worker is a promiscuous self, an enterprising self, with a passion for excellence. For some, this is an opportunity to make a success of themselves, for others it portends inner conflicts, inauthenticity and resistance. (2003, p.215)

Whilst Clegg (2008, p.329) explores the nature of academics' identities as "part of the lived complexity of a person's project and their ways of being in those sites which are constituted as being part of the academic." Day (2008) led a 4-year project which focused on the variations in teachers' work, lives and effectiveness and provides a framework to explore identity. He argues that self efficacy and a sense of agency are fundamental to motivation and commitment (p.251) and that a positive sense of identity with subject, relationships and

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[3] Sentence construction taken directly, whereas 'are' rather than 'is' is more grammatically correct.

roles is important to maintaining self-esteem, commitment to and a passion for teaching (p.250). He identifies teacher identity as being a composite of the interactions between three dimensions of an individual's identity: professional, situated and personal dimensions (p.250). For Day (2008) professional identity reflects the social and policy expectations of what a good teacher is, and the educational ideals of the teacher; the situated aspects relate to the school setting and include factors such as leadership, support and pupil behaviour; the personal dimension is based on the teacher's life outside school and is related to family and social roles.

Sikes (2009), writing about changes to the nature of the academic's role brought about by the demands to become research active in a new university context, has identified some key aspects of professional identity. First, that identity is not fixed but changes. However these changes take place slowly. They are "formed and reformed... through discursive practices and social interactions" (Sikes, 2009, p.158). She argues that the way that people experience change will depend on how the change is communicated and conceptualized in the specific context but also depends on the way that individuals understand and experience change in terms of their personal history. Hence, we have persisting core identities which endure perhaps for our whole life, or perhaps change slowly, as well as identities that are "far more contextually and circumstantially dependent" (Sikes, 2009, p.158). Secondly, she points out that change brings with it tensions, contradictions and complexities as a result of the "space between structure and agency" (p.158). As individuals negotiate these tensions there is an impact on their personal identity that leaves them questioning what they are doing, and for some people, has left them with feelings of inadequacy (p.158).

Change and liminality

The term liminality has been used in a number of different ways and contexts. It originated from the anthropology to describe the transitions associated with rites of passage (van Gennup, 1960). It has also been related to transitions that occur in societies (see Noussia and Lyons, 2009; Riggan, 2011). Meyer and Land (2005, p.375) used the term to describe the conceptual space that students enter and occupy when learning particularly difficult types of knowledge that define their field of study, which they referred to as troublesome knowledge. Meyer and Land (2005) argue that the term is relevant for students because their transition through this liminal time/space is associated with a transfigured relationship to the subject, because they are associated with new knowledge and identity, and also because it can be a protracted process in which the individual oscillates. Clegg et al. (2006,

p.98) employ the concept of liminality in relation to the unsettled and uncertain states academics experienced as part of adopting new practices. They argue that associated with moving through this liminal state was a "shift in seeing that comes about when a new concept is internalised as part of one's personal epistemology" (p.95). They see this process as a transition between old ways of knowing and new. Likewise Smith (2010) uses the term to characterise the probationary period for some new academics who find the transition into higher education's ways of operating troublesome. She uses the term to describe those who encountered dissonance between their expectations and their lived experience and associates liminality with a displaced sense of ontological security (Giddens, 1984) as lecturers forge their identity in their new academic role.

Teacher development and technology

Lecturers make interesting subjects for exploration because their sense of agency, or the power that they have to act at an individual level, is so well developed. Of course, the structures of social systems exert pressure too. As noted in the introduction, higher education is subject to a raft of reforms of its funding, conditions, and many other aspects of the national and institutional context. Crawford (2010) in her exploration of how lecturers experience this tension between agency and structure notes:

> Evident throughout the data were the ways in which academics used their own personal powers to mediate structural influences and make decisions on intent and future actions. (2010, p.198)

The basis for the way that lecturers acted is therefore of interest. Crawford notes the importance lecturers' values play in determining their responses:

> the data demonstrate the influence of the immediacy of a range of very personal, less tangible, value-based concerns. These concerns significantly influence how academics respond to professional development. Examples include being interested, or stimulated, having a personal philosophy that values professional development, being able to see a 'fit' with personal circumstances, 'performative competence' (Archer, 2000, p. 198), and being able to make autonomous decisions about the direction of their development. (2010, p.198)

It is to these values and beliefs that I shall now turn. Many major studies have demonstrated the way that university teachers' beliefs influence their teaching practice; see for example Prosser and Trigwell,(1993); Kember, (1997); Trigwell et al., (1999); Trigwell and Prosser, (2004); Norton et al., (2005). In relation to learning technology, Zhao and Frank (2003) argue that teachers' beliefs rather than the "reality" of the costs and benefits associated with

adoption, that impacts on their willingness to engage with technology to support teaching and learning (p.831). Their analysis showed that "the more strongly a teacher believed that computers were compatible with her teaching style, the more often the teacher reported using computers herself with her students" (2003, p.826). Ertmer (2005) argues that whilst structural issues such as timetable, isolation in the classroom and training are partly responsible for limited uptake of constructivist use of computers in the classroom, there are second order factors related to teachers' beliefs and work too (p.27). She goes on to discuss how beliefs are acquired and how they are changed. In particular, she notes that beliefs can follow practice so that a successful classroom experience can change a teacher's belief. However, she also argues, referring to Rokeach's belief schema (1968), that pedagogical beliefs are more central to teachers' identity than beliefs about the use of technology (2005, p.33). She points out if teachers feel forced to change their pedagogy to accommodate learning technology they are more likely to resist (Ertmer, 2005, p.27). She identifies five key components to professional development to support teachers in their adoption of technology to support a constructivist approach to student learning:

• Ongoing public conversations explicating stakeholders' (teachers, administrators, parents) pedagogical beliefs, including explicit discussions about the ways in which technology can support those beliefs;

• Small communities of practice, in which teachers jointly explore new teaching methods, tools, and beliefs, and support each other as they begin transforming classroom practice;

• Opportunities to observe classroom practices, including technology uses, that are supported by different pedagogical beliefs;

• Technology tools, introduced gradually, beginning with those that support teachers' current practices and expanding to those that support higher level goals;

• Ongoing technical and pedagogical support as teachers develop confidence and competence with the technological tools, as well as the new instructional strategies required to implement a different set of pedagogical beliefs. (Ertmer, 2005, p.35)

In a later paper, Ertmer and Ottenbreit-Leftwich (2010) argue that there is a hierarchical relationship between knowledge, self efficacy and pedagogic beliefs, in that, whilst teachers need knowledge of tools and how they can be applied to teaching this in itself is not sufficient for them to adopt ICT in their teaching. In addition they need confidence or self efficacy, that is a belief in their ability to achieve effective teaching outcomes. Whilst self efficacy is a key variable, they argue it too is not sufficient; in addition "teachers need to value technology as an instructional tool" (2010, p.262). These themes of teacher belief in relation to technology use are returned to in Chapter 9, *Developing as a Digital Practitioner.*

Chapter conclusions

This chapter has focussed on the literature which is most pertinent to the aims of the thesis; the nature of Technology Enhanced Learning literature, technology as socially mediated practices; Web 2.0 affordances and pedagogies, the role of the teacher in Web 2.0 pedagogies, tensions in use of Web 2.0 tools in teaching and learning, digital literacies, authority and Web 2.0, teacher identity, change and liminality, teacher development and technology. These areas were most important in the design of the research. The literature related to the some of the findings chapters (particularly Chapter 6, *The emotional journey,* and Chapter 8, *The Digital Practitioner)* will be drawn on in the discussion within the findings chapters.

There are other areas of literature which could have been considered in the literature review For instance, the wider changes in society in relation to knowledge and its value as discussed by Lyotard (1984), or the role of the university in a post modern world (Readings, 1996; Delanty, 2001; Barnett, 2007). A philosophical exploration of how the digital age has the power and potential to change learning (Lankshear et al., 2000). In addition the changing nature of people's experience of technology could have been explored drawing on Prensky (2001); Selwyn (2008); Bennett et al. (2008); and Jones and Shao (2011). However, given their tangential relevance to this study's aims, the boundaries of the review have not included these areas.

Chapter 3 Methodology and data analysis

Introduction to the chapter

The study focuses on the lived experiences of lecturers adopting new technology. It aims to capture these experiences and to explore the lessons that lecturers have learnt, in terms of the challenges and opportunities presented by the technological tools and how they were addressed in practice. The research focuses on the lecturers' journeys and on the personal and professional accommodations involved in making changes in their teaching practices. The chapter starts with the underpinning philosophical orientation of my study. The practical aspects of carrying out the research are outlined. In particular, there is a focus on how the sample of sixteen lecturers was drawn up and the implications of forming the sample. Ethical issues are addressed. Template Analysis was the approach used for the analysis and this is described.

Philosophical orientations

Qualitative research is a broad church which includes a range of epistemological positions, however, it generally involves understanding the linguistic meaning of textual information. This inevitably requires interpretation or a hermeneutic process where the researcher's views of the subject are brought to bear on the material. Within qualitative research, Madill et al. (2000) discuss three broad epistemological positions: realist, contexualist constructionist and radical constructionist. Realism can be subdivided into three different epistemological positions: naive realism, scientific realism and critical realism. The realist epistemological position asserts "a correspondence theory of truth in which the world is largely knowable and just as it appears to be" (Madill et al., 2000, p.3). This approach contrasts with contextualism which "is the position that all knowledge is local, provisional, and situation dependent" (Jaeger and Rosnow, 1988, cited by Madill et al., 2000, p.9). Finally, radical constructionists problematise the notion that language can be used to represent reality and focus on how knowledge claims function. This study is concerned with the lived experiences of individuals and takes as its starting point the belief that individuals construct how they choose to understand their world based on the interplay between those experiences and their subsequent reflection and interpretations of them. It is thus situated in a contextualist epistemological tradition. Willig (2008) uses the term social constructionism to relate to the same epistemological position. She argues that within social constructionism knowledge is situated and needs to be understood as complex and dialectically informed:

Social constructionism draws attention to the fact that human experience, including perception, is mediated historically, culturally and linguistically. That is, what we perceive and experience is never a direct reflection of environmental conditions but must be understood as a specific reading of these conditions. This does not mean that we can never really know anything; rather, it suggests that there are 'knowledges' rather than 'knowledge'. (Willig, 2008, p.7)

Methodology

This study is based in a single case study HE institution. The value of the case study is to understand the impact and influence that organisational and environmental context is having to on and influencing social processes: in this case teaching and learning processes involving Web 2.0 tools (Hartley, 2004, p.325). Case studies are also used to explore new or emerging processes and behaviours, or capture the emergent and changing properties of life in organisations, and for exploring informal organisation behaviours (Hartley, 2004, p.325). A key aspect of case study research is to understand the context in which particular processes are taking place rather than to try to present the case as typical (Hartley, 2004, p.331). Further consideration of the institutional context is given in Chapter 2 and Chapter 9.

The approach taken was phenomenological, in that, the lived experiences of the lecturers were the focus. Titchen and Hobson (2011) outline two approaches to phenomenology; direct and indirect. There are differences between the style and focus of each approach with the direct approach foregrounding the issues under scrutiny, whilst indirect takes a more oblique approach and aims to gather data from observation and field notes rather than from direct questioning. There are some advantages to the indirect approach in that it can explore the 'precognitive' unspoken, non-verbal aspects of knowing (Titchen and Hobson, 2011, p.135). However, in this case a direct approach was taken because it enabled a discussion of the issues under consideration during the interview (Titchen and Hobson, 2011, p.127).

The method employed for the research was in-depth interviews with a small sample of lecturers. The interviews were broadly based on a narrative form in that the lecturers were asked to describe their experiences using Web 2.0 tools and their response to these experiences. The value of a narrative approach is that it is holistic in that although it focuses on an individual's account it can also be used to understand the broader societal issues that influence the individual. Epistemologically this approach views data collected through interviews to be akin to a story telling. The dynamic of the interview is the process through which meaning is achieved and this is subject of the analysis alongside what is said. This

approach contrasts with a realist approach to interviewing where "'the social world' is in some sense 'out there' – an external reality available to be observed and described" (Elliot, 2005, p.18). Thus rather than assuming lecturers are epistemologically passive, instead in a narrative interview the interviewer should try to "stimulate the interviewee's interpretive capacities" (Elliot, 2005, p.22). Thus, the interviews were conducted so that there was also an opportunity to explore the meaning of the topic for the participant. They explored the lecturers' understandings of the way they use Web 2.0 tools and how their experiences inform the answers to the research questions. This approach is well established in the literature on teachers' identity and role. All the thirteen studies into teacher's conceptions of their role reviewed by Kember used semi structured interviews in which the teachers' views emerged from the data (1997, p. 258).

Interview Process

Personal relationships between the researcher and the interviewees were considered to enhance the data collection process. Within the narrative form the audience is one of the key components of how the story is constructed, and thus, my role as interviewer took the role of audience for the construction of the narrative interview data. Only a few of the lecturers were known to me in any meaningful way. Four had been students on a course with which I am involved as course leader. Two were, as well as being students, colleagues within the same department with whom I have a more rounded and complex relationship. In addition, two were colleagues with whom I had worked with on projects. The rest were relative strangers. Having said this, we continue to work in the same institution, and are likely to see each other around the campus, on staff development courses and/or at validations. Thus the context for the interviews was shared, that is, we are subject to the same institutional pressures of performativity, the uncertainties of the future of HE sector at the current time and the practical issues that employees of the institutions such as car parking. These shared experiences of working in the institution and developing new teaching and learning practices using web tools opens up possibility for a collegiate style of relationship developing through the interview. Of course that being said, there was still a need to maintain a professional identity for both me and the lecturers and to frame the interview in a way that protects our sense of ourselves as professional practitioners. Thus there is a limit to the amount of self disclosure and honesty that each of us judged as acceptable and this varied based on a number of factors. Clegg et al. (2006) comment on the value of the interview for gathering rich data:

There appears to be something special about the conditions of intimacy created by a good interviewer's capacity to establish rapport under conditions of guaranteed confidentiality and anonymity, and where the rules of game involve listening in a non-judgemental, empathetic and attentive way. This is what appears to have happened in this case. Staff were very willing to share their feelings of insecurity and dilemmas they faced in implementing the innovation. (2006, p.98)

As I noted above, four of the lecturers had previously been a student on the course for which I am course leader and which teaches about Web 2.0 tools and their use in teaching and learning. I chose not to approach students who were, at that time, studying on the course because there would be a complex dynamic of teacher/student, between me and the lecturer concerned, that I judged would not aid the openness of the interview process. However, I deviated from this by including one lecturer who was, at the time of the interview, studying the course. This participant was also a close colleague, so I felt the relationship was already well established and went beyond that of a student/teacher. The lecturers who had studied the course all made reference to their study during the interview and in analysing the data I was aware of the potential for aspects of the data to be constructed to please me.

The interviews were recorded and then transcribed for analysis. Transcription is described as the first stage in the analytical process by Elliot (2005, p.51). A number of approaches to transcription were explored; initially trying to capture as much detail as possible, such as recording pauses, emphasis and where speech overlapped. Later transcriptions omitted this detail, but aimed to retain all the spoken words. Punctuation was added to aid the clarity of the data.

The sample

Recruitment to the sample

The sample was drawn from lecturers in the case study institution. The focus was explicitly on those with responsibility for delivery of a syllabus and its assessment. Thus those in academic support roles were excluded. Also excluded were those with Head of Department or Head of Division roles because they have a management function and the research was seeking to focus on authentic 'bottom up' innovation and those with management responsibility are required to be more closely accountable for implementing institutional priorities. Also excluded were those whose use of Web 2.0 tools was focussed on activities such as marketing and outreach rather than teaching and learning explicitly.

The sample was constructed through purposive sampling of lecturers who had adopted Web 2.0 tools. Rogers' (1983) work on adoption of innovation was discussed in Chapter 1, and whilst the categories for labelling ways that individuals respond to innovation are crude they provide a simple vocabulary and taxonomy. He defines five adoption types; 'innovators', 'early adopters', 'early majority', 'late majority' and 'laggards'. The focus for this study is with those who fall into the 'innovators' and 'early adopters' categories.

Silverman (2005, p.130) argues that purposive or non probabilistic sampling needs to be robustly defined and can be theoretically informed. Four types of non probabilistic sampling were used in drawing up the sample. Firstly, convenience sampling whereby I contacted colleagues with whom I have close working relations. Secondly, one of the final interview questions was to ask lecturers to identify others they knew of who might be relevant to the study (snowball sampling). In addition, I sought out lecturers from across the University through emails to the Chairs of each faculty's learning and teaching committees and Chairs of each faculty's validation committees (purposive sampling). Each faculty's Learning Technology Advisor, the University's Academic Development Advisor and the University's Institute for Learning and Teaching were contacted and asked to identify suitable lecturers. In this way the sample was widened beyond those most closely associated with me. Finally, theoretical sampling was used in order to achieve representation in terms of a range of attributes discussed below.

Lecturers were chosen to establish breadth in the range of the four attributes: their subject area, their faculty, the experience of designing web based courses and the type of use. In keeping with the tenants of contextualism, representativeness was not held to be of central importance (compared to its prominence in research design underpinned by an epistemology informed by a realist stance). Instead attention was paid to finding those lecturers whose experience of using Web 2.0 tools in their practice and who would provide the richest and most nuanced understanding of the topic. Madill et al. (2000, p.9) call this contextualist triangulation "where some accounts may be more persuasive or valuable than other or merely more relevant to particular research questions". Hence, in constructing a sample, participants were selected who might provide a rich picture of the topic and where the research questions would be reinterpreted by the lecturers in new ways by virtue of their subject, or the tool they were using, and/or their length and depth of their experience of teaching using web tools. This approach contrasts with triangulation used in a study underpinned by a realist philosophical position, in which the term implies that a variety of data sources will reveal the 'whole picture'. Instead Silverman (2005) argues that the researcher should "celebrate the partiality of your data and delight in the particular

phenomena that it allows you to inspect" (p.122). Indeed this belief is consistent with the view that a narrative is socially constructed dialogue between interviewer and interviewee, and therefore needs to be analysed as such, rather than assuming that there is single 'truth' that can be gleaned from the interview data which will be corroborated by data from another source.

The small sample size enabled more time to be spent with individual lecturers and to provide more meaningful understandings of the research questions. In the area of teaching and learning, as noted by Trowler and Cooper (2002), practices are highly contextualised to particular disciplines and also heavily influenced by a range of factors such as the students' characteristics, facilities available, institutional context etc, and my study aimed to identify and understand these influences on the research questions. Thus, in depth understanding of a small group of lecturers provides a more useful and rich picture of the topic. Interviews generally lasted an hour, although some lasted up to 90 minutes. Appendix D summarises details of the data collection process.

One of the limitations of small samples is the degree of external validity or generalisibility that is suggested by the findings. External validity is the extent to which the findings of the research can be generalised beyond the research sample. Elliot (2005) argues that "qualitative research often adopts a 'common sense' view of generalisability such that the reader is left to make up his or her own mind as to how far the evidence collected in a specific study can be transferred to offer information about the same topic in similar settings" (p.26). This study sought depth and detail from the findings which would not be possible in quantitative approaches. Indeed Elliot (2005) suggests that case studies can be used to explore the intersubjective meaning that can illuminate not just the particular cases being studied but also has applicability to a wider context (p.28).

Characteristics of the sample

The sample was derived from considering the characteristics or attributes of the lecturers who were likely to have the most significant impact on their views of the research questions. These attributes were

- their subject area;
- their faculty;
- their experience of designing courses using web based tools;
- the type of use.

Subject area

Table 3.1 is adapted Lindblom-Ylanne et al. (2006, p.287) and provides a classification for disciplines based on cultural and epistemological differences of subjects taught in higher education.

	Epistemological orientation	Teaching methods that are dominant
Pure hard subjects e.g. Chemistry	Knowledge is cumulative in nature.	Teaching is linear, straightforward and un-contentious. Instructional methods such as lectures and problem based classes are most favoured. There is a focus on retention of facts and the ability to solve structure problems.
Pure soft e.g. History	Holistic and qualitative.	Teaching methods include more face-to-face class meetings and discussions and debates. Creativity and fluency of expressions are valued.
Applied hard e.g. Medicine	Have a linear sequence and are based on factual understanding.	Teaching methods focus on simulations and case studies in relation to professional settings. There is more emphasis on practical competencies and on application of theoretical ideas to professional contexts than for pure hard sciences but there is still an expectation that students need to learn facts.
Applied soft subjects e.g. Education	Knowledge is built through a re-iterative process.	The teaching methods adopted are close to the 'pure soft' disciplines but here is an emphasis on personal growth and intellectual breadth.

Table 3.1 Subject classifications and their epistemological and cultural differences (After Lindblom-Ylanne et al., 2006)
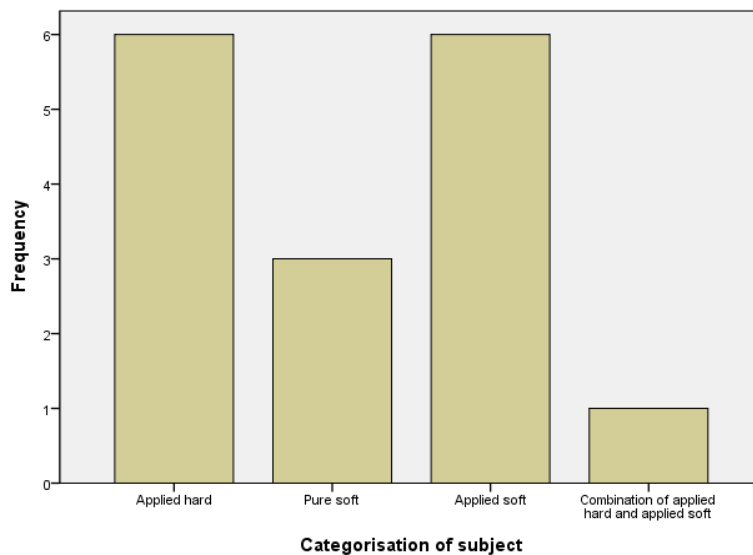
Figure 3.1 Lecturers' subject by category (n=16)

Figure 3.1 shows the number in the sample from each of the four subject categories. There were several lecturers from applied hard, pure soft, applied hard and a combination of applied hard and applied soft but no lecturers were included who taught 'pure hard' subjects such as chemistry or maths. The lack of lecturers from the pure hard discipline area reflects, to some degree, the type of courses that are taught in the institution. It also reflects how Web 2.0 tools are used, that is in subjects that are applied in a professional context rather than 'pure' ones.

Becher and Trowler (2001) have written about the nature of HE institutions and the strong discipline affiliations represented in them. They warn of the dangers of assimilating knowledge communities (2001, p.21) and assuming that theoretical understandings apply equally to all academic contexts. Thus during the analysis attention was paid to the epistemological traditions being taught and how they were evident in the lecturers' responses.

Faculty base

The mechanisms and processes by which academics learn their trade is part of the focus for this study. Lave and Wenger have emphasised the role of community in this process (1991). What constitutes community is therefore a question in point for this study. Within the case study institution, there is a University wide teaching and learning policy which is implemented locally by faculties. In addition, technical support is provided by faculty based

members of staff. Hence a balance of participants from across the University's seven faculties and two 'remote' campuses[4] was sought in order to explore the impact of University wide, and faculty wide systems and structures. In the final sample all faculties were represented. All faculties had at least one representative but only one of lecturers came from one of the remote campus. During the analysis attention was paid to the role of the local culture on supporting staff. Figure 3.2 shows the representation in the sample from each of the University's faculties.
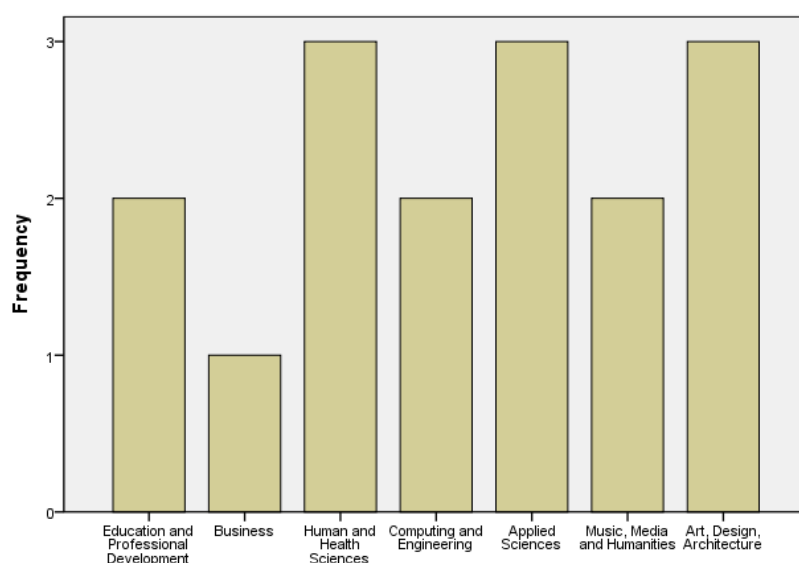
Figure 3.2 Faculty base of the lecturers

Experience of designing web based teaching

The length of time that lecturers had used web based tools in their teaching and learning practices was considered to be a key attribute. The range of use was from one to nineteen years (see Figure 3.3). The aim in constructing the sample was to try to select people who had more experience rather than less. Twelve of the sample had six or more years experience but the remaining four were new to using Web 2.0 tools, using them for the first time in the year that the interview took place. This provided an interesting comparison between those starting out using web tools and those with more embedded skills and experiences.

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[4] As of August 2012 there will be only one 'remote' campus.
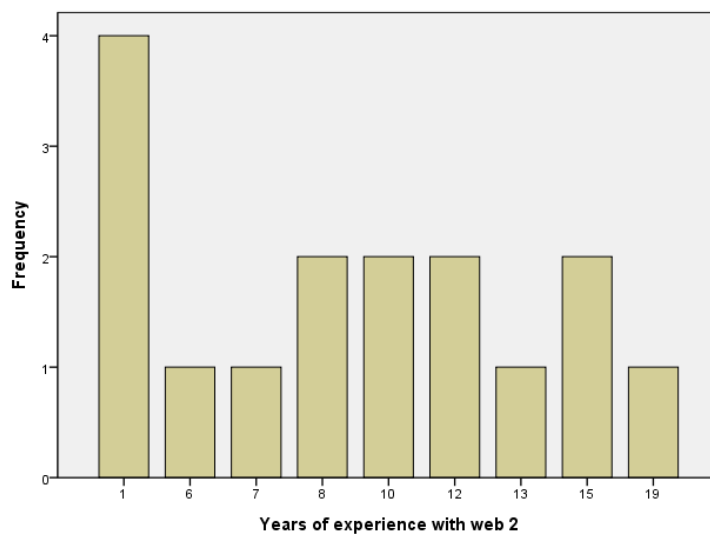
Figure 3.3 Length of experience with Web 2.0 tools (n=16)

Type of use

Chapter 1 included a discussion of the nature of Web 2.0 tools and services and commented that the term is imprecisely defined. The tools used by lecturers in my study are summarised in Table 3.2. Whilst the focus of the discussion of this study is not on the tools in particular, this information provides a picture of the breadth of tools included in the study.

	Within the VLE	Outside the VLE
Blog	2	3
Wiki	3	4
Discussion board	3	
Media sharing	1	
Eportfolio		1
Social networking		1
Total	**9**	**9**

Table 3.2 Summary of number and type Web 2.0 tools in this study. (Total does not add up to sixteen because some lecturers were using more than one tool)

One use of a technological tool did not fall within a strict definition of Web 2.0 (if one exists) as the lecturer captured his lectures including the students asking questions and his response to these and made them available, via the VLE, for students to watch on mobile

devices. This raises an interesting question about this study's boundaries: a Web 2.0 media sharing service such as YouTube and Flickr is considered to be within the definition of Web 2.0 because they allow users to share content. When examining Web 2.0 in teaching and learning the definition I used is for the Web 2.0 tools to enable student participation and/or collaboration and this is not present in the case of the videoed lectures delivered to mobile devices. However, this participant was included in the study for a number of reasons: firstly, because he was an early adopter of web-based technology, secondly, because his use was based on the multimedia affordances of mobile devices, and thirdly, because his use focused on how students' participation could be made possible even within a lecture format. As he says in his interview he was not wanting to produce generic videos that can be used year on year, but ones that are 'personal' to the particular students:

> You can buy an off the shelf video on physiotherapy but it is very chalk and talk you know whereas our stuff is 'off the wall' and it comes about because they ask a question about vertical deficiency[5] and I say let's do it now and we have a portable video camera with us and it acts as a good reminder to them... and they can go away with it. [James]

The only difference between his use and the definition of Web 2.0 is the distribution mechanism, which in his case was via the institutional VLE rather than via a web based hosting service such as YouTube. Nine of the lecturers in the sample used the institutionally hosted Web 2.0 tool (and nine were using a tool hosted outside of the institution) so to exclude James on the basis of the hosting was considered illogical. The issue of what makes a Web 2.0 tool and how lecturers value their openness is returned to Chapter 4, *Web 2.0 tools in practice*.

Unfortunately, there were many types of Web 2.0 tools that were not represented in the sample including microblogging tool (e.g. Twitter), online games (e.g. Secondlife), social bookmarking (e.g. diigo), syndication tools (e.g. RSS feeds), media manipulation tools (e.g voicethread) or mashups (e.g. Yahoo pipes), recommender systems (e.g. Digg). Although these tools are being used by some lecturers who participated in my study they focussed on their use of a different tool when being interviewed.

Variety in the way that the web is used within the teaching context was sought. The terms web supplemented, web dependent and fully online were used based on the work of

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[5] A technical aspect of physiotherapy

categories adopted by an Australian study, which has also been used by the QAA report on elearning in UK HEIs (2008, p.5):

- Web Supplemented where participation online is optional for the student;
- Web Dependent where participation online for each activity is a compulsory requirement of participation although some face-to-face component is retained;
- Online where there is no face-to-face component (Steel and Levy, 2009, p.4).
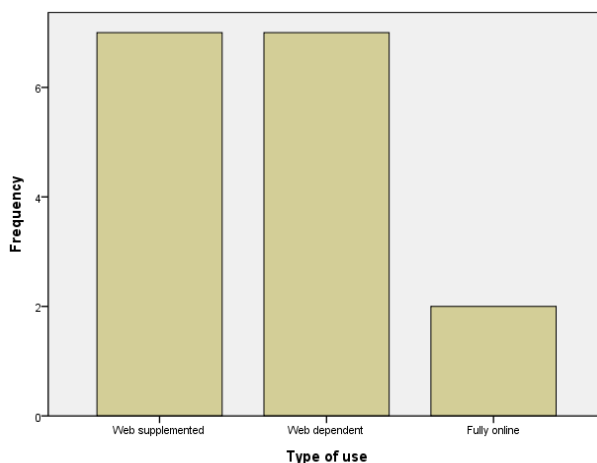
Figure 3.4 Type of use of Web 2.0 tools

My study does not attempt to be representative of the usage across the institution. (Indeed the institution only has one or two wholly online courses out of hundreds of face-to-face courses and hence it was unlikely to find many wholly online modules to include in the study.) However, the sample demonstrated a range of the three types of usage and this breadth helps to ensure that the complexity of the design decisions was explored.

Summary of the sample

From the convenience, snowball and purposive sampling methods, a total of 44 names were suggested of whom 28 were women and 16 men. 11 women were included in the sample and 5 men which reflects the proportions of men and women identified initially. As a generally guiding principle, lecturers were selected for the study where I felt that they would have richness of experience and an ability to communicate this richness. The opinion of a colleague with a University wide role co-ordinating and promoting the use of Web 2.0 tools was used to support me in the decision.

Pseudonym	Gender	Faculty	Subject Pure hard/applied hard/ pure soft/applied soft	Type of use Web supplemented Web dependent Fully online	Tool vle/pure Web 2	Experience of web for t&l[6]
Richard	male	Human and Health Sciences	Applied soft	Web supplemented	Wiki in VLE	8 years
Catherine	female	Education and Professional Development	Applied soft	Web dependent	Blog and wiki outside VLE	10 years
Emily	female	Education and Professional Development	Pure soft	Web dependent	Blog in VLE	1 year
Rachel	female	Business	Applied soft	Web supplemented	Wiki in VLE	1 year
Stuart	male	Human and Health Sciences	Applied hard	Web supplemented	Discussion Board in VLE	19
Crista	female	Computing and Engineering	Applied hard	Web supplemented	Discussion Board in VLE	13 years
James	male	Human and Health Sciences	Applied hard	Web supplemented	Video sharing service via VLE	5 years
Rebecca	female	Applied Sciences	Applied hard	Web supplemented	Wikis outside VLE	15 years
Claudia	female	Music and Humanities	Pure soft	Fully online	Wiki in VLE	15 years
Wendy	female	Applied Sciences	Applied soft	Web supplemented	Social networking outside VLE (Facebook)	1 years
Sue	female	Music, Humanities and Media	Pure soft	Web dependent	Blog in VLE	6 years
Abigail	female	Art, Design and Architecture	Applied soft	Web dependent	Blog and wiki outside VLE	12 years
Jack	Male	Computing and Engineering	Applied hard and applied soft	Web dependent	Eportfolio outside VLE	15 years
Adrian	Male	Art Design and Architecture	Applied soft	Web dependent	Blog outside VLE (Blogger Tumblr)	8 years
Jennifer	Female	Art Design and Architecture	Applied soft	Web dependent	Wiki outside VLE (pbwiki or BB wiki or Facebook – students choose)	1 years
Claire	Female	Applied Science	Applied hard	Fully online	VLE Discussion Board	10 years

Table 3.3 Some of the characteristics /attributes of the sample lecturers

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[6] Teaching and learning shortened to t&l for purposes of brevity.

Interview schedule

The final interview schedule is provided in Appendix A. This schedule was developed through a couple of iterations. The first pilot interview tried to develop the narrative form in that it attempted to draw out the chronology of the adoption of the tool, by asking "So going back to the chronology of the adoption and when did you start doing this? How long was it since they have had the wiki tool in Blackboard?" However the response was rather limited and elicited very little information and thus I concluded that the chronology of a narrative approach did not lend itself to the way that lecturers remembered change within a teaching and learning practices. This raises the question to what extent the interviews can still be considered as narratives if they do not respond to this sort of chronological retelling of the story? Elliot (2005) considers that a narrative has three key features; firstly it has a temporal or chronological dimension; secondly it is meaningful; and finally it is a 'story' produced for a particular audience (p.11). Despite not finding that the chronology of adoption was an effective way of gathering data, the methodology is informed from the narrative tradition, in that the interview focused on changes in teachers' practices which inevitably have a temporal dimension. The fact that the lecturers do not recall the chronology does not disguise the fact that change is temporally determined. The revised interview schedule explicitly follows a temporal sequence in asking about the reasons why the change came about, then how the change was planned and then moves on to ask about the outcome of the change.

Tensions Exercise

Another significant change from pilot to final interview came from the introduction of an exercise into the interview process. The Tensions Exercise evolved from the large number of factors which challenge the adoption of Web 2.0 practices which were identified in the literature. These tensions are discussed in Chapter 2, page 40. In order to elicit lecturers' views on this wide range of tensions within the time constraints of the interview an exercise was derived. The aim of the exercise was to provide an insight into the lecturers' thinking in terms how they managed these tensions during the design of a learning and teaching activity.

A list of twenty nine tensions was produced, drawn from the literature. These were then placed on individual small cards and given to a pilot participant and she was asked to sort the tensions into four categories:

- consider most important;
- consider least important;
- hadn't considered when you designed the activity;
- any that you disagree with.

This card sorting activity is based on an approach to learning and teaching which Petty (2009) calls manipulatives. The activity involves moving cards so that the learners' conceptions of the topic become evident to the teacher and this provides the teacher with an opportunity to gain feedback on the learning taking place. However, from piloting this exercise, it became clear that what I needed to capture was the lecturers' views on how they managed each tension, rather than watching them manipulate a card into one of the categories. Hence the exercise was revised so that the participant was asked to discuss the tension, to consider which of four categories it fitted into, to tick the respective box whilst their 'think aloud process' was captured on the tape and later transcribed and analysed. The 'think aloud process' is documented by Young (2005) as data collection technique which captures lecturers' thinking about a topic as they go about another task.

Also during piloting it became clear that the Tensions Exercise needed to apply both to the design and running of the teaching and learning activity, so for the revised Tensions Exercise, guidance was given to talk about the impact that design decisions had on the way the activity ran. Although during the pilot the participant found the categorisation process to be difficult and perhaps a bit meaningless, categorisation was used unchanged in the final exercise as it was found to provided a stimulus for the lecturers to articulate the design decisions and was an effective way of encouraging lecturers to give full and interesting replies.

Only fourteen of the sixteen lecturers completed the Tensions Exercise because two indicated that they were too busy to do so.

There was overlap between the issues raised in the interview schedule and the Tensions Exercise. For example, the question of a teacher's authority occurred in both. In addition issues of identity and role were covered in both instruments. This provided some methodological triangulation, enabling lecturers to go back over the issues again, or if they felt that they had adequately dealt with them, to move on.

Appendix C contains the revised Tensions Exercise.

Reflexivity

A key component of contextualist or social constructivist epistemological position is the recognition in the research process of the subjectivities of the researcher. Pidgeon and Henwood (1997) identify four dimensions which may affect the production of knowledge within the contextualist position "(1) participants' own understanding, (2) researchers' interpretations, (3) cultural meaning in systems which inform both participants' and researchers' interpretations, and (4) acts of judging particular interpretations as valid by scientific communities" (p.250 in Madill et al., 2000, p.9). In order to help to illuminate the perspective that I bring to the data, and the cultural meaning systems that informs my analysis, I will now briefly summarise aspects of my history, values and assumptions that I consider relevant to the research questions (King, 1996, p.175).

I have been employed in three English Higher Education Institutions; University of Central Lancashire, the Open University and currently, the institution that is the setting for this research. I was appointed as a Senior Lecturer to Preston Polytechnic in 1990 and was employed there when it changed its status to that of a university (post 1992 or new university status). Whilst the Open University is 'old' in terms that it was set up as a university rather than a polytechnic, its mission and curriculum has some similarities to that of a 'new university' in terms of widening access to higher education for those not traditionally represented, offering applied subjects and those that do not fit traditional definitions of the curriculum such as 'environmental sciences' or 'childhood studies'. Thus my experience is of working in 'teaching led' rather than 'research led' HEIs.

My current role is as a Senior Lecturer within a faculty of education at the case study University. I am also a Course Leader for a masters level course in elearning which promotes the use of technology to support learning. As explained previously, four of the lecturers were known to me from being students on the course and a further two were colleagues who I know well from working on institution based projects. Within the institution I would be identifiable as someone who encourages the use of technology, both from my role as course leader, but also from leading several staff development sessions organised through the University's staff development unit on technology related to teaching and learning.

Although it might appear that as a result of my involvement with elearning at the University that I would be associated with a positive orientation to technology, I would consider myself to be quite pragmatic about its adoption. I advocate sensitivity towards adoption of tools so that they are used to serve the aims of the learning situation, and to ensure that those who

using the tools feel adequately supported in terms of their need for technical and pedagogic skills, and have sufficient time to develop and adapt the tools for their purposes. Whilst at the case study University, I have worked as a Senior Lecturer, in a role that is the 'foot soldier' of the institution's teaching staff, rather than as a manager and thus I am not associated with the implementation of the institution's strategic direction.

My experience of teaching and learning with technology dates back to mid 1990s. I have extensive experience of adopting technology to deliver learning both courses that are totally online and those with limited face-to-face contact with students. I have experience of using a wide range of technological tools, most of which I have taught myself although my first and degree was in a technical subject (electronic engineering), thus I have had a familiarity and confidence with computer based tools since taking 'O' level computer studies in the late 1970s.

Through the process of this research I developed my interview technique to limit the extent to which I interjected in the discussion. Initially I saw the interview as being a co-construction of the subject between myself and my participant and offered my own perspectives on his responses. However, in subsequent interviews, I was much more reserved about voicing my views and instead, tried to develop warmth and regard for my participant through encouraging responses but limited offering my opinions, in order to give them more opportunity to talk. I provided amplification when asked. For example, tension *9 Concern for students' safety whilst working online e.g. online bullying* I might use the example of unwanted spam that may result from use of the web.

Mechanisms that support reflexive awareness in the research process include the researcher clearly stating their prior notions of the topic at the start of the research and returning to these regularly through the research process, keeping a research diary to record feelings about the process, reviewing some of the taped interviews with a focus on my performance as an interviewer (King, 2004, p.20). These mechanisms were adopted to help to support validity in the research process.

Ethics

Ethical principles from the British Educational Research Association informed the conduct of the research (2011). These affected the interview schedule in a number of ways: firstly, the purpose of the study was explained. Secondly, lecturers were assured of the anonymity and

confidentiality of the interview data and the uses to which it will be put. The design of the interview questions aimed to avoid putting lecturers 'on the spot' with questions they find hard to answer, when lecturers sought further clarification on meanings these were readily provided with examples to help to explain the questions or terminology. Lecturers were placed at ease by use of an introductory explanation. Care and sensitivity were needed to ensure that the participant did not become tired or distracted by the length of the interview session. I also attempted to build rapport with the participant and convey positive personal regard for the participant (Rogers, 1951).

Particular to my research was the importance of treating the lecturers' views with confidentiality. Several times during an interview a participant made reference to this point. This was particularly true when discussing the questions

- In what ways has the institution supported or hindered your work with technology?
- Is there anything you'd like to add?

In these questions lecturers were invited to offer what might be critical judgements about their employing institution. The interviews were carried out at a time of great uncertainty about job security and thus maintaining trust through anonymity was vital. In addition none of the interviews was transcribed by a third party due to the assurances of limited distribution given in the Consent Form (Appendix E).

Analysis

Silverman outlines two approaches to interpreting interview data: the realist approach where data is taken at face value and the narrative approach where the data is viewed as a story which is framed by the cultural experiences of the participant and the interchange with the interviewer (2005, p.154). Silverman contrasts these two approaches using an example of an interview with a gang member about her experiences of joining the gang. Clearly this is an extreme example where there are strong stereotypes of what gang membership means (e.g. drug taking, violence) which can affect the way that the participants' replies may be interpreted rather than taking them at face value. For my research the notion of narrative is relevant in that what we remember, how we remember it and how we present our experiences as teachers are all located within one's professional identity. The aim was to conduct the interview, through building rapport with the lecturers, and positioning myself as

someone who is also engaged in similar teaching and learning developments to the participant, so that a straightforward interpretation of the transcript could be given.

Epoché or bracketing off is the term used in Interpretive Phenomenology Analysis, IPA, and grounded theory respectively, and refers to the attempt that researchers should make during their analysis to separate themselves from their views and experiences in order to try to see the phenomenon afresh and to understand the phenomenon as it shows itself. Balanced against the notion of bracketing off is the value that insiders bring to their organisational research. As an insider to the case study institution I bring particular 'preunderstandings' of the way the organisation operates and to the possibilities for teaching and learning using of Web 2.0 tools in the classroom (Coghlan, 2003; Brannick and Coghlan, 2007). Thus the analytical process sought to bring both fresh insights but also insider perspectives to bear on the data.

Template analysis (TA)

Template analysis is an approach to data analysis developed by King. It provides a flexible technique with a few specified procedures which allows researchers to tailor it to their particular requirements for qualitative data analysis (King, 2004, p.257). Template analysis is epistemologically neutral and can be used either inductively or deductively to aid the analytical process (King, 2004, p.256). The value of TA is that it allows for the analysis to be informed by a priori categories as well as from inductively derived codes (King, 2004, p.257). Thus, it acknowledges that themes need not be emergent from the data and provides an approach which fitted with my experience of carrying out research. Initially I worked from the data to identify categories, but found this unhelpful and returned to the interview questions and wider reading to give the analysis more structure.

One key feature of TA is the focus on cross-case analysis rather than within case. This is because TA suits a sample size of 20-30 rather than an idiographic approach such as IPA (Reid et al., 2005) which tends to have a sample of less than 10. With larger studies, for example with 40 participants, the need to revise the coding structure makes TA too burdensome to be practical. King calls this a "range of convenience" (Gibbs, 2008, np). This sample size and focus on cross case analysis fits the approach needed for my study.

The aim of template analysis is to use the transcript to produce an account of the data that does justice to its richness (King, 2004, p.266). Rather than being a clearly delineated method, it is, instead, a group of techniques which enable the researcher to thematically organise and analyse data (King, 2004, p.255). The template was developed whilst data

was collected. Silverman warns against premature theory construction and the 'idealization' of research materials based on a priori categories (2005, p.185). Instead he advocates use of rigorous content analysis of transcripts based on lecturers' own inferences and actions. The final template was completed only after all the data collection had been completed. The hierarchical structure of the template is important in that the higher level are broad themes with greater scope which encompass successively narrower, more specific ones although the level in the hierarchy does not determine the significance of the codes (King, 2004, p.258). King makes the point that there is no right or wrong level for a theme but it is a judgement about the story the researcher wants to tell from their data (Gibbs, 2008). The process of developing a template involved adding new themes, subsuming themes, redefining and merging themes and moving themes between levels.

The Final Coding Template used for this research is included in Appendix F. It consists of nine high level codes. Each of these is further divided into a number of second level codes, which have in some cases been further divided into third level codes. This flexibility in the number of levels is another reason for using TA.

One of the dangers with TA is the template can become overly linear. King (2004, p.267) suggests identifying themes which work at a meta level which can be superimposed on the other template. The notion of risk was a meta level theme which I explored in terms of how it related to link across levels, but in the final template it was not used as the term risk did not emerge as a critical issue in the way that I anticipated that it might.

Computer based qualitative data analysis

Computer based analysis, using NVivo, was adopted for the analysis because it allows for a paperless way of working which suited the large volume of complex and rich data that the study generated. In addition, Bazeley (2007) asserts that computer based analysis has the potential to facilitate more rigorous analysis than using paper based coding (p.3), although rigour is clearly, in part, a function of the way that the tool is applied. The transcripts were read and reread to produce the final template, which was then applied to code the data. Table 3.4 provides an excerpt from the data with the codings that were attributed to this data sample shown indicated in the right hand column. The size of each chunk code was generally a couple of sentences, large enough to try to capture the context and meaning of each exert. Although NVivo allows the researcher to easily click through to the source data to read more widely and to broaden the coding so that more words can be included in a particular code.

Transcript	Coding
ME so the integrated learning portfolio used to be study skills based but now you've written it [the new module] so that it integrates other modules.	
SG yes and it now is year long. I was a bit apprehensive about it because they've never accepted blogging very well.	feelings; conservative; digital natives

Table 3.4 Exert from transcribed data to illustrate the coding

Data Presentation

In providing quotations to illustrate my discussion in the findings chapter, I have tried to be faithful to the way that the lecturers talked. However, I have added normal grammatical conventions to make the quotations' meanings clearer to the reader. In addition false starts and repetitions have been edited out (dots have been used to indicate some text is omitted). Where the meaning needs additional words for clarification, which are assumed in the spoken style of dialogue, I have added these and shown this with square brackets. For example, in the quote below Claudia was discussing the tension '*Time consuming to learn new tools'* and her answer is quoted in the following form:

> it [having time to learn new tools] doesn't worry me much; I'm quite motivated to do it. [Claudia]

I have not changed other aspects of the data, except to reword the common spoken abbreviation 'cos' to 'because' which I feel reflects the style of the lecturers' language more accurately when produced in text. In the findings chapters I have, on some occasions, used quotations more than once. I have done this because the quotation is worthy of consideration from a number of perspectives. Whilst this might suggest a paucity of data this is not the case, rather the quote is so apposite that it has value to illustrate a range of ideas. Often, although not always, a particular quote is used because it sums up succinctly the views expressed by a number of participants. In other cases, it may be a unique but a highly telling response. I have, at all times, attempted to be faithful to the wholeness of the data, rather than 'cherry pick' and where examples are used for their uniqueness, this is made clear to the reader.

Chapter conclusions

This chapter discussed the warrant for the findings presented in subsequent chapters. The study set out to explore the 'lived experiences' of early adopters of Web 2.0 tools. Given this focus on lived experiences the study uses small scale and phenomenological research methodology. Clearly there are limitations of the study's design in terms of the size of the sample, however, the analysis has taken an idiographic approach rather than attempting to draw out causal relationships or widely generalisable findings. Instead, the methodology was chosen in order to explore the richness and nuanced nature of the data, and thus to provide a deep vein of enquiry into lecturers and the way that they make changes in their practice, what motives these changes and how they negotiate their professional identities within one particular institutional context.

Chapter 4 Web 2.0 tools in practice

Introduction to the chapter

Web 2.0 tools are relatively new[7] and their uptake in higher education has been limited to what Kelly has called isolated pockets (2010, p.126). Much has been written about the technologies from the perspective of those who are immersed in their application; see for example Conole and Dyke (2004a); Kulukska-Hulme and Traxler (2005). In addition, some of the literature comes from distance learning programmes where the context is significantly different (Mason and Weller, 2000; Salmon, 2000; Salmon, 2002). However, the early adopters in my study are those people who are experimenting with uptake of tools in relatively unsupported 'main stream' environment. They are often isolated in their departments and working with students who have not experienced the tools before in their academic lives. They are likely to be the first people in the institution to be using a particular tool or using it for the first time in a particular way. Their experience is from the 'sharp end' of practice.

This chapter focuses on the experiences of the early adopters in terms of describing and analysing what drives their adoption of the Web 2.0 tool to their teaching and learning practices. In particular, it focuses on the features of the tools as they are applied to pedagogy. The questions that this chapter seeks to answer are:

- What are the features of the tools that lecturers value and how do they support teaching and learning?
- What motivates or drives the adoption of particular tools?
- In what ways do the lecturers experience the tensions identified in the literature explored in Chapter 2 (page 40), how do they understand these tensions and what strategies do they use for addressing them?

Thus, the chapter focuses on the study's first aim:

- to explore how HE teachers make use of Web 2.0 tools within their teaching and learning practices. (Aim 1)

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[7] The term blogging emerged in 1997, the first wiki was written in 1994-5 and the term Web 2.0 emerged in 2005 (Franklin and van Harmelen, 2007)

The chapter uses categories from Kennedy and Lefevre (2009) to interpret the pedagogical functions and affordances of the Web 2.0 tools. The discussion includes an additional affordance suggested by my data, that of online space with its particular features (including ownership, persistence, asynchronicity, controllability, different online learning behaviour, online time and persistence). The chapter also considers the data collected from the Tensions Exercise (Chapter 3, page 65) and explores how lecturers responded to these tensions and how they are managed in practice.

Categories for the analysis

In Chapter 2 the notion of the social mediated nature of the tools was discussed and the term affordance to denote a property of a tool was critiqued. I concluded that the term affordance is widely used despite being held by some to be problematic. Instead the definition of an affordance as lying between 'features', the objective functions or properties of a technology, and 'use' of a tool, was proposed as helpful (McCrory Wallace, 2004). This chapter considers how the affordances of Web 2.0 tools are understood and valued in practice. The chapter also explores how they are harnessed to fulfil a pedagogic function.

Kennedy and Lefevre (2009) have suggested that Web 2.0 tools have three broad pedagogical functions: knowledge building, discussion based, and community building. These categories were defined as follows: knowledge building activities are those which involve knowledge creation rather than acquisition. Scardamalia and Beretier (2006) suggest that knowledge building also assumes that learning involves becoming a member of a wider knowledge building culture, involving the development of competencies and engagement with the wider world. However the requirement for the knowledge building community to include those outside the course community was not adhered to in my analysis. In terms of discussion activities, Laurillard (2002) argues that learning is as much a social practice as it is a psychological or scientific one and thus a well orchestrated and designed discussion activity is a valuable way of developing students' understanding of a difficult topic. For the purposes of this study, community building activities have been defined as those whose principal purpose is in relation to the social aspects of the community of inquiry that is "the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people (i.e. their full personality)" (Garrison and Anderson, 2003, p.28).

In addition to the three broad pedagogical functions, Kennedy and Lefevre (2009) have also proposed six affordances of Web 2.0 tools that lend themselves to particular uses in teaching and learning:

1. Documentation e.g. the ability to track learners' contributions;

2. Tutor support e.g. the ability to support learners outside of class time through access to material;

3. Organisation and convenience e.g. the ability to have up to date documents available and to work in different ways;

4. Opportunity to use the new affordances of digital media e.g. allows easy embedding of video;

5. Community building: can provide participants with ready information about one another;

6. Communication: they provide additional communication channels to conventional face-to-face and phone contact e.g. asynchronous forum.

Other typologies of affordances exist with debate about their relevant merits (Laurillard, 2002; Boyle and Cook, 2004; Conole and Dyke, 2004a; Conole and Dyke, 2004b; Littlejohn, 2004). However, the focus of the discussion in my analysis is how Kennedy and Lefevre's (2009) three functions and six affordances were evidenced. I used these functions and affordances to understand lecturers' rationales for adoption of Web 2.0 tools in their teaching and learning activities.

My study

The data was analysed, trying to keep close to what lecturers actually reported. The data was 'messy' and confused in that the associated teaching is a complex process, with interconnections between modules, involving many different students with a wide range of individual needs. Whilst the data was rich and detailed, there were many places where lecturers appeared to shorten their descriptions of their teaching practices in order to convey their meaning in a relatively succinct and interesting way. For instance, Abigail discusses her use of a blog and wiki tool but her perspective emphasised the use of the blog tool (for reflection activities) rather than the wiki tool (used for knowledge building functions). Thus Abigail's entry has been categorised as 'knowledge building' rather than 'discussion' in order

to stay close to the data. Whilst the analysis posed some challenges, its strength in part, is in the breadth of cases as they cut across many different subjects/disciplines. The data has been explored both across the cases (that is by comparing across the whole sample) and within cases (that is by considering the individual's responses separately).

Pedagogical function

My analysis suggests that rather than the three functions activities identified by Kennedy and Lefevre (2009), instead there were six primary pedagogic functions:

1. Knowledge building activities (5 cases);
2. Reflective activities (4 cases);
3. Discussion based activities (2 cases);
4. Community building activities (2 cases);
5. Capturing and sharing a learning experience (1 case);
6. Integrative activities (ones that combine two or more other activities) (2 cases).

The first three pedagogic functions are taken from Kennedy and Lefevre (2009) but the additional functions identified from my data were community building, capturing and sharing a learning experience and integrative activities. The numbers of cases within each category illustrate that, within this sample, the lecturer's focus is particularly on knowledge building and reflection activities rather than community building, capturing and sharing a learning experience or discussion based. The relatively large number of knowledge building and reflection activities is worthy of note and reflects a change in the use of Web 2.0 tools, whereas discussion boards were the dominant web tool from the late 90s and early 2000s, as wikis and blogs have become available they have become the tools of choice for many of the lecturers in this survey. The two lecturers who used discussion boards are some of the longest users of technology and may be more influenced by early technologies than more recent ones (Claire has 10 years' experience and Simon 19 years). In addition, the relatively small number of community building activities is indicative of the fact that building community has a particular role within a course, but is generally not a central concern for tutors. Thus, the focus for teachers was towards the academic aspects of the course through the use of knowledge building and reflective activities rather than developing the social aspects of the students' learning.

This analysis of the cases has been collated in the tables 4.1 to 4.6 below.

Pseudonym	Tool and Task	Affordances					
		Documentation	Tutor Support	Convenience	Digital media affordances	New communication channel	Community building
Richard	Wiki is used to host group work where students explore a topic	√		√		√	
Claudia	Wiki is used to host individual's work on a topic	√		√			
Rebecca	Wiki is used to host group work where students explore a topic					√	
Rachel	Wiki is used to host group work where students explore a topic				√	√	
Jennifer	Students can use whatever tool they like as the vehicle for a role played group work	√	√		√	√	

Table 4.1 Five cases of the 'knowledge building' as their main pedagogic function

Pseudonym	Tool and Task	Affordances					
		Documentation	Tutor Support	Convenience	Digital media affordances	New communication channel	Community building
Catherine	Blog and wiki to build evidence of students' engagement with the ideas in the module	√				√	
Sue	Blog is used to hold personal reflections on the student's development of skills		√				
Emily	Blog used to create a digital assignment				√		
Adrian	Blog used to build a portfolio of students' work on the module			√	√		

Table 4.2 Four cases of 'reflective activities' as their main pedagogic function

Pseudonym	Tool and Task	Affordances					
		Documentation	Tutor Support	Convenience	Digital media affordances	New communication channel	Community building
Claire	VLE Discussion Board based on a Case Study for Inter disciplinary working					√	
Stuart	Camtasia and Discussion Board in VLE To provide access to teaching in different format				√	√	

Table 4.3 Two cases of 'discussion based activities' as their main pedagogic function

Pseudonym	Tool and Task	Affordances					
		Documentation	Tutor Support	Convenience	Digital media affordances	New communication channel	Community building
Wendy	Facebook is used to keep in contact with students on placement across the world		√			√	√
Crista	Discussion Board in VLE					√	√

Table 4.4 Two cases of 'community building activities' as their main pedagogic function

Pseudonym	Tool and Task	Affordances					
		Documentation	Tutor Support	Convenience	Digital media affordances	New communication channel	Community building
James	Video to support teaching of practical subject			√	√		

Table 4.5 One case of 'sharing a learning experience' as its main pedagogic function

Pseudonym	Tool and Task	Affordances					
		Documentation	Tutor Support	Convenience	Digital media affordances	New communication channel	Community building
Jack	Eportfolio is used to collate documentation and facilitate group work on projects	√	√	√		√	
Abigail	Blog is used to hold personal reflections on the student's development of skills Wiki is used to host group work where students explore a topic	√	√		√	√	

Table 4.6 Two cases that integrate several pedagogic functions

Affordances of Web 2.0 tools

The discussion below illustrates examples of the Kennedy and Lefevre's (2009) affordances of the Web 2.0 tools. It summarises the typical ways in which an affordance was understood by the tutors.

Documentation (6 cases)

The ability to track learner's contributions is one of the features that define a wiki. This was clearly important for those who used the wiki to support group work. In the example below Richard discusses how, not only the tracking of learner contributions is valuable, but also the way that it makes the learning process visible to the tutor:

> what it has done is given the module leader more of an insight into what actually happens when people go away and do this research process and who's contributing what kind of material to the wiki. Whereas that was all sort of unknown before. It was just sort of send the students off with some instructions about what you should be doing, but just sort of hoping that everyone engages with it equally. [Richard]

Tutor Support (5 cases)

This category of affordance is exemplified by the quote below, from Sue, who shows the possibility for extending the contact with the tutor outside of the classroom. The blog tool also makes the students' learning visible in a quite unique way in that it is timely, personal, and private. This sort of personalised feedback is not easily replicated through conventional

print or face-to-face support without more cumbersome processes such as assignment submissions, or time-consuming tutorials:

> We only comment on it [the e-portfolio] for the first 5 weeks to push them further in their reflection. So we comment and say things like have you thought about taking this further? What could you do with it? To sort of push them. Because their reflective skills are not very well developed. [Sue]

Organisation and Convenience (8 cases)

Organisation and convience were features discussed by tutors when they discussed organisation of group work. Many of lecturers valued the flexibility that online learning provided in terms of time and space:

> I like the idea of the wikis because I think students meeting up to do group things gets increasingly difficult, but I like the idea that they can all work on it when it suits them. [Rachel]

> This way they can pop in and out of the screencasts when they want to. They are given it well in advance so they can review them as and when, and it spreads it out more. [Stuart]

> I've seen a lot of work going on at 11pm at night on a Friday. I'll find 2 or 3 of them logged in. [Jack]

Digital media affordances (7 cases)

The notion that new media has different affordances was not generally well understood by tutors. The responses to '*Tension 19 There is a requirement to cultivate fluency and sensitivity in new forms of expression*' in Appendix G illustrates this. However, a few lecturers valued the affordances of digital media and in particular they mentioned the visual richness of video, the web's paperless quality and its personalisability. The following quotes illustrate these points and show the value of digital media for expanding the learning experiences:

> the amount of time that I allocate for demonstrating a reflective journal and other people's reflective journal online would equate to the same as if I brought in suitcase load of reflective [portfolios] that I'd acquired over my own professional practice... and it allows students to find what they feel is appropriate for their personal aesthetic, technical and professional directions. [Adrian]

> It [the Wordpress blog] has its own look and feel that you choose... It is you representing yourself in a much clearer way... so the individuality of it I saw as a bonus. Some students saw it as a bonus and enjoyed and some saw it as a challenging aspect and so <u>next</u> year when I do it, I want to address that in the first session where we get together, and we talk about the medium a bit more explicitly and we explore some of those issues, so they are not coming to them unprepared when they come to them online. [Catherine]

[If a student on placement thinks] "How did he show us how to do that meniscus test in the knee?" I think it [a video demonstration] gives them another option. It is better than a book in that it is a different dimension, it is easier to see, you can look at handling and things like that that you can't quite get out of a book. [James]

Business... it's got quite a lot of written words and I think quite often we lack artefacts to show and demonstrate and this is a way of developing something to show –... something a bit more interesting than words... to be more creative and to use different just different techniques for myself and also for them. You can only write so many reports. [Rachel]

Community building (2 cases)

Only two cases were ascribed to the category community building and only one of these used a social networking site which provides personal data to encourage community building. (The other example used a discussion forum in the VLE.) The value that Wendy found in using social networking was firstly its familiarity to her students so that within a day of setting up her group page all her students had joined it. (This reflects the fact that Wendy's students, like many young people, are already using Facebook for their social communication.) Wendy used a Facebook page to build a supportive community whilst the students were on placements in industry:

So it is really a support network. All the students are a member of this group. I'm a member of the group. When you get "it is awful I'm working this many hours". You get "I'm in the same situation and it is really hard work" but then you get others going, "well I'm loving mine"... So the students who start [placements] earlier have settled in and have overcome that initial anxiety, so they support them [later starters]. So it is a nice sort of forum... Really my motivation was so that I could keep in touch with them, but it has turned out that it is a nice way of them keeping in touch with each other. [Wendy]

Communication (7 cases)

The speed and ease of distribution using Web 2.0 were critical for James's use of rapidly produced, user-generated video can be tailored to the particular learning needs of the group:

Our students change from year to year as you'll know, you get good years, and you get years that don't seem to get it so much sometimes... you could argue why don't you just lecture that stuff and use that?... I suppose my reticence with it is that it is not personal to them. [James]

The variety of mechanisms for communicating between the tutor and the students was valued by Jack who works part time, and this process of being able to monitor his students' work also impacts on the way that they manage their workload. (The issue of the impact of online tools to lead to feelings of greater surveillance by the tutor is one that has been is discussed later in this chapter.)

> I needed a mechanism that was going to be fairly robust that they were going to be able to keep in contact with me. Email is all well and good but it only goes so far... I get them to put their work into the eportfolio create a weekly blog and that then they would not have this issue of having to do 30% of the work in the last 15 minutes. [Jack]

Likewise, Wendy valued the facilities in Facebook to send both personal messages as well as messages to the group as a whole:

> It is a nice way to keep in touch, because if you just communicate via email it is between me and them... I had one guy who went over to the America and he was on the Facebook all the time saying "I'm not sure that I'm enjoying it" so we then did private messaging. [Wendy]

Reviewing affordances

The number of cases that made use of each of these affordances was roughly equal (between five and eight citings for each), with the exception of community building which only had two citings. This suggests that Kennedy and Lefevre (2009) have correctly identified some of the important affordances that drive learning designs. Tables 4.1 to 4.6 show that, even within a pedagogical function, lecturers make use of a number of affordances (on average three affordances cited per case). Although for each table, that is for each pedagogical function, a range of the affordances has been valued, suggesting that there is not a causal link between affordances and function. The implications of this for practice is that lecturers understand and apply the tools differently, valuing different aspects of the tools for its relevance to individual learning designs.

Online space

This discussion of affordances has tended to atomise and disaggregate features and functions of the tools, rather than seeing the tools as offering a combination of a number of features. This disaggregation is not what appeared to be happening in practice. Instead Tables 4.1 to 4.6 show that several of the affordances were valued by lecturers in many of the cases. In particular the notion of online space as having a unique combination of features was evident in the data. The features of the online space included its controllability, ownership, online behaviours, online time and persistence and these are amplified in the discussion below. Below each of these factures is exemplified but again this tends to atomise the features and, as I have just noted, this is not how they are understood by lecturers who conceive of the space as an entirely new medium which combines a number of distinctive attributes.

Controllability, public versus private

The nature of the space, as being either public or private, leads to different relationship with the audience for students' writing. In addition the openness of the medium supports learning with and from peers:

> the blogs we did make them private for a particular student... But I think that helped to motivate them contributing. I think if they'd known that anybody or everybody could see what they were writing, because... they might not make their writing public. [Abigail]

> It is a strong motivator for them to see each other's work. [Claudia]

> there is an opportunity for an individual to publish because it is an eportfolio tool one individual could publish a folder and make that publically available if they wanted to. So if they wanted to make their work available for a potential employer to see they can do. [Jack]

> The other thing is that you can only see presentations in your little group whereas this way you can actually share even more ideas because it potentially opens it up to other people later on. [Rachel]

Land and Bayne (2002) has discussed the nature of online space and the feelings of surveillance that some students experience when tutors are able to see their work as it develops. Drawing on Foucault's (1975) discussion of how the panoptican creates an unequal power relationship between those viewing and those being viewed, they argue that the VLE enables a form of surveillance and suggest that teachers need to "recognise and work with the new modes of identity formation and new articulations of power/knowledge which cyberspace technologies represent" (2002, np). Likewise Jack's experience of using an eportfolio tool evidences the impact of his ability to check up on his students has on their work flow in that he notes that they do not leave course work to the deadline date to complete:

> I get them to put their work into the eportfolio create a weekly blog and that then they would not have this issue of having to do 30% of the work in the last 15 minutes. [Jack]

Ownership

Ownership of the online space was identified as important by several lecturers. The blog tool used by Catherine allows students to change its design through use of templates. This customisability imbues the space with a sense of ownership by the person who controls it which extends into making them more accountable in terms of how they are contributing to the learning activity:

it is their space so in a discussion board no one is going to say, VJ hasn't contributed at all, whereas if you click through to VJ's blog and it is empty it is really obvious. [Catherine]

For Richard, similarly, the students' ownership of the space allows students' autonomy in the way that they approach the task:

I think it was the fact that students could have control over the wiki spaces, because we didn't want to be too prescriptive over what about how this research process was undertaken and what the outcomes of the research process might look like... They all use different approaches, and some of them will sort of take ownership of a particular page and it will be Joanne's and that will be her individual particular research and there will be James's research on another page, and others set it up by topic, so they have spectrum of victimisation or statistics in relation to victims of domestic violence. [Richard]

Claudia's description of what she was intending to achieve in her use of a wiki tool illustrates the importance of a self-contained space for altering the way she wanted her students to relate to the learning in terms of their ownership and responsibility towards the process:

I needed places which were relatively self contained spaces where students could build their own stuff, but where they could also see each others' stuff and comment on it. And that was where Web 2 tools come in. And that was a big shift for me from discussion boards, which I'd used previously to blogs and wikis which was the new design that I started. [Claudia]

Learning behaviours in online space

The type of learning behaviours afforded by the online space is qualitatively different to face-to-face space. For Richard the space feels less constrained by the presence of the tutor:

That will introduce possibilities for students to contribute in a way that probably feels less constrained [than] in a class room environment but it will also introduce problems as well, potentially such as people going off into topic. [Richard]

Richard's quote above also indicated that the new space introduces additional challenges in that he comments that there is more potential to lose focus. The following quote illustrates how Richard considers the lack of embodiment, that is one's physical presence, in online space presents potential challenge to a tutor's authority:

My authority might be undermined? I think it is true. I think in a Web 2 environment, there is that potential, that greater potential. I think it is more of a levelling out. People assume the same status, in a way that is very different to a physical space particularly when you are stood at the front of a group of learners who are all facing you. But I think it is least important because I don't particularly have a problem with my authority being examined in that way or not challenged is perhaps too strong a word. I think it is part and parcel of moving to a Web 2 way of working and thinking that this is perhaps in some ways more democratic. [Richard]

Online time

There are several dimensions to the notion of online time that impact on the design and potential of the learning activity. Claudia explains in the following quote how the freedom of working online enables her to design learning activities without the constraint of the one hour lecture slot which traditionally defines the teaching input in HEIs:

> I didn't have to chunk the learning into the stuff that they could do in the week between each class, so instead of shaping the learning around the time, I was shaping the learning around the time around the learning. So if one task was going to take 3 times as long as another task I was able to give them 3 weeks to do that, whereas in classic face-to-face curriculum you've got an hour. How much can you get done in an hour? And your find yourself slicing up the curriculum into week long and hour long chunks. [Claudia]

Likewise for Claire the online asynchronous medium provides an opportunity to design a learning activity design differently so that her learners, who are working on an interdisciplinary team activity, engage more a deeper in an activity which has more opportunity for reflection:

> It is nice to meet people [face-to-face], but you would only meet them for 2 hours and a lot of that people can't synthesis information and certainly the idea of a 5 stage model you couldn't do that in 2 hours. [Claire]

Persistence

As Adrian comments above (on page 81), the ability to reuse resources due to their paperless nature has the potential to enrich the learning experience for students. This was echoed by several other tutors who valued using previous students' work as a resource and to motivate student by opening up the learning to the rest of the group:

> Then every year I would keep some of the good ones. [Abigail]

> There is also that idea of persistence, that the work from previous students stays behind as well. So they can this is one of the wikis that I've built that they sort of build this encyclopaedia together and each year it gets better because they are contributing to something that future students will benefit from. [Claudia]

The notion of online space with new affordances is a concept with which the learning technology community has been grappling since the inception of online learning in the late 1990s. Initially the focus was on entirely online courses, yet more recently, the nature of the importance of the links between learners' online and the physical presence has been emphasised (Hemmi, Bayne and Land, 2009) whilst Facer (2009, p.4) talks about the importance of "'place' and physical location as a marker for identity". There is potential for online space to provide for disembodied and ontologically challenging learning interactions

discussed in Chapter 2, drawing on Bayne's work in virtual world (2010). However this sort of use of disembodied and ontologically challenging ways of learning was not what was evident in the cases considered in my study. What was in evidence, was lecturers designing new learning activities based on the new affordances of online space.

The Killer Affordance

Whilst for most lecturers there were a range of benefits to using technology, there was, nearly always, one overriding reason derived from the online affordances of the tools which was the basis for the tool's adoption. The notion of the killer application, or 'killer app', is applicable here. The 'killer app' is a term that originates in the computer software industry to describe an application of a piece of software that drives its uptake. The 'killer affordance' can be compared to the idea of the unique selling point, USP, in marketing jargon that is the principle reason why a product is selected, and the reason why it is worth the effort to invest in its use. Hence in terms of teaching and learning, the 'killer affordance' is the affordance which provides the driver, or motivation for adopting a tool.

The discussion of affordances and how they are categorised is, as noted above, one that has been debated within the elearning literature (Laurillard, 2002; Boyle and Cook, 2004; Conole and Dyke, 2004a; Conole and Dyke 2004b; Littlejohn, 2004). However, my study suggests the idea that lecturers generally privilege and value only one of the affordances and this becomes the driver for the tool's adoption. Whilst many of the affordances of the technology are applicable to a case, and in some cases well understood by the lecturer, they did not constitute a reason for the tool's adoption. For instance, Catherine's use of a blogging tool was driven by her desire to create a space outside of the classroom where her students reflect and discuss their understandings of the subject and this was the 'killer affordance' for her. However she also valued other aspects of the medium, exposure of her students to new tools (students creating an online presence, providing a more equitable access to the discussion) but these were not the main driver for her uptake. What is particularly noticeable from the list of the 'killer affordances' in Table 4.7 is the notion of online space with its range of features, discussed above, that drives many lecturers' reason for adoption.

Pseudonym	Primary driver for adoption – the 'killer affordance'
Richard	An space outside of the constraints of a face-to-face meeting for students to carry out their group work.
Claudia	A space that was expandable, not limited by the confines of the classroom, where students could build a resource representing their understanding of the topic.
Rebecca	A space for students to carry out their group work.
Rachel	To widen students' experience of creating digital artefacts with richmultimedia affordances of digital media.
Jennifer	As a vehicle to hold a collaborative team project.
Catherine	A space outside of classroom where students can build their understanding of the topic.
Sue	To support reflection and make it visible to the teacher.
Emily	To widen students' experience of creating digital artefacts with rich multimedia affordances of digital media.
Adrian	To develop online publishing skills.
Jack	A private space outside of classroom owned by students.
	To enable a student with Asperser's Syndrome to participate on more equal terms.
Abigail	A space for students to store presentations and work in groups.
James	To provide material in rich video format for subject with practical dimension.
Claire	To provide a space outside of the constraints of a face-to-face meeting where students could meet students from other disciplines and learn about relating in an interdisciplinary context.
Stuart	Persistent nature of screencast lectures as a learning resource.
	Discussion forum to deepen students' knowledge.
Wendy	To extend the support she can offer students when they are on placement.
	To enable students to keep in contact with one another whilst on placemen.t
Crista	To provide a space for contact that could take place outside the classroom.for

Table 4.7 The primary reason for adoption of a tool – the 'killer affordance'

Tensions

As discussed in the Chapter 2, a large number of tensions suggested by the use of Web 2.0 tools in teaching have been identified. Tensions could be thought of as the polar opposite to an affordance: rather than being a reason to use a technology, they are concerns which may

inhibit their use. My study set out to explore the extent to which tutors identify with these tensions and to discover the strategies that tutors used to manage the tensions through their practice using the Tensions Exercise discussed in Chapter 3, page 65. The data from the Tensions Exercise provided a huge range of responses that has defied simplifying and summarising. Instead, a summary of the responses to the tensions related to pedagogy is given in Appendix G:

The focus for this chapter is the six tensions associated with Web 2.0 tools in particular:

> 6. The University's reputation is a concern if using open web based tools;
>
> 10. The reliability and robustness of Web 2.0 tools is a concern when designing learning and teaching activities;
>
> 11. The web can be a permanent medium so students need awareness of this;
>
> 15. Using a VLE for Web 2.0 limits exposure to the wider internet;
>
> 18. There is a loss of certain aspects of the learning process when we move to online learning. Students want personal contact with teachers;
>
> 19. There is a requirement to cultivate fluency and sensitivity in new forms of expression (e.g. visual or video).

The following discussion illustrates the way that these tensions were understood.

University reputation (tension 6)

The issue of reputation was felt by some lecturers to be important and they ensured that they addressed this in their teaching:

> They are making comments about their placement providers saying "they are working me for this many hours and I hate it". If someone from the placement happened to see that, especially if I'd responded in a negative way perhaps it could affect both the student and the University as well. [Wendy]

It was also noticeable that four lecturers had not considered this tension and this suggests an area where lecturers need more awareness and training.

Robustness and reliability (tension 10)

Lecturers who had decided to use tools that were outside of the VLE had generally taken this decision after considering the pros and cons of using a VLE in terms of its robustness and the level of support available from the University for the VLE compared to a non VLE tool. They displayed a balanced view of the risks involved:

> Things go wrong don't they? And they've got to learn to be adaptable and to manage. [Jennifer]

Yes that worries me... It is why I'd never require student to use a particular Web 2 tool just encourage its use. [Claudia]

They only very occasionally let you down. [Rachel]

Permanence of the web (tension 11)

In terms of the permanence of the medium some lecturers were aware of this issue and ensured that it was addressed, sometimes, as part of the taught curriculum:

As they work online, as their identity evolves, they become more confident physically through their presence on line. [Adrian]

I don't think I've talked about permanence with students but I have talked about online identity and that it is something you have to develop skills in. I feel really strongly that it is like a new key skill almost but that we ought to be supporting learners and thinking about how we manage their online identity so that they end up with something that they are happy for the world to see and would help them to present a professional persona as well as a social persona because I think that we are busily presenting a social face on line but that there is much less going on in terms of how do you exploit these tools in order to present themselves professionally. [Catherine]

In the professional based stuff that I teach in year 3 we do consider the use of Facebook and I try to get across to them that you have to be very careful about the type of thing that you put on there. [James]

VLE as a 'walled garden' (tension 15)

The issue of whether to use the VLE or open web tools was a live one for many lecturers. It was raised not only in response to the Tensions Exercise but also throughout the interview and a node (VLEness) was used to code this data. On the one hand, lecturers were keen to scaffold and support students by providing them with the 'walled garden' of the VLE where the audience for their work was limited. This they felt would encourage students' contributions:

The blogs, we did make them private... Having the knowledge that it was only the tutor and themselves that could see what they were writing, and they were told that as well, I think it made them more likely to contribute. [Abigail]

I am quite happy to stay within the limits of Blackboard because it is really for them to find out more about a particular example and to share the example with each other. But they are not for wider consumption they are not that technical. They are not that well researched. [Rachel]

Yet on the other hand, lecturers were also aware that limiting students' work to the VLE limited the authenticity of the learning activity in that it made the activity more sterile and lacked potential for engagement with the wider community of the web:

The VLE doesn't have the real feel that we're trying to get them to do in industry. [Jennifer]

That's one of the things that we need to think about - how we can encourage exposure to wider [world]. I think we do do links and things but that's slightly passive. What I'd really like is something that allowed them to have some engagement with the wider internet but actual engagement as opposed to just reading. [Sue]

There were other facets to the decision to go outside the VLE. These included the limited affordances of the VLE in terms of its design, integration of multimedia content, students' attitudes to the VLE as a tool of the institution and the simplicity of using an institutional tool (so that no new IDs or passwords were needed).

Loss of intimacy (tension 18)

Loss of intimacy in the online medium was a tension that all lecturers, both confident and less experienced, refuted. For instance, Emily, one of tutors with least experience of using Web 2.0 tools in the sample, comments:

I think online learning can be more intimate actually and I also think it can be more pacy. [Emily]

However, many lecturers commented that the way the tool is designed into the learning that is critical to its success. Rachel's comments sum up the importance of design:

I do think the learning process changes in online learning, because they are more in control of the process, the speed and so on, but they are still getting that diversity. I think that if materials are well written and designed for the purpose that they are trying to be used for then it doesn't impact on the learning, it just changes the medium that they are going through. And I think that is the key to any of this technology is that you should only use it if you can see a clear benefit to the students. I don't think contact has to be face-to-face. It can still be personal without the face-to-face. I don't see that as a limitation. [Rachel]

Some lecturers made use of face-to-face contact alongside the online delivery to make an integrated learning experience:

[The module isn't] wholly online. It is a traditional lecture space plus something going on online at the same time. So I think in that way they feel supported and it would be different… it was totally online. [Jennifer]

Stuart also comments on the importance of the integration between online and face-to-face when he critiques another person's poor implementation of online learning:

There was a group of students who wanted more face-to-face... They were told to come in at lunchtime having spent the morning being given some directed [online] studies but what was missing was they didn't spend the first period discussing what they'd done in the morning. It was like that's done and it wasn't joined up. [So] it

depends how it is sold to the student if they understand the value of what they are doing and the value behind it. [Stuart]

Non-textual literacy (tension 19)

The skill of developing students' non-textual literacy was one that was not well understood by lecturers. Those that did understand it were not specific in describing how they developed students' skills in this area. Perhaps it is because of the newness of the media and one that is not well understood in academia (outside of the disciplines like film studies) that lecturers struggled to embed these skills into their teaching:

It is a digital literacy sort of thing isn't it that there are lots of different ways in which you can convey your thoughts online that you don't have access to, if you just presenting your work in writing. Yes so that is something that you have to think about when you are designing it. I should do more of it next year. [Catherine]

Strategies to manage tensions

Cross case analysis

The strategies that lecturers used to manage the tensions and their opinions about the tensions were coded using the codes given in Table 4.8. Definitions are given in Appendix F.

Strategies for managing tensions
    Accommodated
    Managing students' expectations
    Turned
Opinions about the tensions
    Same as face-to-face
    Haven't thought
    Important
    Disagree

Table 4.8 Codes used for coding the tensions.

The numbers of examples of each code is summarised in Appendix H, *How tensions were coded.* Just as there was no clear pattern in terms of how each of the tensions was understood, likewise how tensions were managed defied simple summarising. For instance, the tension '*Loss of teacher's control of what is going on when students use Web 2.0 tools*'

was 'managed' by two lecturers, 'turned' by another into a facet of their design, one 'hadn't considered' the tension, one considered it 'important' and two lecturers 'disagreed' with it.

		Strategies for managing tensions			Opinions about the tensions			
		Accommodated	Managing student expectations	Turned	Same as f2f	Haven't thought	Important	Disagree
	Totals	25	6	7	6	17	16	33

Table 4.9 Total number of examples of strategies and opinions related to the management of tensions (Taken from Appendix H)

Table 4.9 illustrates that overall lecturers disagreed with tensions more than any of the other categories. Tensions were frequently accommodated through the design of the learning activity, for instance by making students aware that what they publish on the web can be viewed by anyone with web access, or by drawing attention to some of the challenges of group work in the teaching. Similarly, some lecturers found ways to turn a tension, to make it a feature of the learning design, for instance by valuing the volume of contributions rather than the quality participation, or celebrating the alternative perspectives possible from web pages which are not edited in the formal way. Although there were some tensions which lecturers identified as important, there was no particular a pattern in terms of which ones. Overall, the table indicates that lecturers were much less concerned with the tensions than might be thought, based on the literature on tensions (see Chapter 2, page 40).

The qualitative data provides a rich source to explore these categories, albeit that the range of responses defies summarising into a coherent explanation. Quotes illustrating the range of responses for some of the tensions are provided in Appendix G. They show the diversity of interrelated factors that lecturers juggle, including the background and skills of their students, the timing of the activity in relation to other parts of the students' workload, the importance lecturers place on the skills and or knowledge being developed alongside ensuring that students could meet the outcome of the course/module overall, their own knowledge, understanding and confidence in the issue and in the technology. This complexity of interrelated factors illustrates the challenging process that lecturers go through when designing for learning using technology.

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Lecturers' management of tensions – within case issues

The data has also been explored by looking within cases, that is, examining the challenges experienced by individual lecturers as they adopt these tools and apply them to their particular context. The way that lecturers approached these tensions varied hugely depending on the individual: from confident, to diffident, to cautious. The balance between the approaches to the tensions varied, partly depending on the level of experience of the lecturer, and also, in part, depending on their individual response to change. To illustrate this two individuals have been selected who represent the extremes of the sample in terms of confidence and experience.

Claudia, one of the most confident and longest users of Web 2.0 tools, responds to the tensions by either rejecting them or she has a well defined response (see Appendix I). Her responses to the tensions were well considered and confident. The quote below is typical of how she has decided to accommodate one of the tensions, that of the range of students' technological skills, into her learning designs:

> I'm always making sure that if a student has wonderful kit good on them they can go to town, it won't necessarily give them a better mark because they've got that stuff. The same criteria would be used for those who only had a word document if they've used the document to its potential. [Claudia]

At the other end of the spectrum, Emily is a less experienced user of web tools and is much more equivocal and cautious in her discussion of many of the tensions and how she should approach them (see Appendix J). Emily is still coming to terms with a number (around four) of tensions: two related to use of Web 2 tools the others were general pedagogical issues such as management of group work, or general digital literacy tensions. In the following quote Emily illustrates the challenge of designing an activity with a new tool and not predicting accurately the level of students' skill and knowledge:

> I made far too many assumptions that students would be able to [work with a multimedia format effectively]. We need to do more for this blog thing to be successful in the way that I'd hoped, we need to do more work on how to deal with different types of resource. Which we didn't do... [Emily]

In addition, Emily comments on the challenge of ensuring that a new tool is fully integrated into the design in terms of ensuring that the assessment criteria link to what she is asking students to do with the technology:

> I'm not quite sure that we got it right because the difficulty here is that if you are going to say to a student you've got to submit this assessment in a novel way and that is by creating a blog and you have to do that and it is part of the learning criteria, but at the same time you say the blog isn't important it's the content that matters it is a

contradictory message that you're given isn't it? I don't think we'd thought it through carefully enough and I don't think I've got a solution. [Emily]

Emily's adoption of the technology is much less assured than other more experienced users. Throughout the interview she discusses her lack of knowledge of the tools and her understanding of the technology which she is using. Her lack of commitment is reflected in her ambivalence to the tool:

I do think if the blog hadn't gone as smoothly as it had of done, I probably would have dumped it... if it just hadn't worked it would <u>not</u> have been worth the hassle. I don't know if it is worth the hassle to be honest. I'm using the technology because if I don't I'll get left behind. [Emily]

Overall, lecturers lay between these two examples in terms of their understanding of the tools, their possibilities and challenges, and the level of confidence and the extent to which they had well considered strategies for managing any of the tensions.

Chapter conclusions

This chapter has focussed on the way that lecturers use Web 2.0 tools in their practice; their benefits and challenges. Kennedy and Lefevre (2009) suggested one particular way of describing the functions and affordances of the online tools. My analysis did, indeed, identify that these Kennedy and Lefevre's (2009) functions and affordances were evident in practice. An additional three functions, community building, capturing and sharing a learning experience and "integrating several functions" were also identified.

Whilst it is important to understand the tools and their features (or affordances) and how they could be applied to teaching and learning, this knowledge, in itself, does not explain what drives a lecturer to choose to use them. The analysis suggests that there was one overriding reason or driver for the adoption: that I have called the 'killer affordance'. The 'killer affordance' flowed from an understanding of a tool's affordances and from seeing how one affordance, in particular, would significantly enhance the learning experience for students. This 'killer affordance' provided lecturers with a motivation to drive their uptake of the tool and dominated other affordances which, whilst being valued, were not sufficiently important or transformational to drive uptake in the particular context.

The nature of online space, with unique features of ownership, persistence, asynchronicity, controllability, different online learning behaviour and online time, makes it entirely different from the off line, synchronous, face-to-face environment. This chapter has suggested that

understanding the possibilities of the online space provided many lecturers with the 'killer affordance' which drove their adoption. The implication, for those charged with promotion of Web 2,0 tools, is that it might be more helpful, rather than focussing on the affordances of Web 2.0 tools as separate and distinct features of the tools, to conceive of them has having the potential to radically change the form and shape of teaching and learning through the combined features of the online space. Chapter 5 takes up the theme of the transformative and radical potential of Web 2.0 tools.

Although twenty nine tensions had been identified in the literature and used as the basis for the Tensions Exercise, the lecturers' responses did not reflect a negative picture of dealing with the challenges of the technology. Many of the tensions were rejected by lecturers and this suggests that the literature on Web 2.0 tools, which is derived more from conjecture about their potential challenge rather than being empirically informed, presents the tools as more problematic than they are in practice, for the early adopters at least. For the challenges that remained, often lecturers found ways of working with these to either accommodate them or to turn them to a feature of a learning design. The importance of the 'killer affordance' to provide a powerful driver to motivate lecturers to overcome the tensions is suggested.

There are some lecturers who are grappling with some tensions and this continued challenge, for some, makes their commitment to adoption less secure. This did not apply to the more confident and long standing adopters who were committed to the use of Web 2.0 tools. The notion of the lecturers' commitment to the adoption is discussed further in Chapter 6, *The emotional journey*. The findings suggest that rather than understanding affordances as clinical and disaggregated features, what is more important, in terms of their adoption, is to identify one overriding affordance that will support improved teaching and learning activity. Identification of this killer affordance, it is suggested, will form the driver to propel a lecturer into adoption.

This study focused on lecturers who had made use of Web 2.0 technologies and therefore it has the danger of concentrating on the positive cases: the ones where there was a positive outcome in terms of the impact that the technology had on learning. This tendency to focus on the positive case will thus lead to a skewed data set. This is acknowledged. However, what is learnt from this study of successful adoptions of the Web 2.0 tools can be used to understand what makes for a successful adoption.

Chapter 5 Web 2.0 pedagogies in practice – radical or reined in?

Introduction to the chapter

Chapter 2 identified that the literature was awash with new pedagogies associated with Web 2.0 tools. They include participatory learning, Connectivism, learning 2.0, emergent learning. The notion of these pedagogies being 'radical' and what this means was also discussed in Chapter 2, page 32. To summarise, radical is a 'slippery' term which defies precise meaning. It includes notions of increased student agency in the learning process, students as active knowledge creators and students actively involved in their learning through conversations taking place in online networks. However, little of the literature associated with these new pedagogies is based on examples embedded in main stream courses in HEIs. Michael Wesch's digital ethnography course (Wesch, 2007), Alec Couros's graduate-level course in educational technology (Cormier, 2008) and Siemens' and Downes' (2012) Connectivism and Connective Knowledge Massive Open Online Course are all examples of applications of novel approaches to the curriculum founded on radical principles but all are in innovative subject areas where there might be an expectation of the radical in the eyes of students. Instead, my study explores the nature of adoption of the radical in one HEI. This chapter explores the extent to which these new pedagogies are visible in practice and the way that the radical possibilities are 'reined in' by lecturers. The chapter continues the discussion of the study's first aim:

- to explore how HE teachers make use of Web 2.0 tools within their teaching and learning practices. (Aim 1)

> **Comment [EJB8]:** page

Radical aspects of pedagogical practices

The analysis indicated many ways in which lecturers had radical intentions underpinning their learning designs. Particularly evident were ideas related to Wenger's (1998) Communities of Practice, in terms of developing students' sense of identity as a professional:

> what I show them is what is out there in the community, other people who are blogging and who are working in this way and the variety of ways that a reflective journal can be written and how cleverly and subtly it can be marketing yourself ... the value of developing this way of reflecting on their own work. Which is essentially what it is, but the value for them is they have an identity online. [Adrian]

So what we are trying to get across is to recognise where their area of expertise is, and to be comfortable being able to say "I don't need to know about that because that's the physiotherapist's or that's a biochemist's job." [Claire]

Similarly, Wenger's notions of Communities of Practice are evident in Catherine's aspirations for her students. She wants them to work with the ideas in the module, to use the online space to develop their ideas so that they become a part of their thinking:

Catherine: what I was asking the students to do is to respond to a set of ideas and a set of online tools and to make public their responses to them and to theorise them, and to do it as individuals instead of as part of a discussion board... What I was aiming to do was to feel like the tutor was actually there, and to feel like they were actually working together and learning stuff not just reading stuff. It was like

Interviewer: lived

Catherine: lived exactly lived

Another aspect of a Community of Practice is the idea of learning with other students and building a learning community and this underpinned Crista's use of a discussion forum and illustrates her aspiration to build a learning community amongst her students:

I am developing a community of learning in small groups or for the whole group because they in a way they know each other better. [Crista]

For some lecturers their subject discipline lent them to valuing the radical aspects of Web 2.0's affordances. Claudia teaches a subject which challenges the authority of the academy and for her use of Web 2.0 enables this:

The democratisation of knowledge and Web 2 is really changing what academia is. And that is a really vital part of post colonial theory and critical pedagogy. And if I am able through my teaching and learning to dismantle the academy then I've succeeded... I think that Web 2 has an enormous part to play in this. Web 2 is making it seem more and more ridiculous in that we try to maintain this crumbling ivory tower that we are living it? [Claudia]

Claudia was the only lecturer whose subject lent itself directly to the radical challenge to the academy: even within other disciplines, not known for their radical epistemological orientation, the radical was still valued. Crista, who teaches control engineering, used Web 2.0 tools too for their potential to emphasise the contestable nature of knowledge and the importance of learning as a constructivist process:

I am not giving the final solution to them especially studying postgraduate courses. They will be obliged when they get jobs to choose a solution and that solution might not be the most optimum one but it will have advantages for that company and they have to come up with answer and to be responsible for that choice and this is what I'm trying to get them to understand, not just to come and just to learn by heart some lines or some equations it is doing nothing for them. [Crista]

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The notion of student agency (Downes, 2005) is evident in many of the cases. Jack sees Web 2.0 tools as helping to develop autonomous and self directed characteristics that are an important graduate attribute and an essential skill for studying within higher education:

> first year will arrive with very much please put the spoon in my mouth let's find another way of saying that – they expect to be led... And the first year is often about making that transition from direct to self-directed learning. [Jack]

A similar sentiment is expressed by Rebecca:

> You can't just spoon feed them all the time. It is a skill that is even more important than the pharmacy. They need certain facts to practise but they also need to think on their feet how to get out of situation. They need initiative and they are never going to learn that if I'm there sticking my nose in all the time. [Rebecca]

The potential to use the new medium to deepen students' thinking is an aspiration of Rachel's:

> So I thought whereas the presentations are quite descriptive this [creating a wiki page] might be a bit more creative. What does it mean from a business point of view? Thinking about costs and benefits and markets and working customers and so on. [Rachel]

> if they've posted an idea there is scope for people to challenge and question it or ask for further detail and that in those interactions that's where the learning is I think. [Catherine]

Sue wants learning to be an ongoing reflective process that is not focussed on a single summative assessment activity. For Sue the use of a new tool provides a way to achieve this vision:

> What I wanted to do was to come up with… some kind of portfolio tools that allowed for that sort of developmental learning. [Sue]

Sue aspires to create a learning activity which is ongoing and owned by her students. This sort of aspiration accords with Downes's (2005) views of learning 2.0 where the learning process belongs to students or as Davidson and Goldberg (2009) suggest lifelong learning without the intermediary of the "institutional middleman" (p.33). However, Sue and her students' use of the tools glimpses at what is possible with autonomous self directed learning rather than embodying it:

> There is a core of them that have kept writing in their journals. What are we in March? They are still writing online journals. And they seem to like the online element. They like the convenience and like the fact that it's central. After the first 5 weeks we don't comment on it. [Sue]

The notion referred to by Davidson and Goldberg (2009) as horizontal access of the web to information in which knowledge making is "much less the function of a credentialed elite and

increasingly collaboratively created" (p.25) is valued and encourage by lecturers. For Adrian the opportunity to value the knowledge that learners bring is evident:

> I don't know how many within the group have retail jobs or have experience, but where does the experience lie? They are obviously far more experienced in their subject area. Certainly I felt that I was learning from them. [Adrian]

Reining in the radical

Despite the above examples of the radical being understood and forming part of the aim for students' learning activities, there is also evidence of 'reining in' of some of the radical aspects. The idea of reining in or curtailing the radical aspects was discussed by Land and Bayne (2008). They suggest that the radical potential of the blog and wiki medium was curtailed or 'reined in' by both lecturers and students, challenging effects of new media formations "to control and constrain them within more orthodox understanding of authorship, assessment, collaboration and formal learning" (p.678). They comment on the challenges of assessing blog postings within the existing institutional and regulatory frameworks which have been informed and constituted by established print paradigm (2008, p. 679). Whereas a blog is written as a public, fragmented and 'slippery' form of writing it does not lend itself to being subjected to formal assessment based on traditional criteria applied to traditional academic writing (for instance line of argument, use of references, structure, coherence, grammatical precision etc.). Indeed they argue that traditional assessment practices are "largely locked into transmissive mode" (Land and Bayne, 2008, p.681).

From my data there were several examples of reining in as the following quotations and discussion illustrate. Students' conservative expectations of the tutors' role and of the learning process are evident in these two quotations:

> I've actually now got the students sending me links: "I saw this and this and it was very good" or "what about this article?" and they actually send them to me which is quite interesting. **I still think they see me as being in charge** but we are working at this together we are looking at things together... I saw this and this is relevant. They are seeing what they are learning out there in real life. [Rachel]

> I had high aspirations of it, seeing it as something as lifelong, developmental. But I think in the end I think that students tend to think of it as something that students see as part of first year. [Sue]

There is also evidence of reining in by tutors who are aware of their need to manage the learning process. Tutors are aware of the particular challenges of learning in a connected world where information is abundant but its provenance is hugely variable. Many lecturers

discussed the need to scaffold and support the learning. Particular examples below illustrate the need to develop students' understanding of provenance (for Emily) and the need to manage information overload (for Claire):

> My students, because they are writing about religion, they sometimes want to look at it from an insider's point of view... Web sites are really useful for an insider's point of view, but you have to choose one that has some sense of authority, not one that some bloke wrote in his bedroom, you know what I mean? And they don't do it. [Emily]

> I think that students can get overwhelmed by too much information sometimes. When it comes down to it what they like is to sit down at a table with you and a piece of paper, and talk about what they know and what they don't know. They have a lot of information at the their finger tips but they still have to engage with it and there is nothing changed there really. [Claire]

Land and Bayne (2008) noted that some of the teachers in their study expressed their experiences of using blogs as a compromise where, on the one hand, a private blog created safety and a sense of security for students, yet on the other by using a public blog students get the benefits of collaboration and networking, but may feel more constrained by needing to develop and maintain a more public style of writing. In addition, a further challenge to using blogs in teaching is to deal with the anarchic aspects of the web. Likewise, in my data some lecturers started out with radical aspirations yet they recognised that these needed to be moulded to support students. Sue, working with a blog tool, limits the use of the comment function on the blog, in order to make the learning space private and thus engender a feeling of safety for her students:

> we didn't [encourage commenting] that was a distinct decision that we took. It was supposed to be a really safe space and absolutely safe. Given what they've written I think that was the right decision. It is meant to be really quite a deep reflection on their own learning and inevitably that means that they do expose themselves... it is fairly private for some of them. [Sue]

Similarly, the nature of the subject needs to fit with a the pedagogical affordances of the web. As Rachel comments the use of a wiki is appropriate for her subject where there is a lot of information to support her subject [ergonomics of product design] on the web, but for a different subject a different more teacher-led approach might be more applicable:

> learning process is different in different modules anyway, so I think how they work on my module might be different to how they work on a strategy module for example because the whole teaching is different because of the content's different. [Rachel]

There was considerable evidence of the ways in which the radical aspects were reined in by the institutional processes that surround formal education. Firstly, the way that formal structures of the academy has a curtailing function on the notion of lifelong personalised

learning is evident in many Web 2.0 approaches to learning (Downes, 2005, Davidson and Goldberg, 2009). For instance, it is not possible to have integrated holistic learning when modules are cleared out at the end of the academic year and where modules are separate and discrete:

> With the blog tool within Blackboard, the problem is they get to the end of the module and that module gets rolled over to next year and disappears and that's not really what we are aiming for. In an ideal world what they would do is they would keep that blog, it wouldn't be attached to a module and they would use it for whatever module they <u>needed</u> it for like ICCT [their next module] in second year, their dissertation in the third year. But our technology doesn't lend itself to that. [Sue]

Secondly, assessment curtails the more radical vision that Sue has for her students. In this case it is the very nature of an assessment as something summative or final that has the effect of shutting down the learning process in the students' minds:

> We wanted to get to the point where the students were putting something together that they could keep they could keep electronically and they wouldn't think of as a final scrap book if you like [that] they would put in and that would be it. Unfortunately I don't think we quite got over that. The nature of summative assessment encourages that kind of thinking, that we produce something and that's the end of the matter. We no longer have to reflect on our skills and we no longer have to think about how me might improve them or what we might do in second year. We've done it and we've put it in that's it. What I wanted to do was to come up with some kind of portfolio tools that allowed for that sort of developmental learning, but it was quite difficult in that we had to get one that allowed them to submit using the tool. [Sue]

Thirdly, tutors were ambivalent towards taking students' learning outside the institution, through taking the opportunities provided by the networking possibilities and exploring notions of connected learning (in terms of connecting beyond the immediate institutionally bounded community). On the one hand, they appreciated the possibilities that such borderless access to people and sources provides, yet at the same time needed to constrain and manage the learning experience:

> my reasoned thinking about that is that Web 2 is something about being much more savvy with a range of tools. It is like borderless. The whole idea of the University network being this contained environment I think Web 2 is the antithesis of that really and if you don't feel that you have got that freedom to use some of those other platforms it feels like you are doing Web 2 in a really constrained artificial way. [Richard]

> VLEs are such artificial environments in terms of the authenticity of learning. We need to be encouraging students to work towards a better understanding of their personal learning environment, their personal learning network... I must say I'm being a little bit of a coward as it is easier to hide in the VLE. [Claudia]

The reasons for the constraining varied. For some it was to do with the additional time and complexity that learning a new tool brings and thus the importance of guiding students so

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that they do not become overwhelmed through their learning journey. For others fears about the robustness of web based tools or wanting to limit the audience for students as emergent thinkers in the discipline prevailed:

> I wouldn't want to do it [learn to use a new Web 2 tool] now, when they've got a big assessment burden. [Rachel]

> we give them too many options, the sweet shop affect and they don't really, you know, especially in the first year. [They need to] know what's important and what they should do and to guide them to what's most important to engage with in the early days. [Sue]

> So the fact that a wiki is quick to demo and quick to start using the fact that it is already integrated within Blackboard, those were all considerations really that meant that it would be less time consuming for the students to get to grips with it and I don't need students signing up for accounts and having separate passwords. [Richard]

> we want to ensure that it is going to run from September to May then we can't have something that is going to disappear. [Sue]

Finally, the institutional technology and the way it is implemented limits the radical possibilities of the web. These are partly to do with the limited affordances of the institutional VLE and partly to do with the way that it is implemented. So, for instance, at the end of each academic year modules are, by default, no longer available. Again, it is Sue who is most vocal in her understanding of the potential for the radical being constrained in this way:

> we will have to be involved in social media, and the possibilities that that offers us are really really intense but, how we manage that when we are not set up for that our system doesn't lend itself to that kind of flexibility. Consumer culture has clearly got them. That is where the interesting stuff lies. [Sue]

Chapter conclusions

Web 2.0 tools have potential to radically alter the shape and structure of learning in terms of increasing student agency, deepening students' learning and encouraging student autonomy and learning that is lifelong. They also have the potential to challenge the authority of the academy and to make possible different, more democratic, ways of constructing and sharing knowledge. My study has illustrated that the radical potential of Web 2.0 tools is being incorporated into lecturers' designs and visions for learning. It would be disingenuous to suggest that all tutors understood the radical in the same way, but there were examples from across a range of subjects where the radical nature of web tools was underpinning learning designs. However, in addition, there was a reining in of this radical potential limited by many factors. These include lecturers' perceptions of the requirements of a formal academic

programme (module structure, academic year etc), the implementation of the VLE within the institution, and where lecturers who chose to limit students' exposure to the 'open' web both for practical issues time management and cognitive overload but also in terms of the importance for learners to feel safe in the way that contributions on the web (for instance a public blog posting) would not provide. They were also aware of the conservative nature of students' expectations and thus the time it would take to convince them to work in new ways. They weighed up the affordances with the challenges and made informed decisions with regard to a strategic adoption of tools.

This chapter has shown that there is a complex interplay between learners' expectations, the institutional structures and the challenge of managing the curriculum that make it difficult for lecturers to deliver some of these radical potentials, even when they are well understood and valued. The discussion raises questions of how institutional structures and processes support and hinder the radical imaginative potential of lecturers making changes in their practice and these are discussed in Chapter 9, *Developing as a Digital Practitioner*.

The next chapter explores lecturers' emotional response to making changes and this discussion also this helps to illuminate some of the reasons why the radical is less in evidence in practice.

Chapter 6 The emotional journey

Introduction to the chapter

Chapter 4, *Web 2.0 tools in practice,* concluded that there were many features or affordances of the tools that were valued by lecturers, leading to their adoption in teaching practices. It outlined how the tensions or challenges associated with the Web 2.0 tools were largely accommodated, managed and disagreed with by the early adopters. This suggests that the uptake of Web 2.0 tools might be easy. However, there were some hints at the challenges experienced by those who were still grappling with some of the tensions. These challenges make their commitment to adoption less secure. Chapter 5, *Web 2.0 pedagogies in practice,* concluded that the radical potential of Web 2.0 tools was understood and valued by many lecturers, but their potential was reined in by many factors which lecturers experienced as constraining including the conventional academic structure, the institutional VLE, in order to manage students' workload and to accommodate the conservative expectations of some students.

This chapter links the challenges discussed in Chapters 4 and 5. It does so through exploring the emotional journey associated with changing one's teaching and learning practices and how this constitutes emotional work. It situates the discussion in the ideas of Boyd and Bolton (2003) on emotional work and Coupland et al.'s (2008) analysis of teachers', administrators' and managers' emotional experiences of working in an organization.

This chapter addresses the study's third aim, albeit in a tangential way:

- To examine any changes in lecturers' identity and role brought about through the adoption of Web 2.0 tools and techniques. (Aim 3)

It also addresses the study's second aim:

- to consider how lecturers are supported and/or hindered by the institutional context in which they work in terms of innovating their teaching practices. (Aim 2)

The chapter explores, analyses and categorises positive and negative emotions evident in the interview data. The discussion illuminates the nature and scale of the challenge that some people experience when changing their teaching and learning practices to incorporate technology. The chapter identifies some of the strategies that lecturers use to manage these anxieties.

Emotional labour, emotional work

Emotional labour was originally defined by Hochschild as:

> the management of feeling to create a publicly observable facial and bodily display; emotional labor is sold for a wage and therefore has exchange value. I use the synonymous terms emotion work or emotion management to refer to these same acts done in a private context where they have use value. (1983, p.7)

However, the critiques of Hochschild argue that there is a variety of ways in which one manages one's professional emotions and that emotion is not always a part of a commercial exchange. Boyd and Bolton (2003, p.295) present a categorisation/typology of emotion management in organisational contexts; pecuniary, prescriptive, presentational and philanthropic emotional management. They distinguish pecuniary and prescriptive emotional management from presentational and philanthropic emotional management. The first two fall into the category of emotional labour defined by Hochschild (1983), as the commercial use of emotion in organisations. However, they argue that presentational and philanthropic types of emotional management are not types of emotional management that are defined by the organisation.

Issues of teachers' emotional lives have been studied from a number of perspectives. Jenkins and Conley (2007) identify that the move to a more marketised system of education brings with it additional pressures including emotional challenges for teachers resulting from the branding of a school (for example, by having 'a caring culture'), building rapport with children, dealing with challenging pupils, developing detachment in relation to child protection issues, and managing relationships with parents. They conclude that managing the contradictions implicit in this commodified range of ideological positions requires that "teachers engage, to a sophisticated degree, in emotional dexterity (see Boyd and Bolton, 2003), something that involves the performance of a number of different roles beyond their pedagogical responsibilities" (2007, p.999). Jenkins and Conley (2007, p.997) argue that the emotional content of teachers' work has not been recognised or rewarded even though it is a prominent aspect of their working experiences and they link the burden of managing emotions to teachers' ill health and absenteeism. Similarly, Day (2008, p.254) connects teachers' emotional lives to their performance, burnout and attrition and highlights the emotional challenges for teachers working in a culture of performativity and managerial control (p.258). Within the FE sector, Avis et al. (2011) discuss the ways that emotions frame teachers' work including care for students' emotional and physical well being, concern to ensure their students achieve successful learning outcomes, the challenges of managing their own well being in a culture of managerialism and performativity. The same values are

evident too in the 'post 92' university sector, where the culture and response to issues such as widening participation place particular pressures on lecturers to support their students both emotionally and intellectually. Hence, emotional management and emotional work make up a significant aspect of the working lives of teachers and one that forms a legitimate source of enquiry.

My study

The interview schedule did not ask about emotions directly but where evidence of emotions was demonstrated in the data it was coded and examined. The data coded 'metaphor' was analysed too because, as Cousins (2009) suggests, metaphors illuminate underlying emotions and "telling clues as to how people see things" (p.48). As professionals the language of emotions is not often a part of our repertoire. Jenkins and Conley (2007, p.999) noted emotional management remains unrecognized in the formal performance management structures for teachers despite it being a considerable part of their work. Likewise, for lecturers the language of emotions is likely to be invisible because it is not a part of what the institution recognises through its performance management systems. In addition, when discussing emotions in a professional context, lecturers will be mindful of retelling their experiences in a way that constructs and presents their identities in a way that reinforces and supports a positive sense of self. As Cousin notes "Most people tend to place themselves in a good light in the telling of stories and offering opinions" (2009, p.76).

Generally lecturers, when picking an example of a technology to discuss, selected ones that had been successful. Although, there was one example where use of a new tool failed. However, the language used by the lecturer in retelling what happened was measured, reflective, analytical and thus did not convey much emotion:

> in the previous year I'd allowed the class to run rough shod over me a little bit and say "I don't like that platform and I want to use Blackboard" and so I'd backed off a bit from it and so I'd said "oh ok then you can use Blackboard if you want, you can use posterous, you can use Twitter but you don't have to". So I did lose control somewhat, but it wasn't loss of the Web 2 aspects, it was loss of control over me being assertive of what the delivery methods should be even when students have different preferences for different platforms and I needed to control where the learning was happening. [Catherine]

Caution was taken when coding to try to distinguish emotion which was genuine, rather than part of a professional act. Jenkins and Conley (2007, p.996) refer to this as feigning emotions to engage children's learning. For instance, one lecturer described how when she

presented an activity to her students she used emotion to enthuse her students, but this does not convey a heartfelt emotion rather the way that she uses emotion in her teaching persona. This is an example of what Boyd and Bolton (2003, p.295) call prescriptive emotion, one that is not financially motivated but motivated by status or altruism or instrumentalism. None of these motivations adequately describe this teacher's motivations which are likely to be driven by professional pride and the need to engage with students emotionally in order for them to receive a high quality teaching experience. In this way her motivation is part of the repertoire for a 'good teacher'. In terms of the feeling rules outlined by Boyd and Bolton (2003), her enthusiasm is governed by professional and organisational practices:

> if you tell them what you want them to find out and really encourage them, and be really excited when they do, it is amazing what you can achieve. [Claudia]

Interesting, although perhaps not surprising, it was almost entirely women who spoke about their emotional response to change. Nine out of the eleven women included in the sample, talked about their feelings, whereas only one man, of the five men in the sample, did so. Hochschild (1983, p.165) argues that women and men do different kinds of emotional work with women adapting to the needs of others. Drawing on Hochschild, Colley (2006, p.16) argues that women face higher costs in emotional management "partly because women have to rely more on their emotional resources, lacking equity with men in economic, cultural and social capital".

Analysis of emotion

The analysis made here was informed by Coupland et al.'s (2008) paper which focussed on the how people talk about emotions and used discursive approaches in order "to examine 'internal' constructs such as emotions and identities" (p.334). In addition to exploring their data linguistically, Coupland et al. (2008) also explored emotion in terms of the sociology of the organisation focussing on the rule systems in use regarding 'appropriate' emotional expression (2008, p.334) and on the social forces that account for phenomena such as emotion and attempted to "attend to the social and discursive element of its construction" (2008, p.335). Their discussion of upgrading of emotion, proximity, distance and moral order were used to frame my analysis. These ideas are explained when they are used later in the chapter.

My data was divided into categories of positive and negative emotional responses which were explored through a process of reading and rereading, questioning and referring to the literature.

Negative emotions

A range of what might be classed as negative emotions were reported in this study. These were:

- Fear of exposure;
- Apprehension;
- Anxiety;
- Inadequacy;
- Embarrassment;
- Frustration;
- Despair;
- Vulnerability;
- Infuriation;
- Fear of a catastrophe;
- Humiliation;
- Anger;
- Fear of pedagogic failure.

Some of these emotions were more commonly reported than others. For example, being apprehensive was mentioned explicitly by two lecturers. Most of the others were only evident in one person's response. Given the nature of this research as idiographic and phenomenological, the frequency of the occurrence of an emotion is not held to be of absolute significance. Indeed, considering the ability of lecturers to protect their professional identity through their analytical faculties, the very presence of emotions in the data is worthy of close examination.

The analysis identified three broad categories which related to the reasons for the negative emotions: emotions related to the lecturers' personal identity; emotions related to 'carrying the can' for others; and emotions related to working with others.

Related to their personal skills and knowledge	Related to carrying 'the can' for others	Related to others
Apprehension	Embarrassment	Humiliation
Anxiety	Frustration	Anger
Vulnerability	Infuriation	
Fear of exposure	Fear of a catastrophe	
Inadequacy	Inadequacy	
	Despair	

Table 6.1 Negative emotions related to adoption of Web 2.0 tools

Negative feelings related to personal skills and knowledge

Lecturers are expected by students to be confident and knowledgeable. Their role is to design and manage the learning environment. Moving to a new technological tool, for some lecturers, was experienced in a range of negative ways from a low level of negativity, for example apprehension or anxiety, to the most strongly negative, that of exposure or vulnerability. An example of what might be considered a low degree of negative emotion was the anxiety Sue expresses in the following quote:

> I do remember feeling when I taught for the first time entirely online that I was slightly anxious. [Sue]

Identifying anxiety as a normal part of change process is supported by Fullan's work on change in education (1999). Fullan (1999, p.25) argues that rather than avoiding anxiety, people who are able to deal effectively with change have learnt to manage their anxiety. He goes on to argue that organisations should find ways to manage or contain anxiety. He identifies several strategies used by individuals who cope effectively with anxiety including having highly developed emotional intelligence (citing Goleman, 1996), seeking solitude, finding support, persisting in the face of challenges and sustaining a higher goal. He argues, citing Stacey (1996, pp.181-2 in Fullan, 1999, p.77), that organisations need to work towards being 'holding environments' which contain anxiety. The ways the institution supports change is discussed further in Chapter 9, *Developing the Digital Practitioner*.

Fear of being exposed is an emotional response which expresses a stronger level of negative emotion than anxiety and apprehension. Fear of exposure appeared to be related to a belief that lecturers do not have adequate knowledge in relation to the technology:

> I think that is part of my anxiety is that I only got a very superficial surface learning of how this thing works and as an academic you don't feel confident with that superficial learning and I want a deeper learning of how it all works. [Emily]

Fear of exposure was also experienced as exposure in terms of going into the unknown. For example, when Richard was using a new Web 2.0 synchronous tool where he would need to respond in real time without the opportunity to consider actions:

> I kind of felt in a sense very ill prepared to do that, even though I'd gone and had a chat with Sue [a more experienced colleague] about it and I didn't really have a chance to prepare in a way that I would have liked to have done. So when I came to do the session it felt a little bit like I was kind of flying without a parachute... There was a kind of nervousness about it. [Richard]

Inadequacy was also evident in one lecturer's response. She talked about feeling that her lack of understanding of technology was "a weakness, a serious weakness" [Emily] in her professional practice. Having a strong sense of one's competence and skills is generally important in order to be a confident practitioner and this feeling of inadequacy illustrates how, for this lecturer, not keeping her skills up to date was undermining her professional identity.

There were several examples where lecturers expressed apprehension, or anxiety, or fear of exposure. Lecturers with most experience of using web tools often recalled these feelings from when they first used a new tool, or in relation to continuing to make changes to their practices. Hence, it is possible to speculate that this state of anxiety and exposure is something that most early adopters experience but find ways to overcome or accommodate.

Negative feelings where lecturers 'carry the can'

Contrasting with lecturers' feelings about their own skills and roles are feelings which originate from actions outside the lecturers' control. These feelings included embarrassment, frustration, infuriation, fear of a catastrophe, feelings of inadequacy and despair. This range of negative emotion was much stronger and had more significant consequences in terms of students' learning outcomes. It illustrates the vulnerability that lecturers experience in terms of the people and systems on whom they depend. An example of how isolated a lecturer can feel is given in the following quote. Emily's use of the term 'game over' indicates the extent of vulnerability that she feels in relation to the availability of technical support:

there isn't anybody else in the faculty apart from John[8] to help me, so if John isn't here that's it game over. [Emily]

The reliability of the University's systems is another source of strain for lecturers. At the mildest level this is experienced as embarrassment when the University's systems do not work for some reason and the lecturer is left exposed and having to apologise for errors which are not his (or her) fault:

> I was hugely pissed off... that is a huge concern, and I think it is hugely embarrassing when you have to go to students and say, "the licence has elapsed here", because, however much you say, that in all honesty you say this is not my fault here... You are still representing the University and it does look bad. [Richard]

This sentiment was echoed by another lecturer whose frustration led her to thinking that using new tools may not be worth the effort:

> The Grademark tool just seems to be unreliable. When it works it's great but sometimes it doesn't and so you're left in this position – do I want to use it so that we get those benefits and accept that sometimes it goes wrong. Or do we scrap it and go back to marking in word and emailing through - which we know will work. [Catherine]

However, not surprisingly, when it comes to consideration of the potential impact on students' assessments, lecturers' reactions were more extreme. They displayed despair, frustration, exposure, isolation and feelings of catastrophe. Generally these feelings were not in response to an event that had even occurred but an anticipation of how vulnerable lecturers feel to using technological systems within assessed work:

> I keep thinking that I'm going to click on Blackboard and all the assessments are going to have disappeared and I'm going to have to say aghh. [Emily]

> It would be a disaster, an unmitigated disaster, if we'd done all this work and set it up and encouraged students to engage with it, and then all of a sudden it went to a pay-for service or something or it just got withdrawn. [Sue]

Negative feelings in relation to others: challenging normative discourses

A final category of negative feelings concerned how tutors relate to their colleagues. Most commonly lecturers discussed relationships with colleagues as supportive, however there were a couple of lecturers whose response fell into this category of negative emotions. One lecturer perceived the response of colleagues, at times, to be dismissive and disparaging.

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Another lecturer articulated a very strong sense of being humiliated and laughed at by colleagues and talked about the work being an emotional battle:

> I feel like I'm on the lunatic fringe. I feel that people are laughing at me because of what I do... It is work hard emotional work. And sometimes when I get tired and I get fed up I just feel like saying "oh fuck it. I'll go and lecture each week." You know I'll upload my PowerPoints to Blackboard and I'll give them a one hour lecture blah de blah de blah. Sometimes it just feels too hard. [Claudia]

Claudia identifies the struggle that she has to contend with as she takes on new ways of working that go outside of the norms of her department. This is clearly 'emotional work'. She articulates feeling despondent and challenged to the point that she thinks about abandoning her approach and going back to using the VLE in a more conventional way.

Several lecturers used the metaphor of 'a battle' when discussing their work with others. The notion of fighting or battling was sometimes used in relation to colleagues with whom they were working closely to jointly deliver a programme and sometimes, more generally, in relation to the dominate discourse in a lecturer's department:

> I get the courage to stand up against them and fight back against it... I'll do if in a formative context and that will add to weight to the fight. [Emily]

> I'm sticking my head above a parapet so it has to get knocked off occasionally. [Claudia]

The metaphor of 'a fight', either with individuals or with a general culture, conjures up notions of people on two sides, for and against, a new way of working. It suggests the strength of the opposition that lecturers in my study feel in making changes and the personal challenge in pursuing these changes. Both Claudia and Emily, at other points in their interviews, also identify themselves as being relatively isolated in relation to this fight:

> there isn't anybody else in the school apart from John[9] to help me, so if John isn't here that's it game over. [Emily]

> I am the only person on that ladder[10] at all in this institution. [Claudia]

Even though they represent very different ends of a continuum, in terms of experience and confidence in their use of tools in their teaching, both Claudia and Emily experience feelings

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[10] the ladder is a metaphor for career progression within the University

of isolation from the normative discourse within their subject area and, for Claudia, the quote indicates her sense of isolation in relation to her work within the institution.

The power of the cultural norms to affect the process of change is returned to and discussed further in Chapter 9, *Developing as a Digital Practitioner,* page 160.

Upgrading and downgrading of emotion

Coupland et al. (2008, p.336) talk of upgrading of emotion whereby emotion is emphasised and is constructed as "very close to the speaker with colourful language and powerful expressions of feeling." It is notable, in the quotes given earlier in this chapter, that upgrading of emotion is much more evident when talking about their feelings in relation to 'carrying the can' for others compared to feelings related to their own personal skills and knowledge:

> It would be a disaster, an unmitigated disaster. [Sue]

> I was hugely pissed off... that is a huge concern, and I think it is hugely embarrassing. [Richard]

In contrast, lecturers are more measured, or downgrade, emotions related to their own skills and expertise.

Self, other and ownership of emotion

Coupland et al. (2008, p.337) describe the term mitigation as a process by which people make claim to negative emotions but do so in ways that protect their professional identity. One example of the way in which people mitigate negative emotions is through the construction of distance or proximity between the speaker and the emotion being described (Coupland et al. 2008, p.338). In my study there was evidence of lecturers constructing distance through their use of the second person. Typically when they talked about emotion they used the first person but talked in the second person when things went wrong or were difficult:

> when I've felt frustrated and it does all feel like a lot of hard work and **you** don't really know why **you** took it on. [Claire]

> There was a kind of nervousness about it and it is also the case of accepting that and even admitting it to students you know "this is the first time I've done this"... and I think if **you** do that it can allay your kind of nerves about it... I think it is hugely embarrassing when **you** have to go to students and say "the licence has elapsed." [Richard]

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What Harré (1986) describes as "the local moral order" (p.7) is evident through the way that these expressions of emotion are constructed. In particular, in the last quote, Richard is vulnerable to criticism from his students. He has to take the blame for what is not his fault and needs to do so whilst maintaining his professional identity with his students. This may explain why emotions related to 'carrying the can for others' are expressed so strongly in that they express a sense that lecturers consider what they are experiencing to be morally wrong.

Positive feelings

A smaller range of positive emotions was evident. These included;

- Loving the work;
- Enjoyment;
- Delight;
- Feeling revitalised;
- Excitement;
- Pride;
- Confidence.

Two lecturers talked about both enjoying and loving their work with students:

> I don't place a big premium on that [time to run activities] because if it is working then I enjoy it... I love it when people say "have you read this?" or "I'm not sure that that's correct because"... then I know that they are engaging with it. [Catherine]

Lecturers' identity as professionals was clearly evident in their emotional responses. Two lecturers articulated energy and enthusiasm for trying out new approaches in their teaching and another expressed pleasure in being supported in taking a masters course in elearning to enable her to learn how to use new technologies:

> I'm delighted that I've been given the opportunity, you know that the University has funded me for an MSc. I can't fault that, really really fantastic. [Emily]

Another expressed pride in the design of a teaching and learning activity.

Although a smaller number of positive emotions was evident, underpinning all of the lecturers' stories of adoption was a strong sense of vision and commitment to their students and to their students' learning. Jephcote and Salsibury's (2009) study of lecturers in an FE

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context and how they managed the pressures of the performativity agenda noted "teachers in our study privileged the needs and interests of their students" (p.971). Indeed, one of the dangers of working with transcribed text is that this pride and passion is partly lost through the transcription process. Perhaps, with hindsight, other methodological approaches might have been explored to capture the emotional highs, as well as the lows, of the process of innovation.

Strategies to manage emotions and the notion of 'giving up'

This section explores the strategies that the early adopters used to manage the emotional aspects of the adoption of Technology Enhanced Learning, TEL, and how they juggle with the notion of continuing with the adoption alongside the notion of 'giving up'. Lecturers managed negative feelings associated with their own skills and knowledge in a variety of ways. Firstly, some lecturers reported ensuring that they were highly prepared. This may include having a complete understanding of the topic, a good grasp of the technology and how it will work in practice. Secondly, some lecturers worked through their feelings of discomfort by acknowledging that this is how change feels:

> I sort of forced myself... because I thought if students are going to do it then I'm going to have to learn. [Emily]

Thirdly, another lecturer discussed making students aware of the situation and encouraging them to see this as a shared journey into unknown territory:

> even admitting it to students you know "this is the first time I've done this" or "this is a bit of an experiment let's see how it goes" and I think if you do that it can allay your kind of nerves about it and it can also allay some of the students' nerves about it as they may not have much experience. [Richard]

Fourthly, one lecturer pointed out that all teaching involves undertaking an endeavour with students that may not go according to one's plans. Hence there is inherent risk in all teaching whether it be with or without technology, involving a new strategy or repeating a familiar lesson plan. This ability to analyse, rationalise and manage the uncertainties of leading a teaching session is a routine part of the lecturer's repertoire and is another strategy by which the early adopters managed their feelings of anxiety.

Positive emotions associated with making changes provided another way of balancing risk with benefits. The exchange quoted below illustrates the beneficial revitalising effect that Jennifer experiences when she makes a change in her teaching practice:

>*Interviewer :* when you are making a change in your practice it can make you feel unsettled and uncertain in your practice

>*Jennifer* : or revitalised.

As Fullan (1999, p77) argues creativity and anxiety go hand in hand and Jennifer's quote reveals that some lecturers harness the feelings of anxiety and vulnerability to energise their practices by using new approach to teaching and learning.

Giving up

Chapter 4, *Web 2.0 tools in practice*, presented a positive view of the early adopters' attitudes to the challenges presented by technology. Many of the tensions identified in the literature were disagreed with, whilst others were accommodated within learning designs. However, this chapter has illustrated a more negative picture of the uptake of TEL. In situations where colleagues 'carried the can' for the limitations in the University systems they reported avoiding using certain tools and some reported thinking about giving up on their use.

>The Grademark tool just seems to be unreliable. When it works it's great but sometimes it doesn't and so you're left in this position – do I want to use it so that we get those benefits and accept that sometimes it goes wrong. Or do we scrap it and go back to marking in word and emailing through - which we know will work. [Catherine]

Likewise in the discussion of challenging the normative discourses within the institution, Claudia's and Emily's quotes illustrate how close they come to 'giving up':

>I feel like I'm on the lunatic fringe. I feel that people are laughing at me because of what I do... It is work hard emotional work. And sometimes when I get tired and I get fed up I just feel like saying "oh fuck it. I'll go and lecture each week." You know I'll upload my PowerPoints to Blackboard and I'll give them a one hour lecture blah de blah de blah. Sometimes it just feels too hard. [Claudia]

>there isn't anybody else in the school apart from John[11] to help me, so if John isn't here that's it game over. [Emily]

The emotional journey associated with challenging normative discourses is expressed as humiliation, of being reduced to tears, of being treated in a disparaging way. This sort of

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conflict in one's working environment is a high emotional burden for colleagues to endure and one that would dissuade the casual user against the uptake of the tool.

Importance of emotional work

When it comes to making changes in either a professional or personal capacity Heath and Heath (2010) argue that this is not simply an intellectual process. They have coined a metaphor of an elephant, a rider and its path to explain the change process; the elephant represents the emotional self, the rider the intellectual and analytical engagement in change and the path being the systems and processes and how they support or hinder the journey. They argue that to achieve change requires a sense of direction (in terms of the rider's intellectual understanding of what is wanted and why) as well as motivation (in terms of the emotional engagement) and the route for the journey to be as smooth as possible. They suggest that without emotional engagement changes will not be sustained (Heath and Heath, 2010, p.10). This view is supported by other writers in the field of change management, see, for example, Epstein (1998, p.34). Thus, whilst lecturers might be quite measured about discussing their emotions, it is important to understand the emotional engagement of successful adopters of Web 2.0 tools. As Pope comments in her discussion of supporting teacher development:

> Helping pre- and in-service teacher to consider changing their current practice is not merely a technical process... The process seems to require a great deal of emotional energy. (Pope, 2005, p.201)

Chapter conclusions

Chapters 4 and 5 identified that some lecturers faced challenges in terms of managing the tensions associated with using new technological tools. This chapter explored the emotional dimension to this process. The chapter has shown that there is an emotional cost to making changes in teaching and learning practices and this was felt both by those new to adoption and those who were more experienced. This emotional cost ranges from low levels of anxiety to more strongly expressed emotions such as fear of exposure and inadequacy. However, it was also noted that all teaching involved risk and that whilst there are particular risks associated with technology, these should not be over emphasised. Indeed, for some, the whole notion of making changes was energising and motivating and the discussion of the positive emotions emphasised the pleasures of working with students, pride in their work and enthusiasm for trying new ideas.

Lecturers had a range of strategies for managing their emotions: some put more time into preparation, others acknowledged the challenge and 'worked through it', whilst others tried to build with their students a sense of shared journey into the 'new world' brought about by technology. These strategies illustrate that lecturers are putting in more, both emotionally and practically, to try to engage students and deliver quality learning experiences as a result of their use of technology. As Jephcote and Salisbury (2009) point out in relation to FE colleges, lecturers are "privileging the needs and interests of their students, often at the cost of their own work-life balance" (p.969).

The emotional journey is not just a personal one: it has an institutional dimension too. The chapter has illustrated that working with technology has additional challenges related to the technical support structures. It was during their discussion of the emotions related to 'carrying the can' for others within the institution that lecturers showed 'upgrading' that is, they placed greatest emphasis on these emotions compared to emotions that related to things that were more directly within their control. They were angry and frustrated by being the 'fall guy' when aspects of the technology or the institutional support for technology failed. Indeed this led some, including even from the most confident and committed early adopters, to wondering if taking on new tools was worth their while.

The notion of normative discourses arose and this is a theme that is explored in Chapter 9, *Developing as a Digital Practitioner*. The majority of lecturers experienced their relationships with colleagues as supportive, however for a minority, their experience was of challenging the dominant pedagogic culture and resulted in a strong sense of humiliation which again undermined their commitment to the adoption. This was also experienced by some of the most committed and confident adopters in the sample, so was not related to any lack confidence. The questions that emerge from this discussion are: how does the institution support lecturers to make changes? How does the institution recognise and mitigate the emotional cost in being at the vanguard of new approaches to teaching and learning? These questions are returned to in Chapter 9, *Developing as a Digital Practitioner*.

Finally, the chapter identifies how close some of the early adopters come to 'giving up' their Web 2.0 practices. This notion is returned to in the Chapter 10, *Conclusions*.

Chapter 7 Identity, role and change

Introduction to the chapter

This study examines lecturers making changes to their professional teaching and learning practices. The lens is the changes brought about through use of Web 2.0 tools but, at a more fundamental level, the focus is on people in their professional role and their relationship to change. Chapter 4, *Web 2.0 tools in practice,* explored the nature of the Web 2.0 tools in their application to teaching and learning and identified that there is a 'killer affordance' which motivates lecturers in their uptake. Chapter 5, *Web 2.0 pedagogies in practice,* identified that lecturers understood and wished to harness the more radical aspects of the tools' potential. Chapter 6, *The emotional journey,* discussed the emotional challenges involved in making changes to one's practice and suggested that there was an emotional cost to this process. This chapter explores how the lecturers experienced change but from a broader perspective than the emotional one discussed in Chapter 6. It is concerned, through listening to and quoting the voices of the lecturers, to understand and conceptualise their role and identity as they make changes in their practices through use of Web 2.0 tools. It considers the study's third aim:

- to examine any changes in lecturers' identity and role brought about through the adoption of Web 2.0 tools and techniques. (Aim 3)

In particular, it addresses the following questions:

- How do lecturers construct their professional selves when making changes to their practices?
- How do they experience change?
- What are the particular ways that the technological tools affect their identity?
- How do they manage their professional identity through this process of change?

The discussion uses Stronach et al.'s (2002) notions of 'shards of identity', 'ecologies of practice' and 'economies of performance' to illuminate how lecturers identify themselves and see themselves in relation to others around them. Liminality and ontological security are discussed in relation to making changes.

My study

The interview schedule explored explicitly how lecturers' identities were changed through use of web based tools (Appendix A). The particular questions asked in the interview were;

- How has your identity, by which I mean how you think about yourself as a teacher, been changed with adoption of this tool?

- How has your role, by which I mean what you do, been changed with adoption of this tool?

- How do you see your authority as provider of knowledge changing in a Web 2.0 world?

- Clegg et al. (2006) talk about liminality as in betweeness, an unsettled and uncertain state. Sikes (2009) says change involves questioning what you are doing and for some this leaves feelings of inadequacy. Do either of these descriptions resonate with the your experiences of change? In what ways do you experience change? Do descriptions of liminality resonate with your experiences of change?

In addition, the Tensions Exercise (discussed in Chapter 3, page 65) explored some of the same notions. The prompts listed below helped to illuminate how lecturers experience challenges to their authority through students' exposure to web based sources:

Comment [EJB10]: page

- My authority may be undermined;

- Concern over exposure of my (teacher) expertise in terms of subject expert (rather than technical skills);

- I am concerned that my position will be undermined through students accessing other sources on the web.

The interview questions were, in hindsight, rather direct in their phrasing. Clegg (2008, p.333) decided to gather data on academics' views of their identity by asking them how they would frame a question on identity. She did this to avoid imposing her own framing of the issue on participants' replies, but it may also have opened up the notion of identity in a way that colleagues found more accessible to answer. Similarly, Knight and Trowler (2001) comment that academics are not necessarily attentive to the construction of their identities. In my study, across the sample, lecturers interpreted the questions very differently which

suggests a lack of shared, commonly understood, view of the terms identity and role. Even though I gave a short definition in the question, colleagues did not interpret the questions similarly. For instance, the responses to the question about the tutor's role changing covered dispositions and philosophical approaches towards their teaching and learning in general, as well as the more practical issues such as online group dynamics and the design of online or blended learning. However, what was evident was the detailed and nuanced understanding that colleagues have of their role, their philosophical orientations to their teaching and how this manifests itself in the online environment. The question concerning changes to teacher's identity elicited, from most participants, a flat rejection of the idea that the use of technology changes their identity and people generally struggled to answer the question with coherence. Although some responses drew on metaphors for the role of the teacher as 'guide on the side' or 'sage on the stage' or in terms of acts of teaching as 'facilitating' or 'guiding'. The majority challenged the notion of a changed identity through use of Web 2.0 tools:

> That is a bit philosophical. Ontologically speaking of course my identity is changing as I gain in expertise and experience within the University and as an academic and as other things as well, and I guess my increased use and knowledge of IT is an feature of that, but a really small feature. I mean I don't consider it to be something that shapes my identity - my use of IT. [Emily]

> That is a really interesting, I don't think it does really... It might change slightly. How I achieve what I want to achieve or what I think is achievable within the role, but I don't think it changes what I think my role is. I wouldn't have said so. I can't see any way in which it would. [Sue]

The question relating to liminality, not a term that many people were aware of, evoked an large amount of data. Table 7.1 shows the number of words and number of words coded for the questions on liminality, role and identity. The figures show how, despite liminality being a more unfamiliar concept than role and identity, the question on liminality gave rise to a lot more data (over 6000 words compared to around 4000 words for the identity and role questions). In addition, the quality of the data was richer in terms of the nodes that were coded to this data with 71 nodes coded from the data in response to the question on liminality and both role and identity had each 43 nodes. What this might suggest is that lecturers understood the notion of change and uncertainty in their teaching and learning lives (liminality) and have a vocabulary to discuss it, yet generally they did not have a similar vocabulary to discuss their identity and role.

	Question about liminality	Question about role	Question about identity
Number of words	6678	4072	3580
Number of nodes coded within each question	71	43	43

Table 7.1 Quantitative information of the questions on liminality, role and identity.

The Tensions Exercise was successful at providing concrete examples of how colleagues construct narratives about their role and about how the lecturers shape teaching and learning practices. Perhaps on reflection, the Tensions Exercise provided a more oblique way of asking about role and identity and could have replaced entirely the direct questioning.

Shards of identity

Stronach et al. (2002, p.116) explore how teachers and nurses construct their roles using mini narratives: "unstable, shifting, sometimes contradictory or expressed as conflicts". Stronach et al. (2002) describe these mini narratives as "shards of self-accounting" (p.116) which were variously mobilised by teachers to account for their overall response to contemporary teaching initiatives and conditions. These fragmented narratives exist in tension and individuals toggle between these notions of themselves. Professionals exist within what Stronach et al. (2002) term 'economies of performance' and 'ecologies of practice'. On the one hand, lecturers are exposed to the outside–in pressures of the economies of performance, that is the notion of accumulation of individual and collective experiences of teaching or nursing through which people laid claim to being 'professional'. Whilst on the other hand, there are the inside–out pressures, the various 'ecologies of practice' defined as the professional dispositions and commitments individually and collectively engendered by which professionals make claims about their professional practice (Stronach et al. 2002, p.109). The notion that professional identities are split and fluid is supported by Clegg's study of academics' identity (2008, p.332). Stronach et al.'s (2002) and Clegg's (2008) views of professionals as split, conflicted and plural has shaped the analysis of the voices of the lecturers in my study.

Stronach et al. (2002) highlight nine aspects of a professional's identity that were evident from their study of teachers and nurses. These shards are colourful in their rich depictions of the many ways that professionals conceive of themselves. Stronach et al.'s (2002, p.118) claim is that there is not a singular voice of a teacher. Instead there are complex and contradictory roles which do not reduce to simple types and styles. The metaphor of shard is one which is supported in my data, in that, like shards of broken glass, there are multiple aspects to the role of the teacher that these are not orderly but chaotic: they represent parts of the whole, but cannot be simply reconstructed to make a whole. Within my study there were examples of all Stronach et al.'s (2002, p.116) nine shards:

- teacher as recollected pupil;
- teacher as pressured individual;
- the subject specialist;
- the person/teacher I am;
- the socialized apprentice;
- the coerced innovator;
- the convinced professional;
- professional critic;
- sceptical pragmatist.

In addition to Stronach et al.'s (2002) nine shards of identity, a further twelve fragments of identities were evidenced within my study. These are:

- The anxious innovator;
- The coerced employee;
- The willing experimenter;
- Marginalised innovator;
- Qualified and confident;
- The student pleaser;
- The demanding teacher;
- The scared unskilled;
- All skilled up;
- Equal with students;
- A distinct work identity;
- Exposed professional.

The data has been used to provide an example of each of these nine characterisations see Table 7.2. By giving voice to them they become alive and more meaningful. More could be said about what each quote appeared to mean for the individual and for how they approach their role. Initially the shards are exemplified through quotes taken from the data and then the way that the combination of identities is mobilised is discussed by considering two individuals:

Teacher as recollected pupil *(*from Stronach et al., 2002)

I thought that that was a great opportunity for them and something that they would really enjoy because I suppose I was looking at it from my point of view and saying thing that is what I like to do, to say things publically and to expound and all that sort of thing. [Catherine]

Teacher as pressured individual (from Stronach et al., 2002)

you can't just come up with ideas, especially when you are working flat out busy busy, busy, you can't be creative under those circumstances... but just working flat out on a tread mill delivering teaching that I was doing, it was just too much really and I didn't find that to be a very creative inducing situation really. [Claire]

The subject specialist (from Stronach et al., 2002)

Interviewer: What do you teach?

Rebecca: pharmacology

Interviewer: so it is quite factually based.

Rebecca: it is not just factually based. It is thinking based. It is scientific so they have to take a concept and run with it and formulate their own ideas. If it was just fact based I could give you the facts then go away and they'd regurgitate them. That doesn't teach you to be a scientist.

The person/teacher I am (from Stronach et al., 2002)

I know in my career I've got to a stage where I know what I should know and don't know everything but I'm comfortable with my position. [Claire]

The socialized apprentice (from Stronach et al., 2002)

I've only been here 2 years. I've been helped by access to people like Chris, the learning bytes, people like yourself, Jack, Bob, Jane are all happy to come and help other people. [Jennifer]

The coerced innovator (from Stronach et al., 2002)

I sort of forced myself, part of the reason why I forced myself into that position, because I thought if students are going to do it then I'm going to have to learn. And I certainly know more than I did but I don't feel very confident with IT. But I'll keep working on it and will get there. [Emily]

The convinced professional (from Stronach et al., 2002)

Well really it was my personal initiative. Because in my school we have just minimum requirements of using Blackboard so it only for people who want to have their own initiative to be more open to use it. [Crista]

Professional critic (from Stronach et al., 2002)

I had the agency to turn around to my boss and say I'm not going to do that anymore.

[Claudia]

Sceptical pragmatist (from Stronach et al., 2002)

It is something that in my opinion is coming as part of our jobs. So time consuming for me to learn new tools? Well it is a part of my job to learn new tools. [Crista]

The anxious innovator

I think all change involves that [uncertainty]. That would be in any change, and it can be more acute …particularly if you are an early user and therefore you are not surrounded by a culture in which it is the norm. I think that is definitely there. I think most people, I don't know whether they would ever admit, must feel that, when there is some sort of change. [Sue]

The coerced employee

it feels that we are being pushed towards it [use of online learning] because it is more convenient but I am not convinced that it engenders better learning. [James]

Putting our notes up on Blackboard giving lecture notes in their entirety, it enables us to get the materials over to them very quickly. They take the stuff home and it discourages them from making their own notes and doing background reading. All this self learning that is supposed to happen is discouraged by putting them on Blackboard. [Rebecca]

Student pleaser

I've often been too compliant. I've thought I have to please the students and I have to pander to what their preferences are. [Catherine]

Demanding teacher

if you think that my job as your teacher is always to make you feel comfortable then you've got the wrong end of the stick because actually sometimes my job is to challenge you to do something that is outside your comfort zone and that's what we are doing here. [Catherine]

Willing experimenter

I volunteered for a project, so I learnt a little bit there, so it gave me an idea to try something else. I go along to quite a lot of these little teaching and learning seminars and just try to find something out and then if is it something. [Rachel]

Marginalised innovator/educator

Problem based learning - it is not very popular in the school. Some of my colleagues prefer just to chalk and talk write on the board. [Crista]

I would love to work for an institution where I am just one of the masses that is doing all this. [Claudia]

Qualified and confident

I've done my bit. I've passed all my courses. I ended up with a distinction. I've got all the qualifications. I've done my elearning course. [Crista]

The scared unskilled

I know how to write an essay. I'm completely confident in supporting students in essay writing, [but] creating a blog WOW. I've no idea... It bothered me and it continues to bother me, hold on let me think. I don't think it bothers me that some of my students are more IT savvy than me, but I am bothered that my IT skills to support those students who are struggling with the IT. [Emily]

The all skilled up

my experience at the OU supporting students as a tutor and of being a student on a module and the experience of the innovations that were possible and this idea of a model being

available. I had a format that I could follow. [Claire]

The equal with students

I like getting on the same level as my student and understanding them all and I like them to understand who I am what I'm about... I think that I end up with some very good relationships with my students by the time they are leaving. [Jack]

A distinct work identity

my personal profile is at the highest privacy setting so if you were to go on to Facebook and look me up, and I've done that deliberately because I don't want the students going on and seeing my holiday photos or seeing me out on a Saturday night because I don't want it to destroy my professional reputation. [Wendy]

The exposed professional

I think it is important that we have to make our positions clear, that we are not practising designers and technologists on a regular basis. We are not like... I need to be a complete expert, because how can anybody be that person? [Adrian]

Table 7.2 Examples of shards of identity

As Stronach et al. (2002) point out, these shards of identity may often exist in tension to one another. Some are diametrically opposed: for example *the all skilled up* and *the scared unskilled*. However, these identities may also co-exist, in that, one may feel both skilled and scared about one's skill level at the same time, or at different times, or in relation to different aspects of one's role. *The student pleaser* and *the demanding teacher* are likewise diametrically opposed on one level, but may be experienced jointly as someone moves between these views of their world and how they want to relate to their students and their role as teacher. Many teachers are likely to recognise the tension between *the student pleaser* and *the demanding teacher:* professional standards, the desire to maintain academic rigour and to provide a learning experience which demands that students are stretched academically. However, on the other hand, the power of tools such as the National Students' Survey (NSS) to drive the agenda of institutions and, in turn, to lead to mechanisms by which lecturers are judged, rewarded and their careers secured, is familiar territory for many in the HE sector. Within this University setting, the Vice Chancellor had made a recent call to staff, at an internal teaching and learning conference, to try to ensure that the NSS was kept at the forefront of their minds.

Some of the identities are brought into focus through the use of technology. In particular, of the notion of the '*exposed professional*':

> I was conscious that people might think "you absolute muppet" teaching that in that particular way or that's not quite how it is done in clinical practice because I'm not considering it from a clinical perspective but from a learning perspective. Do you see where I'm coming from? I've got several hats to hit and it is a compromise. [James]

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James feels exposed in relation to his videos being available via YouTube so that they become readily accessible and can be commented on by colleagues, or clinical professionals. This type of exposure is made possible through Web 2.0 technologies where users can upload video to the internet. Thus, digital technologies allow for easy reproduction and distribution of lecturers' intellectual teaching resources. James's anxiety is that his videos will be seen out of context by professionals who have a different perspective on the topic. As a tutor James is concerned to make videos which support his students to understand some of the key things about physiotherapy, whereas a clinician will approach the subject from a different perspective, that of a practising professional. The internet can provide these materials decontextualised of their provenance and purpose and thus have the potential to increase a lecturer's sense of exposure. In addition, the technology adds to this feeling of exposure due to the permanency of the digital format:

> There is a permanency about putting a lecture on Blackboard, if you say something dumb and wrong in a lecture theatre and students submit it in an exam then it never needs to see the light of day again, but if you put it on a screencast then people can laugh of you the rest of the world. [Claudia].

Wendy's comments, in relation to her students seeing aspects of her home life via Facebook, are brought about through new tools which straddle her home and work lives ('*a distinct work identity*' page 127). The use of tools, such as Facebook, for educational

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purposes is still in its infancy, but with growing usage amongst the student population, academic staff are considering them as a way of engaging with students. As Jack's comment reveals ('*the equal with students*' page 127), for some tutors, the desire to develop

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a relationship which is based on mutual respect for students and thus to, perhaps, open up aspects of their personal lives to their students, is an important part of their role which they value. Clearly there are implicit dangers which lie along in this area of home/life online identities for tutors. For those with limited technical confidence, this is particularly an area of concern, in that although it is possible to set up multiple profiles and to make one's profile private which can help lecturers to manage their online identity. Being able to do so requires an understanding of these features and an awareness of the need to attend to this. The situation of managing one's online identity is made more difficult because of the complexity and changing nature of the online tools; for instance, understanding Facebook's privacy settings, or the affordances of Facebook's open and closed groups, or the differences between a Facebook group and a page.

Stronach et al. (2002) identify three of their original shards which reflect differing attitudes to change: '*the coerced innovator*', '*convinced professional*' and '*the sceptical pragmatist*'. Stronach et al's (2002) adjectives of 'coerced', 'convinced' and 'sceptical' present three

positions in terms of one's attitude to change. Convinced suggests that one is in agreement with the change and does not doubt its value, whereas both sceptical and coerced present differing degrees of resistance and challenge to change. This study focussed solely on 'bottom up' innovation, where lecturers had decided to undertake changes of their own choosing, yet despite this there as some evidence of lecturers feeling coerced and or sceptical. There was only one example of '*a coerced innovator'* in the group, Emily. However, the fact that she felt coerced, despite having made the decision to adopt a Web 2.0 tool of her own volition, is noteworthy. In Emily's case, the motivation for the change comes from her own desire to keep up to date and to reflect in her teaching the use of technology:

> I'm using the technology because if I don't I'll get left behind. [Emily]

There were many more examples of '*the convinced professional'*: Richard, Catherine, Rachel, Stuart, Crista, James, Claudia, Sue, Abigail, Jack, Adrian and Claire all fell broadly into this category (twelve of the sixteen participants). However, there was also evidence of '*a sceptical pragmatist'* approach to adoption of a technology (see Crista's quote page 126).

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I have extended the characterisations in relation to change to include an additional four shards of identity:

- The anxious innovator;

- Marginalised innovator;

- The coerced employee;

- The willing experimenter.

Whilst there were examples of '*the coerced employee'* (see quotes from James and Rebecca page 126) where the institution made demands on them to use the technology, there were also people who felt the exact opposite – that the pressure to support the uptake of new technologies was not being given a strong enough institutional steer. The institutional context and its impact on individuals in relation to changing one's practices is discussed more fully in Chapter 9, *Developing as a Digital Practitioner*.

Comment [s14]: page

Willingness to experiment represents a disposition to technology which, it appears, is the most common characteristic of these early adopters in my study. The notions of personal beliefs and values and how they characterise lecturers using Web 2.0 tools is returned to in Chapter 8, *The Digital Practitioner.*

Juggling identities

It is clear from the data that individuals live with many conflicting views of themselves as professionals. Tables 7.3, 7.4 and 7.5 present the identity shards of three of the lecturers, Richard, Catherine and Emily, and these have been provided to illustrate the multiple voices that lecturers live with. Richard and Catherine are both experienced in their use of Web 2.0 tools but Emily was using the tools for the first time. The tables illustrate the conflicts evident in their stories.

Richard	
Recollected pupil	if we can't tolerate a bit of discomfort and a bit of insecurity then where are we as learners if we stop learning?
Exposed professional	[Through use of online tools] I probably feel that my individual reputation is more at stake... if I'm using an open or web based tool, if it is not a good tool, I feel that it is my decision making that is being exposed.
Willing experimenter	and if you haven't tried to harness that potential [of online tools] or use those possibilities then you don't know effectively they could possibly be or may not be.
Demanding teacher	I think it is important that we take students out of their comfort zone sometimes. I think that is where some of the real learning takes place.
Teacher as pressured individual	but I always feel that my decision to do that adds to my workload and adds to my stress levels.
As convinced professional	I'm not being prompted and I'm not being prodded and I'm not being pushed to do this so I have to ask the question, so why do I continue to do it? For me it's probably partly about recognising alternatives: there are always alternative ways of doing things and that some of these technologies seem to offer ways of engaging students.
Professional critic	it is probably seen as quite a good thing, just on a general level, if people are using technology. It is probably seen to tick a box even if people are quite unthinking about that, the sense that let's use Blackboard more. [Not] why would you use Blackboard more? Is it going to offer you anything better?

Table 7.3 Shards of identify – Richard

Catherine	
Teacher as recollected pupil	I thought that that was a great opportunity for them and something that they would really enjoy because I suppose I was looking at it from my point of view and saying thing that is what I like to do, to say things publically and to expound and all that sort of thing.
Demanding teacher	if you think that my job as your teacher is always to make you feel comfortable then you've got the wrong end of the stick because actually sometimes my job is to challenge you to do something that is outside your comfort zone and that's what we are doing here.
Student pleaser	I've often been too compliant. I've thought I have to please the students, and I have to pander to what their preferences are.
As exposed professional	I'm beginning to become more concerned about that [her online identity]... I always very blasé about that and thought it didn't really matter. But now I'm beginning to feel... I should have been more careful about my online presence from the start.

Table 7.4 Shards of identify – Catherine

Emily	
The coerced innovator	I sort of forced myself, part of the reason why I forced myself into that position, because I thought if students are going to do it then I'm going to have to learn. And I certainly know more than I did but I don't feel very confident with IT.
The scared unskilled	I know how to write an essay. I'm completely confident in supporting students in essay writing, [but] creating a blog WOW. I've no idea....I tried to be organised but actually what I found is that the technology moves on so quickly that you are always out of date, it feels like you are always out of date.
Sceptical pragmatist	Not because I agree that using technology leads to better teaching because I don't, but I think that it is here to stay and if I don't jump on the wagon then I'll get left behind.

Qualified and confident	I feel that I should know about what I'm teaching about and I want to know about what I'm teaching about.... I'm not as savvy at using the internet as I am at understanding useful philosophical contexts of Buddhism.

Table 7.5 Shards of identify – Emily

Stronach et al. (2002, p.120) identified that professional selfhood was often a matter of addressing and resolving these tensions through "accommodation, resistance, compliance, subversion – or, more commonly, a kind of bureaucratic cautiousness" (p.120). However, my data does not indicate that individuals resolved tensions, but rather that they accommodated these split and conflicted aspects of their professional identity. At points lecturers' responses are incomplete or incoherent indicating something other than tidy, ordered or well managed resolving of tensions.

Within my study there was evidence of the juggling the tensions referred to by Stronach et al. (2002, p119), as lecturers managed the inside–out pressures of 'ecologies of practice':

> I'm conscious that I **need** to keep up to speed with things, but I **want** to as well. So no. I think there is so much out there that you can't know everything and I think it is knowing who to talk to if you do need to know something within the University and beyond. [Abigail] (emphasis added)

> I think that I've worked hard to get where I am and within the school **I've had to prove myself** and because I'm not a subject academic so it was a matter of getting out there, talking to people, showing how you can help people what you can do and then you get that respect and you get the chance to work with other academics and having a PhD helps as well because they see you as on a level. [Abigail] (emphasis added)

> but **you've got so much at stake**. If it was just me and my work who cares but actually I've got the students' work, their degrees, you know their future. [Emily] (emphasis added)

Interestingly, the outside–in pressures of the 'economies of performance' are only tangentially referred to. Abigail, in the first quote, talks about needing to be "up to speed with things" and contrasts this with her internal drive to initiate change. In the second quote Abigail's discussion focussed more on her relationship with colleagues, how she is perceived by them. Her conflict is cultural and organisational rather than directly related to performativity (although of course, both culture and the way the organisation functions are influenced by the wider performativity agenda). Emily's concern is expressed in terms of her students' achievement, without reference to the National Student Survey, or other measures of peformativity. This apparent lack of focus on pressures due to performativity might reflect

the time that the data was gathered, which was just before the main implications of the Coalition Government's reforms in HE which have come to increasing prominence in 2011-2012,or they might relate to the nature of the interview questions which tended to focus on individuals and their practice rather than exploring institutional issues.

The lack of discussion of issues stemming from the performativity culture was noteworthy because of its absence. The institution had a relatively new Vice Chancellor at the time of the data gathering, yet none of the lecturers referred directly to aspects of the University's strategic plan or the key performance indicators that are derived from it. In the quotes below James and Richard display ambivalence to the way that the institution is supporting developments in adoption of technology without the policy being driven by a well articulated value for its use:

> it feels that we are being pushed towards it [use of the VLE] because it is more convenient but I am not convinced that it engenders better learning. [James]

> on a general level if people are using technology it is probably seen to tick a box even if people are quite unthinking about that, the sense that let's use Blackboard more for this. [Richard]

> They want people to do things but there is nothing. But it is not going to happen without that [a well supported strategic plan for adoption of technology]. [Stuart]

Stuart's view of the lack of strategy in relation to adoption of technology is echoed by Catherine's view that her use is internally driven and motivated:

> I've tended to do so off my own bat and haven't expected or received any support from the institution to do that. [Catherine]

These themes will be revisited in Chapter 9, *Developing as a Digital Practitioner*.

Authority and expertise

My supposition when formulating the study was that the increased use of the web opened up lecturers' knowledge through exposure to new teaching and learning practices, as discussed in Chapter 2. Land and Bayne (2008) talk about how digital technologies "undermine the authority of academic knowledge" (p.676). Dohn (2009) discusses, in depth, the ontological basis of Web 2.0 and argues that the Web 2.0 leads to "people acting differently in sharing collaborating and negotiating meaning on the net in more bottom up ways than before" (p.117) and that Web 2.0 practices embody dynamic, participatory view of knowledge. This possibility was evident in the way that some lecturers used the Web 2.0 tools. Lecturers

designed activities where students could explore the web, challenge the conventional practices in their subject and suggest new meanings:

> I'm quite happy with that [my authority might be undermined]. I quite like a debate. I don't know how many within the group have retail jobs or have experience, but where does the experience lie? They are obviously far more experienced in their subject area certainly I felt that I was learning from them. [Adrian]

> I think in a Web 2 environment, there is more of a levelling out. People assume the same status, in a way that is very different to a physical space particularly when you are stood at the front of a group of learners who are all facing you, but I think it is least important because I don't particularly have a problem with my authority being examined in that way or not challenged is perhaps too strong a word. I think it is part and parcel of moving to a Web 2 way of working and thinking that this is perhaps in some ways more democratic. That will introduce possibilities for students to contribute in a way that probably feels less constrained in a class room environment but it will also introduce problems as well, potentially such as people going off into topics that you think are completely irrelevant or perhaps behaving in a way that targets individuals personally. [Richard]

> I think in HE you are hoping that students will challenge your views and that would just be a part of that. It is not always a comfortable process. It is a process that we would want to happen anyway and the web is just an extension of that obviously with all the provisos about the quality of what they are getting... But on any level it is a psychological challenge but it is a necessary and a good one. [Sue]

> I don't think I know it all and... if my students expect me to then they are misconceived really. We are all learning together and also students come up with some super resources that you can then use next time around. [Emily]

Clegg et al. (2006, p.96) explored a similar 'bottom up' adoption of new pedagogical process. They describe how lecturers gain pleasure from designing activities in which they relinquish mastery rather than exercise it and this is clearly evident in the quotes given above. However, contrary to Clegg et al.'s (2006) study which found a general concern amongst lecturers that students might know more that the tutor or the ""nightmare" of a stream of unanswerable questions" (p.96), my findings indicate lecturers welcome their students engaging in finding other sources of information on the web and challenging them. This was true for all of the lecturers interviewed irrespective of their subject. The quotes above are taken from a mix of subjects, both applied and pure, and from arts based and science based subjects. For all the epistemological traditions this held true and the range of subjects was broad including from, on the one hand, post colonial theory and critical pedagogy, traditions which challenge notions of received knowledge and aim to give voice to those traditionally marginalised from the academy, but also to more essentialist subjects such as pharmacology, control engineering and physiology. Lecturers from all these disciplines welcomed the opportunity for students to use the web to find alternative perspectives on their subject:

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Web 2 is making it seem more and more ridiculous in that we try to maintain this crumbling ivory tower that we are living it... Some of the gate keeping we are doing is just because we can, because we have the power to do so... don't want to close gates and open gates just because I can do so and I think a lot people just like the power that academy gives them. [Claudia, a lecturer in post colonial theory]

They [students] are accessing discussion forums and they can see what other students from other institutions are presenting as solutions or how they solve some difficulties in understanding the content that is presenting and that is something wonderful. [Crista, a lecturer in control engineering]

In Chapter 4, *Web 2.0 tools in practice,* how lecturers managed, accommodated or disagreed with tensions from use of Web 2.0 tools was discussed. There were, in addition, some ways in which lecturers explicitly managed their role and identity: Adrian positions himself as a learner in the new environment alongside the student:

[it] is impossible to present ourselves as being experts with this authority... We have to be professional learners, or somehow professional, on a slightly different level. [Adrian]

When handling a difficult experience where his knowledge is not as up to date as the students expect resulting, Adrian tackles this threat to his authority by maintaining his own sense of composure:

the students were laughing and but I can get around that and explain to them that technology isn't always available when you want it. [Adrian]

Tutors sometimes invested time in explaining to students what they would get out of the experience. The notion that students have a conservative expectation of learning, which presents lecturers with challenges when undertaking new teaching and learning paradigms, was seen by nearly all lecturers as a critical factor in the success of their teaching using Web 2.0 tools:

I think one of the students had challenged me and said "I don't think that is very fair that you are making us feel uncomfortable" and so I'd said so if you think that my job as your teacher is always to make you feel comfortable then you've got the wrong end of the stick because actually sometimes my job is to challenge you to do something that is outside your comfort zone and that's what we are doing here. [Catherine]

My technological skills less important yes definitely but it isn't important to me least important. I don't think it matters as long as you build up some collaborative trusting relationship with them. [Catherine]

It [new teaching and learning practices] depends how it is sold to the student if they understand the value of what they are doing and the value behind it. [Stuart]

I think if you lay the ground work at the outset that this is going to be a process of enquiry about intellectual risk taking then I think you get a lot less [student resistance]. [Claudia]

Liminality

The term liminality was discussed in Chapter 2, page 48. It was first used to describe the process of transition associated with rites of passage. In my study I have used it in the same way as Clegg et al. (2006), who apply the concept of liminality to the unsettled and uncertain state associated with the adoption of new teaching and learning practices as academics move from a familiar 'old' way of knowing to 'new' practices. There was a range of replies to the question on liminality, from total agreement, to flat rejection. Lecturers with most experience of Web 2.0 tools were not necessarily the ones who rejected the notion of liminality. Claudia, Catherine, James, Richard and Sue (all of whom have over 5 years' experience of using Web 2.0 tools, see Table 3.3) all recognised the notion of liminality. This suggests that the unsettled process of taking up new tools is not simply related to one's confidence in the technology but to other factors including the need to convince students of their value and the challenges of working against the dominant practices.

Meyer and Land (2005) identify 'stuck places' in the process of becoming or moving into a new academic identity which signify the epistemological transformation that learners take when making significant conceptual leaps in their subject. They comment that stuck places can have an ontological dimension (2005, p.378) and in the case of lecturers coming into a new way of practising their subject in a different medium (the web) there is the potential for the concept of the 'stuck place' to apply. Likewise, Smith (2010, p.579) argues that becoming an academic is likely to be straightforward if one's ontological security is maintained, whereas discontinuities in norms and practices leads to a disturbed view of one's identity. Although adopting Web 2.0 tools has the potential to be radical, as discussed in Chapter 5, *Web 2.0 pedagogies in practice,* the lecturers in my study did not experience this change as a challenge to their status as a teacher or to their position in relation to authority and expertise. They welcomed and relished the participative and collaborative potential of the tools. However, they experienced the adoption of new practices as risky in terms of delivering the best possible learning experience for their students. In the following two examples lecturers discuss the risky, liminal space that they experience when embarking on a new way of teaching. Their voices speak of the anxiety surrounding their desire to serve their students and the personal challenge that they experience:

Because I'm teaching in a new context that has new affordances there is scope to do different things as a teacher that you wouldn't normally do and so you then have to thinking through for yourself is that pedagogically a good decision? Is it ethically a good decision to do it in that way? And you are making those decisions. And what you are doing is risky because you might make the wrong decision and then you know things can go wrong. You can make students unhappy. But I do it none the less, for a couple of reasons, one is that I think there might be benefits to teaching and learning and that is a central reason why you do anything isn't it? So I do sort of feel myself to be in that liminal space trying out new strategies or new tools with students, worried about whether I'm going to make a mistake that will trip me up but I'm doing it because I think that the benefits that accrue might be really important. [Catherine]

When I'm planning changes, and this would probably related to any sort of innovation in their teaching practice, whether it involved technology or not... it does feel risky on one level, in the sense that you are trying something new, you don't know how it is going to work, you don't know how students are going to respond to it, you don't know what the outcomes are going to be, and it feels risky not only because it's your own teaching practice that you are developing and kind of experimenting with but also because it's the students' educational experience that is at stake... but my experience of it is that it rarely goes horrendously wrong and the reality of it is rarely as exposing as we think it is going to be. [Richard]

These findings echo Clegg et al.'s (2006) similar study of lecturers undertaking changes in their practices involving technology. Their study identified what one tutor called the "layer upon layer of anxiety" (2006, p.96) and found that anxiety was not universal and its intensity varied too. Although the majority of colleagues in my study identified with feelings of liminality, there were a smaller number of people (five out of the sixteen) who did not accept this notion. One participant, in particular, did so because as she commented, that the world as unknowable in its entirety:

Interviewer : Do either of these descriptions of liminality resonate with your experiences of change?

Abigail: No I wouldn't say inadequately. I'm conscious that I need to keep up to speed with things, but I want to as well. So no I think there is so much out there that you can't know everything and I think it is knowing who to talk to if you do need to know something within the University and beyond.

For others that particular way of expressing themselves (as uncertain or anxious or liminal in between state) was quite alien. These people do not appear to identify with anxiety in the way that they define themselves and this may be related to their attitude to anxiety in life generally, or the strength to which they identify as '*a confident professional*' or may particularly relate to their confidence with technology:

No I wouldn't link that to that. There have been times when I've felt frustrated and it does all feel like a lot of hard work and you don't really know why you took it on. [Claire]

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> No I've never had any issues about the technology. I don't feel that I've got anything there to worry about. I haven't got any issues about authority. [Jack]

> No probably I've done it gradually. I was quite lucky that the first idea worked quite well. So if something was less popular you might draw back from it. It was popular what I did, so I didn't feel too threatened. [Rachel]

> Not within myself but I can see it within others. When you are trying to encourage people then there is definitely that anxiety of moving forward. [Stuart]

In trying to understand what makes the early adopters willing to experiment with Web 2.0 tools despite the liminal state that many of them experienced, I have turned to work on conceptions of teaching. Several researchers have identified two distinct orientations to teaching. Prosser and Trigwell (1993) talk of transmission/teacher focussed (ITTF) and conceptual change/student focussed (CCSF) approaches to teaching, whilst Kember (1997) identified two broad orientations; teacher-centred and student-centred with a transitional teacher student dialogue position in the middle. It is beyond the scope of this study to prove a causal link, but my findings suggest that a teacher's beliefs about their role maybe linked to a willingness to adopt Web 2.0 practices, and in particular, teachers who see their role as a facilitator and who aim for students' conceptual change are those who are likely to be adopting TEL.

Chapter conclusions

This chapter has explored how lecturers experience the changes in their identity and role which accompany their use of Web 2.0 tools. It set out to examine:

- How lecturers construct their professional selves when making changes to their practices?
- How they experience changes?
- What are the particular ways that the technological tools affect their identity?
- How they manage their professional identity through this process of change?

This chapter has explored the experience of lecturers' sense of self as they make changes in their practice. The professional self appears to be constructed as a number of different views of the self which are held in some sort of balance as lecturers undertake their role. The delicate balancing or juggling act that lecturers participate in to manage these conflicted identities raises issues for the way they are supported in their development by the

institutional policy context. These ideas are discussed in Chapter 9, *Developing as a Digital Practitioner.*

Lecturers experienced change in a range of ways from willing/convinced through sceptical to coerced. Not surprisingly, in this sample of early adopters, the majority might be categorised as one of Stronach et al.'s (2002) '*willing experimenters'.* Only one lecturer was identified as '*a coerced innovator'.* The fact that so few participants feel coerced into taking on new tools reflects the institutional strategy and its implementation and this is discussed further in Chapter 9, *Developing as a Digital Practitioner*. What clearly drives the majority of this early adopter sample is what Stronach et al. (2002) have called 'ecologies of practice' whereby their motives are internally driven by their own sense of what it means to be a 'good teacher'. The importance of lecturer's beliefs about technology and their attitude to change is returned to in Chapter 8, *The Digital Practitioner.*

Technology is just a facet of the complexity of lecturers' role and it is worthy of note that tutors did not foreground their relationship to technology in their discussions of their professional identity. This raises questions about how lecturers value and conceive of the technological skills, practices and attributes which is explored in the next chapter. There are several ways that the technology adds to lecturers' sense of unease and challenges them. Firstly, there can be an added sense of exposure due to the permanency and ease of distribution associated with digital resources. Secondly, the boundaries between home and work life identities have the potential to be blurred by use of technology, and lecturers need to be particularly careful how they manage this tension. For some lecturers, building a collegiate relationship with students is particularly important and the web offers great possibilities for more personal and equal relationships but lecturers need to consider how to maintain a professionally appropriate identity whilst using social media.

Liminality, and/or feelings of uncertainty, are felt by many lecturers, both those who are experienced at using technology, and those with less experience. The uncertainty relates to the pressures that lecturers are under and are most evident as a result of the inside–out pressures to serve their students better, whereas, coping with the outside–in pressures of performativity was not as evident. The focus on serving students and providing the best quality of education is a theme which was also discussed in Chapter 6, *The emotional journey* and is returned to in Chapter 9, *Developing as a Digital Practitioner*.

Lecturers did not experience liminality as a challenge to themselves ontologically in that, although the Web 2.0 tools have potential for the radical as discussed in Chapter 4, *Web pedagogies in practice*, lecturers universally welcomed this challenge. Indeed, the findings

provide no evidence that lecturers felt under any additional pressure due to the wider availability of knowledge on the web or the speed with which knowledge is constructed and disseminated due to technological intervention. Lecturers particularly valued the radical and challenging potential of the new tools in ways that were discussed in Chapter 5, *Web 2.0 pedagogies in practice.* Lecturers' beliefs about how their role, in that they consider themselves to be facilitators of learning, committed to student-centred approaches appears to be linked to the ontological security when making this change in their practice and this makes the adoption of the TEL less personally challenging.

Both Chapter 4, *Web 2.0 tools in practice,* and Chapter 6, *The emotional journey,* identified some of the strategies that lecturers used to manage the adoption of Web 2.0 tools in terms of the design of learning activities and in terms of how they managed the associated emotional journey. In addition, this chapter has identified ways that lecturers approach the management of their role and identity. These include positioning themselves as learners alongside their students; not expecting themselves to be the most competent technically; building trust with their students; and working to convince students of the value of the approach that they are adopting.

Chapter 8 considers what it means to be a 'digital practitioner' in terms of a lecturer's skills, practices and attributes.

Chapter 8 The Digital Practitioner

Introduction to the chapter

Previous chapters have explored how lecturers make changes in their practices (Chapter 4 and 5) and the emotional and professional dimensions to these changes (Chapter 6 and 7). The last two findings chapters, Chapters 8, *The Digital Practitioner* and Chapter 9, *Developing as a Digital Practitioner,* examine these changes in terms of lecturers' access to technology, the skills, practices and attributes associated with being a 'digital practitioner'. The term 'digital practitioner' is borrowed from Ecclesfield et al.(2012) who suggest that:

> the "digital practitioner" is, in part, the "communicative practitioner" whose focus has become the initiation, support and facilitation of learning and whose expertise resides in both their subject knowledge and their ability to use technology and develop technology use in their students that opens out "ecology of knowledge and learning" and creates contexts to generate "obuchenie" where learning and teaching can become fused in collaboration. (2012, p.53)

Ecclesfield et al.'s definition fuses some of the radical aspects of Web 2.0 discussed in Chapter 5, *Web 2.0 pedagogies*, with its focus on learning as participation in networks and learners and teachers involved as 'fellow travellers', yet it emphasises the role of the teacher, with expertise in their subject and knowledge of technology, to orchestrate the learning process.

This chapter focuses particularly on the first part of the study's fourth aim,

- to examine the skills and practices needed and how these are acquired when using Web 2.0 tools. (Aim 4)

It is concerned with the identification of skills and practices and seeks to examine them from the perspective of those who are experienced users of the tools. The next chapter, Chapter 9, *Developing as a Digital Practitioner*, explores the second part of Aim 4 – how skills and practices are acquired.

The chapter starts by considering an existing framework which conceptualises students' digital literacies and their development from Sharpe and Beetham (2010). It also considers the term 'digital practitioner' from Ecclesfield et al. (2012) and White and Le Cornu's (2011) notions of being Post Digital and of Activity Theory to understand lecturers and their skills. Sharpe and Beetham's (2010) framework is then used to conceptualise my data related to lecturers. Finally, the chapter proposes a model for lecturers' attributes, practices, skills and access, the *Digital Practitioner Framework*.

Perspectives on lecturers' digital competences

Sharpe and Beetham (2010) have proposed a framework to understand students' digital literacies which locates skills, practices and attributes in a hierarchy. One particularly useful aspect of the framework is that it distinguishes between skills and practices and this offers a more nuanced way of articulating the tutor's role than simply the term skills. Sharpe and Beetham's work was first published in 2010 but has subsequently been refined. In 2010 they presented the upper most level as 'creative appropriation' but have subsequently modified their framework to replace the top level by attributes and to include arrows which indicate how the students' access, skills, practices and attributes are developed, see Figure 8.1.
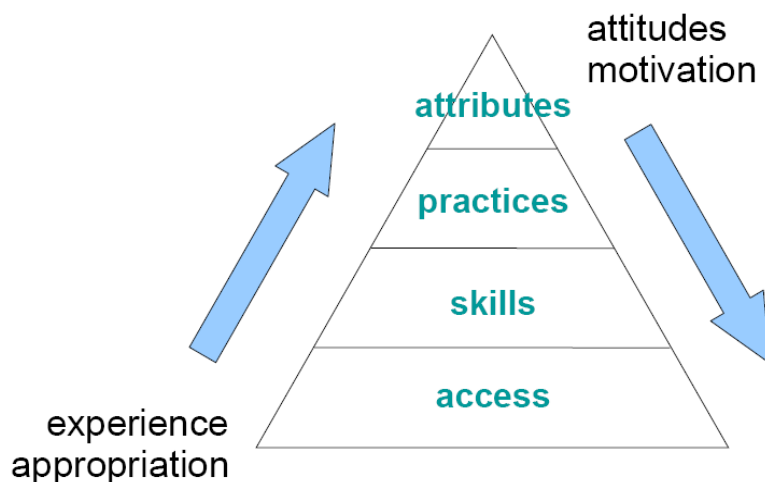
Figure 8.1 A hierarchical model to depict learners developing effective strategies for learning with technology (Source: Beetham and Sharpe, 2011, np).

In drawing up this model, Sharpe and Beetham's (2010) were influenced by Maslow's (1968) hierarchy of needs. Thus the bottom layer of the pyramid is the most fundamental conditions necessary for learners to engage in using technology to support their learning. Access includes availability of appropriate hardware, connection to the Internet and being able to access web based tools or the institutional VLE, having the appropriate software to access resources, having materials presented in accessible format, being able to plug in to the mains electricity etc. Sharpe and Beetham (2010) also suggest that the issues surrounding time and its management are a facet of the access level. The second level of the framework represents the skills which students draw on in the application of technology to learning. These include skills in information literacy, meta-cognitive skills, ICT skills in terms of

handling multiple, diverse information sources and media, proficiently and mediating their interactions with social and professional groups using an ever-changing and expanding range of technologies (Sharpe and Beetham, 2010). Practices are defined as "Learners make informed choices about how to use technologies, alone and with others. They develop personal, flexible strategies in response to situational needs" (Beetham and Sharpe, 2011). Attributes relate to a student's attitude and identity in relation to their learning. A learner who operates at this level of the pyramid has a strongly developed understanding of the value and possibilities of using technology to support their learning. The left hand upward arrow in Figure 8.1 shows how access can drive development of skills, which can in term result in effective practices and identification with the attributes of a confident digital learner. Likewise, the right hand downward arrow illustrates how a student, who identifies as a confident digital learner, is motivated to learn new practices, skills and acquire access.
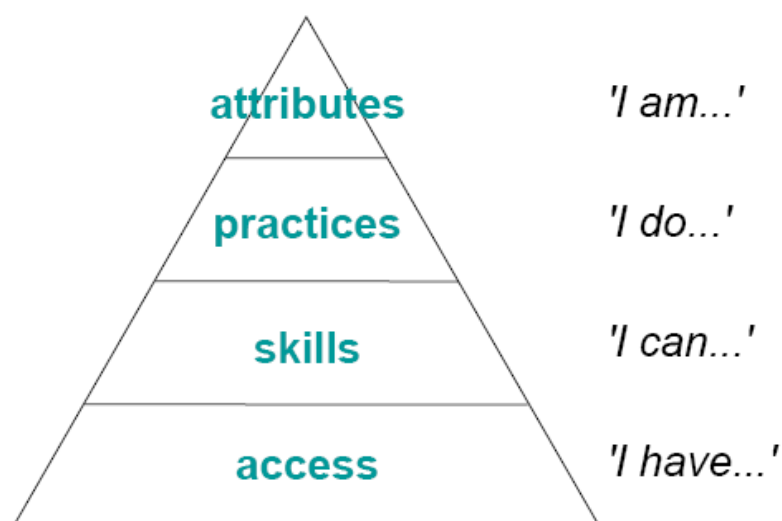
Figure 8.2 Stages of Development (Source: Beetham and Sharpe, 2011, np)

Beetham and Sharpe (2011) have annotated each level of the pyramid by associating it with a verb; hence access level is denoted by 'I have...', the skills level by 'I can...' For example 'I have a lap top' (access level), 'I can access online journals' (skills level), 'I distinguish between appropriate media for a particular task' (practices level), 'I am part of a learning environment that suits me, with an awareness of my needs and preferences including ICT preferences' (attributes level), see Figure 8.2.

This chapter takes its title, *The Digital Practitioner*, from Ecclesfield et al.'s (2012) work exploring FE lecturers' use of digital tools. As discussed above, their notion of a digital practitioner is someone whose role is "the initiation, support and facilitation of learning and whose expertise resides in both their subject knowledge and their ability to use technology and develop technology use in their students" (2012, p.53). Ecclesfield et al. (2012) explored the attitudes of 815 FE practitioners towards the technological tools they use both in their 'out of college lives' and within their teaching practices. Their approach looked beyond the skills that lecturers had (or had not) to their feelings about using technology. One of Ecclesfield et al.'s main findings is the identification of the term 'the enquiring mind' to conceptualise a self-managed approach to the adoption of technology (2012, p.48). The enquiring mind is described as encompassing confidence in use and willingness to adapt tools for particular contexts. They suggest that confidence is the key to successful assimilation of technology into learning and that confidence, as a facet of 'the enquiring mind', enables teachers to be more self-managed in their use of learning technology rather than waiting for direction and instruction on standardised approaches to teaching. They argue that digital practitioners are able to adapt technology into their professional purposes and integrate into their personal "ethic of care" (Jephcote and Salisbury, 2009, p.971).

The enquiring mind concept can be compared to the attribute level in Sharpe and Beetham's (2010) model. Both represent high level relatively stable characteristics of the individual, the learner in Beetham and Sharpe's case, and the lecturer for Ecclesfield et al. Both high level characteristics can drive or motivate the development of lower level skills and practices. For Sharpe and Beetham, a learner's self belief can motivate their willingness to learn new practices and skills. For Ecclesfield et al., a practitioner's enquiring mind will drive them to overcome the challenges associated with using a new technology.

Ecclesfield et al. (2012) argue that the normalising of use of technology into one's practice and successful adoption is evidenced by its invisibility so that only new or troublesome or unsatisfactory technologies remain open to view. Successful practices, where technologies are embedded into "artfully constructed student-centred learning experiences" (Ecclesfield et al., 2012, p.50-51) was not discussed by many lecturers, in that it is part of what they do and thus is not considered extraordinary. For instance, only ten (of the eight hundred and fifteen responses) in Ecclesfield et al.'s study mentioned use of word processing a skill that is so familiar it is now worthy of comment (2012, p.50) and likewise with the use of the institutional VLE (2012, p.51).

The notion of normalising practices involving technology into our life has been conceptualised by David White in his *Digital Visitors and Digital Residents Principle* (2009). White identifies two contrasting approaches towards the web which are not based on the learner's skill or their age but to do with other cultural issues and in particular related to an individual's motivations. He characterises 'Visitors' as being goal orientated in terms of their engagement with the web; they go online and do not leave a trace. He contrasts 'Visitors' with the 'Resident' who lives out a form of their life online. There are other aspects to the Visitor/Resident's characteristics, such as their attitude to privacy, their skills and experience of branding of one's self online, their understanding of online space and how it relates to off-line relationships. Although the 'Visitor' may have good technological skills, the way that they approach being online is different as they are more goal orientated. It is worth noting that Visitor/Resident orientation is related to context rather than an absolute that is one can be a visitor in one context (personal) and resident in another, for example one's work persona. White (2009) introduces the notion of 'Post Digital space' where the issues of technology adoption and use are not in relation to functionality of the technology or the skills to operate it, but instead the important focus is on the socio-cultural issues in terms of motivations, orientation towards and conceptions of online tools/spaces.

There are similarities between Ecclesfield et al.'s (2012) notion of normalisation of practice, White's (2009) notion of Post Digital and the way that Activity Theory has been used to understand elearning practices. Kaptelin and Nardi (2006) have conceptualised Activity Theory as a hierarchy with three levels; activity, actions and operations, see Figure 8.3. They consider that these levels reflect the way that people think about the activities that they engage in. Hence at the uppermost level, the activity provides a motive which may well be something that we are not conscious of, whereas a goal is more immediate in our consciousness. At the lowest level are operations which are "routine process providing an adjustment of an action to the ongoing situation" (2006, p.62). Examples cited by Kapetelin and Nardi (2006) are the unconscious way that people move through a crowd without colliding; the goal is to get to a particular place but the operation of weaving is automatic. A conscious action can transform into an unconscious operation, for instance when learning to drive the operation of the pedals becomes automatic with practice.
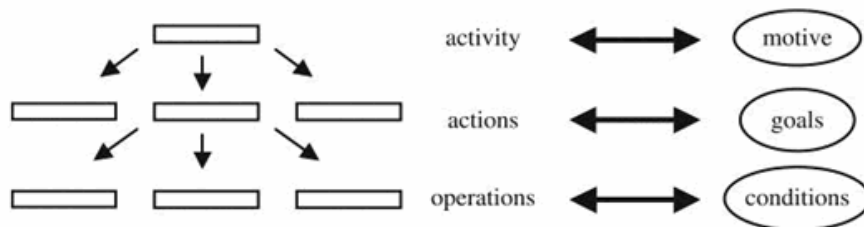
Figure 8.3 Diagram showing the hierarchical structure of an activity (Source: Kaptelinin and Nardi, 2006, p.64)

Price and Oliver (2007) used the levels of an activity to explain how lecturers' practices were changed by the introduction of discussion boards. They noticed that lecturers frequently related their new online practice to their familiar face-to-face teaching practices but Price and Oliver (2007) question the extent to which this is an accurate description of practice. They suggest that once the new operations are mastered, they become automatic and indeed invisible. Hence tutors who have reached a level of mastery of the operations involved in tutoring online consider the two forms basically as the same and see "no real difference with their teaching face-to-face, because they will become unaware of the majority of the ways in which their practices are different" (2007, p.24). They suggest that this is because the action of tutoring online remains the same, at the uppermost of level that of motive, but is very different at level of actions for example looking for signs of non-participation is very different online compared to face-to-face. In addition, at level of the operation, the role of tutor is entirely different online to face-to-face; online tutors need to monitor the statistics provided by Blackboard to see who is contributing is entirely different from glancing round room to gauge students' attendance and interest.

The preceding discussion has drawn parallels between Ecclesfield et al.'s (2012) normalisation of practice, White's (2011) notion of Post Digital and Kaptin and Nardi's (2006) use of Activity Theory. Central to all these theorisations is the idea that skills become routinised and automatic when familiar. Awareness of this notion is important when exploring the skills, practices and attributes in relation to the digital ways of working because it suggests the importance of focussing on lecturers' beliefs about the value of a technology and about its role in teaching and learning, rather than the mechanics of learning to use a particular tool.

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My study

The node 'knowledge and skill' was used to code interview data. There were also several of
the tensions in the Tensions Exercise (see Chapter 3) which directed lecturers to comment
on their knowledge and skills:

- Concern over my technical skills;

- My technological skills are less good than some of my students;

- I need a better knowledge of how to use technology within my teaching;

- I need better skills of enquiry into web based information sources.

In addition the prompt:

- I am concerned about further erosion of my personal and professional boundaries

provided a rich set of data to interrogate notions of access to technology (in its broadest
sense).

The questions did not directly ask lecturers to identify the skills that they thought necessary
for teaching with Web 2.0 tools, however this was implicit in their replies. The node 'skills
and knowledge' and was analysed by reading and rereading. A lot of data was coded 'skills
and knowledge', over 7500 words coded compared to other nodes of 'identity' at 2224 and
'role' at 4072. The data in the node consisted of discussion of the skills and practices of
online tutoring, what makes them similar or different from face-to-face skills and practices,
how they were learnt, and the way that they were learnt. The node conflated the term 'skill'
and the term 'practice', that is, the application of a skill to a teaching and learning task. The
analysis has sought to remedy this conflation by differentiating the terms in the discussion in
this chapter. Although the data was re-examined in the light of the adoption of Sharpe and
Beetham's (2010) digital literacies framework only partial re-coding took place. This involved
re-reading the data coded to 'skills' in order to distinguish the way that the terms 'skills' and
'practices' that have been used within this analysis and in its presentation in the thesis.

The data did not reveal a coherent picture of the lecturers' responses. There were six
participants for whom no data was coded as 'skills and knowledge' in that, beyond the direct
questions about skills (How have you learnt the skills technical skills involved in using this
technology in teaching? and How have you learnt the pedagogical skills of using this
technology in teaching?) they did not directly refer to 'skills and knowledge' in the other parts

of the interview. These people were, in some, but not all cases, tutors with more experience of using the web in their teaching. It is tempting to point to a causal relationship between the length of lecturers' web use and the extent to which lecturers had assimilated skills into their repertoire, the Ecclesfield et al.'s (2012) normalisation of practice. However, there were other experienced tutors who talked the most about the skills and practices involved in online tutoring. These people were clearly able, and wanted to unpack their accumulated skills and practices. There are a number of reasons why some lecturers are likely to be able to articulate aspects of their skills and practices. Firstly, as reflective practitioners (Schön, 1987) they are likely to be able to analyse and reflect on their practices and skills even if they are relatively well normalised into their practice. In addition, for many tutors the skills were still being honed and developed even though they might be experienced practitioners. Secondly, some of the tutors had a specific role within their faculties to lead others in developing their teaching with online tools. Thus, they are likely to have spent time analysing the nature of the skills and practices and how they might be developed in others. Finally, as Ecclesfield et al. (2012) and White (2009) have noted, technological practices once familiar become routinised and thus not as readily open for scrutiny, so that whereas someone may be a highly competent online facilitator, the things that they do to achieve success in the online learning medium are automatic and routine and taken for granted.

Developing the *Digital Practitioner Framework*

Sharpe and Beetham's (2010) framework for the adoption of students' digital literacies has been applied to the data from this study to propose a model which represents lecturers' development. The following discussion explores Sharpe and Beetham's (2010) framework's four levels, starting with the top level, and considers the extent to which the model can be applied to lecturers' attributes, practices, skills and access.

Attribute level

The top level describes the attributes, the more stable aspects of their personality, which enable lecturers to make use of their skills and practices to design and deliver learning activities which make use of technology. Many of my sample of early adopters felt connected and committed to ways of working using digital tools. They gravitated to these ways of working and they are the 'norms' of their practice. Those with most exposure to the tools felt this most strongly:

> For me it just feels normal. I don't think I could teach if I went to another institution somewhere else where everything was chalk and talk. I think I'd die a death now because I'm so ingrained with it. [James]

Other lecturers also illustrate the way that new ways of working are assimilated into their beliefs and ways of operating. Sue when asked why she had decided to adopt an online tool said:

> I didn't think of not doing. [Sue]

Similarly, Catherine also believes in their value to the extent that she always decides to use new tools whenever she is designing for learning:

> I'm tempted to use new methods where a new method would be possible. No, I always do. [Catherine]

James, Sue and Catherine show that digital practices become normal, rather than exceptional, once they are part of the practitioner's repertoire. This assimilation of practices into a sense of being resonates with the ideas of Ecclesfield et al.'s (2012) normalising of digital practices, David White's (2009) notions of Post Digital, and the way that the subordinate aspects of an activity are rendered invisible in the Activity Theory. These teachers make use of technological tools without considering them to be exceptional or extraordinary. Sharpe and Beetham (2010) identify attributes of the digitally confident learner and Ecclesfield et al. (2012, p.49) talk about the digital practitioner as being confident in their use of technology. This assimilation of a practice into one's belief system reflects an ontological orientation towards technology which is notable and different from merely identifying a 'skill set' related to technological competencies. Given the normalisation of technological tools into teacher's practices, this suggests that the focus, when developing lecturers' TEL practices, should be on their attitudes and beliefs about technology and its value to support the teaching and learning process.

Practice level

At the 'practice level' lecturers talked about what they did with the technological tools in terms of how they worked to support teaching and learning. The early adopters in my study demonstrated a wealth of expertise in the complexity of the online learning process and of their role as designers and facilitators of online learning. This included an understanding of design of online learning activities, of management of the learning process both at the level of the activity, the group and for individual students. There is much literature which focuses on the nature of teaching in the online environment (see for example Salmon, 2002; MacDonald, 2008.) Rather than examine the types of online design and facilitation

practices, instead this section will theorise the value of seeing these practices as a new form of teaching knowledge.

It is a common adage to focus on the pedagogy rather than the technology and one that was clearly evident in the beliefs and behaviours of the lecturers in this study:

> I think that is the key to any of this technology is that you should only use it if you can see a clear benefit to the students and that is why sometimes I've been a bit slower putting new things in because I've waited until they were ready developed or I was ready or the module was ready. [Rachel]

Emily illustrates this when she reflects and analyses the value of a blog tool which her students used to embed a range of media (e.g. images and video) for their assignment. Emily's concern is that students are presenting material effectively but what they are failing to do is to engage on a more analytical level with the materials that they have selected. The focus for Emily, as with the other lecturers, is how she uses the technology to support good quality teaching and learning:

> A lot of them made their blogs look quite nice and pretty and they explained a concept and then there was a YouTube clip of someone talking about that concept so they are using it in an illustrative purpose, and some of them did that quite successfully, but I don't think any of them actually made that leap of saying this YouTube is 3 minutes long and it talks about this issues and then pulled out that did the evaluation on that. [Emily]

Mishra and Koehler (2006) note that it is necessary for teachers to have new forms of knowledge that is knowledge of how the technology interacts with the content and pedagogy in order to effectively integrate technology into their classroom practices. They argue that it is inappropriate to separate technological skills from the way that they impact on both the content knowledge (what is going to be taught) and the pedagogical knowledge (how it is going to be taught). Figure 8.4 illustrates the intersections between the types of knowledge that is suggested by Mishra and Koehler (2006). The centre of the Venn diagram is the technological, pedagogical and content knowledge (TPCK). Mishra and Koehler (2006) suggest that all three types of knowledge, and knowledge of how they relate to one another, are necessary in order to effectively integrate of technology into learning. Kennedy and Lefevre (2009), when discussing the TPCK model, suggest that teachers need all three forms of distinct knowledge (content, pedagogical and technological) as well as to understand the way these three components interact with one another:

> a teacher capable of negotiating these relationships represents a form of expertise different from, and greater than, the knowledge of a disciplinary expert (say a mathematician or a historian), a technology expert (a computer scientist) and a pedagogical expert (an experienced educator). Effective technology integration for

pedagogy around specific subject matter requires developing sensitivity to the dynamic relationship between all three components. (2009, np)
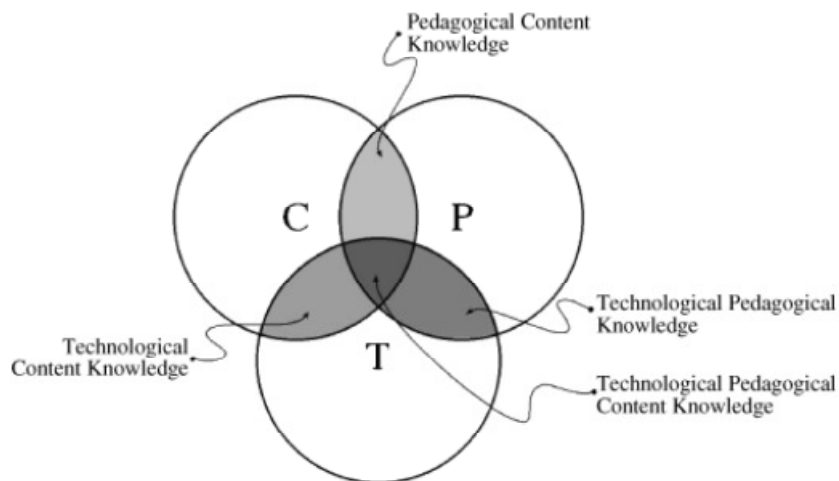
Figure 8.4 Pedagogical Technological Content Knowledge. The Three Circles, Content, Pedagogy, and Technology, Overlap to Lead to Four More Kinds of Interrelated Knowledge (Source: Mishra and Koehler, 2006, p.1025)

My analysis supports the TPCK model and illustrates that lecturers need to have quite detailed knowledge of the technologies in order to support effective teaching and learning. Yet it is the way that the technology interacts with the content and the pedagogy that is critical. The inter-relatedness of this technical, content and pedagogical knowledge has also been identified by Vogel (2010, p.14) who says "This discrete need [for technological understanding] challenges the prevailing espoused theory that the technicalities should be subordinated to educational concerns."

Thus at the practice level, lecturers are seen to be debating the complexity of their learning design required to engage and deliver high quality learning activities for their students. Practices are being developed all the time through lecturers' growing experiences of teaching using these tools and of exploring the issues that arise. Several lecturers commented that the process of the interview had increased their understanding of teaching practices:

> You've made me think of lots and lots of things that I hadn't considered so it has been a very useful exercise for me. [Wendy]

I consider our discussion very useful, because you have given me some new perspectives about using these web tools and some things I didn't consider when I was encouraging my students to look on the internet. I will be more careful when I'm guiding them how to use the internet. [Crista]

The comments indicate that there may be the unknown unknowns in the tutors' understanding of Technology Enhanced Learning (TEL) practices. There are limits on what people currently understand. However, what is evident here, and is explored further in Chapter 9, *Developing as a Digital Practitioner,* are colleagues showing a lively interest in refining and developing their teaching practices.

Skills Level

The 'skills level' of Sharpe and Beetham's (2010) framework is characterised by how students developing their technical, information, communication and learning skills. For tutors, skills include understanding of the affordances of particular Web 2.0 tools, how to set them up to be robust and reliable, and how to make best use of them in the learning context. Examples of the technological skills which were evident in the data were:

- Settings on a blog tool to make it private or public;

- How to control privacy on a blog or on a social network environment (Facebook);

- Awareness of the password requirements of a wiki tool;

- Awareness of the resource consumption of certain programmes;

- Awareness of the limitations of one implementation of a tool over another e.g. Campus Pack blog over Wordpress blog;

- How to make public parts of an eportfolio;

- The trade off between quality and speed of production of video;

- Skills of getting good sound quality on video;

- Knowledge about video formats and converters.

These skills illustrate a deep vein of knowledge surrounding the technological tools that lecturers are using and how to use them to gain the affect they need in their teaching practices. The following quote exemplifies the subtle tradeoffs between the choices of how they use particular facets of the technology (in this case the quality of the video and the

urgency to get the video released to students) that lecturers may need to make in the design of the learning process. In this example James is debating how he uses video to support his teaching. He argues that it is the ability to create video 'on the fly' that is relevant to the students because they were in the class that makes it the appropriate choice of tool in his context. What is evident in the quote is the inter-relation between the lecturer's technical skills in video and the way that he uses this knowledge to optimise the learning experience for his students:

> It is not about the quality it is about the urgency to get the video out there... I also believe that if you do it there and then they remember that when it occurred... It also shows that, one thing you never find on videos normally is that sort of two way debate and discussion often when we are videotaping. We do that technique where the students are asking questions... the problem of video based technology, and I've looked into a lot of what others have produced, is that it is not personal to you and it is not done in a way that is going to help their learning so you can buy off the shelf video on physiotherapy but it is very chalk and talk you know whereas our stuff is off the wall and it comes about because they ask a question about vertical deficiency[12], and I say let's do it now and we have a portable video camera with us and it acts as a good reminder to them. [James]

The vast majority of lecturers in my sample felt adequately technically skilled for the role they needed to do. Many of them commented that although their skills were less good than their students but this did not bother them. They discussed a variety of techniques for managing deficiencies in their skills. Examples quoted here are typical and include being open and honest about their role as teachers not designers, developing their skills through exploration and seeking out guidance and through developing their esteem with their students in terms of other aspects of their role:

> I think it is important that we have to make our positions clear, that we are not practising designers and technologists on a regular basis. [Adrian]

> If [there is] something I don't understand I'm going and I'm finding out. I'm not getting panicky or backing down. [Crista]

> My technological skills [are less good than my students] yes definitely but it isn't important to me least important. I don't think it matters as long as you build up some collaborative trusting relationship with them. If they show you something it is really good. [Catherine]

One colleague was aware of her limited technical skill and found it worrying, not in terms of her self esteem, but in relation to being able to support her students and to handling the

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[12] A technical term used in physiotherapy

technology. In addition, this colleague expressed anxiety related to having, what she feels to be, an incomplete understanding of the technological tool:

> I only got a very superficial surface learning of how this thing works and as an academic you don't feel confident with that superficial learning and I want a deeper learning of how it all works. [Emily]

Perhaps not surprisingly given the sample of early adopters, technical skills were not considered an area of concern for the vast majority, however this single voice of dissent hints at the potential for the majority who are not using the technology and their reluctance so to do.

The focus in this section has been on technical skills, but tension 27 explored lecturers' skills in relation to skills of enquiry. Universally, lecturers responded that they felt adequately skilled in this regard. This finding, of universal confidence in lecturers' academic literacy skill is interesting and noteworthy, but beyond the scope of this study to develop further.

Just as with practices, the data is limited by the limitations of lecturers' knowledge, 'the unknown unknowns'. Thus, colleagues are not always in a position to comment on their lack of skills. However, what my study reveals is that, almost exclusively, these tutors feel sufficiently skilled in terms of their technical skills to do their job adequately.

Access Level

In Sharpe and Beetham's (2010) learner focussed framework the access level covers students' access to devices, technologies, resources and services. It includes aspects of ownership of devices, the accessibility of the tools learning and issues related to time and time management. Data related was gathered from the Tensions Exercise, which elicited a lot of discussion of how colleagues accessed technology and under the prompts;

- I fear the boundary between my personal and professional space and time will be further eroded through using these tools;

- More teacher time is required to run a session;

- Time consuming for me to learn to use new tools.

Lecturers also had opportunity to comment on issues of access, if they felt it relevant, in the open ended question at the end of the interview.

Lecturers' responses show that access to computers/devices and to the online world is not a significant concern for them. No one mentioned limitations of access either in work or at

home. One tutor commented that she had only just got broadband access at home, but for the others there was an assumption that access to devices connected to the internet was there when they needed it. A range of devices were used for keeping in contact with University business including smart phones, lap tops and tablet devices. No one commented on the cost of purchasing equipment or of maintaining their internet connection and one might infer that they did not resent the costs associated with access. However, the issues of time management and personal and professional are live ones for some tutors. This issue has two aspects: firstly in terms of the time investment to learn the new tools, and secondly the issues of managing time and personal and professional boundaries that emerge through use of Web 2.0 tools.

Access level: time and investment in learning new skills

Most lecturers referred to learning new skills as an investment. They spoke about recognising that there was an investment needed which pays off, either in terms of saving time later, or in terms of improved teaching and learning opportunities for their students. James sums up both succinctly:

> I actually use them because one, I think they work, but two, in a lot of ways they save my time. [James]

Likewise, both Abigail and Emily support this idea of investing time in order to deliver improved experiences for their students which drives them to learn the new skills:

> Then every year I would keep some of the good ones and delete the content and create a blank version. It took a day or so to do that. I had to put time aside... I don't know if it saves time but it enhances the module. Because... it just engages the students more... I thought it is worth me setting half a day just to look at if this is a goer or not. When I thought it was [a goer], I had ideas about how it could be used. I thought it is worth spending a couple of days just getting all this set up. [Abigail]

> I think it is a bit like learning to drive. It takes some time and effort to learn to drive but then you can do it is a time saver, apart from when the car breaks down. [Emily]

Access level: new ways of working

Many lecturers either actively welcome new ways of working that web tools enable or accepted it as a necessary aspect of their working lives:

> I think it [the use of Web 2 tools] will but I've accepted that [the blurring of boundaries]. [Jennifer]

> To me I just don't care, if I'm on the computer of an evening doing some reading for my PhD or doing a social forum and it [an email] is from a student, I'll answer it because it's there. [Stuart]

So there is a bit of boundary erosion due to technology but I find it helps because I can quickly reply and it means that I don't have to do that when I come in, I can just keep an eye on what's going on. I don't spend too much time. I just a quick look and reply to a student. It makes things easier and you can get more done. [Abigail]

Others identified particular strategies that they use to manage those boundaries and the expectations of their students. These included not accepting students as friends in social media and giving students clear guidance in terms of when and what they can expect of them online:

I'm quite boundaried in my use of Web 2 technologies to the point that I won't accept students' requests to be friends on Facebook... You have to think it through and you have to set the boundaries, and you have to set up the expectation around engaging with this technology with the clear message that you as a tutor will be investing this much time in engaging with students' work, whether that's saying I'll be online Monday mornings 10 until 11 or I'm going to come in and do a summary of issues that have come up, or I'm going to blog about some of the things that you've been talking about… The students know what to expect from you and you are quite clear about how that fits into your working week. [Richard]

Others had developed practical ways of demarking their lives:

I know how to switch it off. [Claudia]

I don't use my lap-top at home. I do use my iPad but I choose which bits I want to do. I don't let my work life dictate to me at home... I've got better at that. [Catherine]

However amongst this overwhelming positive picture of staff investing and managing their time, there were other examples of colleagues who experienced this investment as a challenge in their working lives:

There have been times when I've felt frustrated and it does all feel like a lot of hard work and you don't really know why you took it on. You've created all this extra work for yourself and it is not that I'm work-shy or anything it is just too much to do? The new system Elluminate which is going to enable us to do online tutorials. The trouble is time. [Claire]

The main obstacle to that is volume of work. I haven't got the space. I feel like I haven't got the space to take time out to learn a new skill properly and that is a real, a significant and real hindrance... It is not that I don't want to put the time in to learn the new tools. I would be very interested to and I'd like to spend more time learning the tools. It is just that my timetable is already bursting at the seams. So what gives? [Emily]

Thus the picture is mixed, with some lecturers feeling in control of their lives through their use of technology, and some feeling under some additional pressures. Overall, the balance is definitely with the former group in terms of the volume of the responses.

Framework for a digital practitioner

The preceding discussion has shown that Sharpe and Beetham's (2010) framework for developing students' digital literacies can be successfully applied to understand lecturers and the access, skills, practices and attributes of the digital practitioner. Figure 8.5 summarises the characteristics of the digital practitioner based on the findings from my study.

I am
confident in my attitude to TEL;
willing to experiment with technology and how it can be used in teaching and learning;
able to balance risks of change with its potential.

I design learning activities to suit my students' needs using TEL as appropriate.
I facilitate learning using appropriate technological tools.
I explore the capabilities of technology.
I behave ethically in contexts where the digital is blurring boundaries.

I can:
evaluate the affordances of TEL tools to suit my needs;
manage the blurring of boundaries between private and work time.

I have access to:
networked devices and applications;
media devices;
people who can support me in using technology.
I have allocated time to:
experiment and evaluate with new technologies.

Figure 8.5 The starting point for the *Digital Practitioner Framework* after JISC (2011, np)

Chapter conclusions

This chapter has focussed on the early adopters' skills and practices. The notion underpinning my study is that by understanding the early adopters we can derive a model which will illuminate the journey that the others, the early and late majority, will need to travel if they are to adopt TEL practices. The early and late majority are those who are less committed to and by the radical potential of the tools discussed in Chapter 4 and 5 (*Web 2.0*

tools in practice and *Web 2.0 pedagogies in practice*)*,* less willing to undertake the emotional journey described in Chapter 6 and less likely to see a match between their conception of teaching and the affordances of Web 2.0 tools Chapter 7, *Identity, role and change*.

In this chapter parallels were drawn between ideas from Ecclesfield et al.'s (2012) of normalisation of practice, White's (2009) notions of Post Digital and Kaptin and Nardi's (2006) interpretation of Activity Theory in that, once familiar skills become routinised, they are less visible. As Ecclesfield et al. (2012, p.51) comment "perhaps only new or troublesome or unsatisfactory technologies with little immediate application to practice remain on the surface and open to view" and that the technologies with the greatest impact may well be related to that which is invisible. The chapter argued that given the normalisation of technological tools into teacher's practices, the focus when developing lecturers' TEL practices should be on their attitudes and beliefs about technology and its value to support the teaching and learning process. There were similarities too, between Ecclesfield et al.'s (2012) notions of the enquiring mind and Sharpe and Beetham's (2010) ideas of the attributes as the more stable aspects of personality that drive uptake. This theme, of attitudes driving adoption of new skills and practices, is returned to in Chapter 9, *Developing as a Digital Practitioner.*

The chapter has shown that Sharpe and Beetham's (2010) framework for the development of digital literacies can be used to model lecturers' adoption of digital ways of teaching and learning approaches and that the same hierarchical levels of attributes, practices, skills and access apply. The *Digital Practitioner Framework*, Figure 8.5, was proposed as a useful way of understanding the findings related to first part of Aim 4:

- to examine the skills and practices needed and how they are acquired.

In particular, the chapter has discussed how attributes, the relatively stable aspects of personality, were evidenced. Many of my sample felt very connected to ways of working using digital tools and those with most exposure to the tools felt this most strongly. Practices, that is the application of skills to supporting teaching and learning, were highly contextualised. Lecturers were keen to develop their understanding of how to make best use of Web 2.0 tools. This is discussed further in Chapter 9, *Developing as a Digital Practitioner*. Lecturers had, in general, a well informed and detailed knowledge of the tools. However, they are much more concerned with how these tools can be used to support students' learning. They generally felt skilled to do their job in terms of their technological and digital literacy skills and were not particularly concerned if their technical skills were less good than their students as they had developed a number of ways of managing this

situation.

Access, in terms of equipment or connectivity, did not appear to be a concern for these lecturers, however, management of time and personal and professional boundaries was more of an issue for some. Some welcomed the blurring of boundaries between home and work life that new technologies tend to bring, but for others this was a 'live' issue. An important finding here is that the early adopters generally see the time that they spend learning to use new tools as an investment driven by the desire to serve their students better.

The next chapter considers how skills and practices are learnt and the way that the institutional context frames this process.

Chapter 9 Developing as a Digital Practitioner

Introduction to the chapter

In Chapter 8 *The Digital Practitioner Framework,* Figure 8.5, was proposed to depict a hierarchical relationship between the digital practitioner's access, skills, practices and attributes. The framework was developed to understand the characteristics of early adopters and to model what the confident digital practitioner 'looks like'. This, the final findings chapter, develops, deepens and refines this framework.

The chapter addresses two of the study's aims:

- to consider how lecturers are supported and/or hindered by the institutional context in which they work in terms of innovating in their teaching practices. (Aim 2)

- to examine the skills needed and how these are acquired when teaching using with Web 2.0 tools. (Aim 4)

The chapter starts by discussing the institutional context in terms of its policies and their implementation that relate to elearning. It considers the institutional culture and its support structures. The chapter also refines the *Digital Practitioner Framework* to show how skills, practices and attributes are acquired and what drives practitioners towards adoption of Technology Enhanced Learning (TEL) practices.

Putting boundaries around the scope of this chapter has been challenging. There are multiple influences that impact on lecturers' development including their department, institutional and national contexts (Zhao and Frank, 2003; Land, 2004; Bronfenbrenner, 2005). Likewise the literature on change and change management as it applies to TEL contexts is extensive and pertinent (see for example Kenny, 2003; Land, 2004; Bates, 2005). However, as my study focused on 'bottom up' adoption, it side-steps discussing the challenges that institutions experience in trying to encourage uptake of TEL.

My study

There were three interview questions directly related to this chapter:

- How have you learnt the technical skills involved in using this technology in teaching?
- How have you learnt the pedagogical skills of using this technology in teaching?

- In what ways has the institution supported or hindered your work with technology?

In addition, the open question at the end of the interview elicited views about institutional and cultural issues. These direct questions only yielded around a third of the codes within the nodes 'skills', 'processes', 'support', 'culture' and 'colleagues'. The remaining two thirds came from the other parts of the interview, indicating that these issues permeate the way that lecturers talk about their work.

Institutional context

McNay (1995, p.105) suggests a model showing four cultures within universities: collegiums, bureaucracy, corporation and enterprise, which he describes on a quadrant related to policy definition and the control over its implementation, see Figure 9.1. McNay (1995) comments that all four cultures are likely to co-exist within the same institution and these cultures reflecting the issue under consideration, the leadership style, the external drivers, traditions and mission of the organisation. The University in my study has a loosely defined elearning strategy and loose approach to its policy implementation. Thus the institution would be an example of a collegium type of culture in regards to elearning (although in other regards it has a much more tightly defined approach to policy and its implementation). This loosely defined strategy and implementation leave a space that the early adopters have filled, working, largely in isolation, without significant institutional support and recognition. This is not unusual: McDonald et al. (2009, p.22) report that policy and strategy in the area of TEL are often seen to lag behind practice.

Policy definition

loose

collegium | bureaucracy

Control of implementation

loose ———————————————— tight

enterprise | corporation
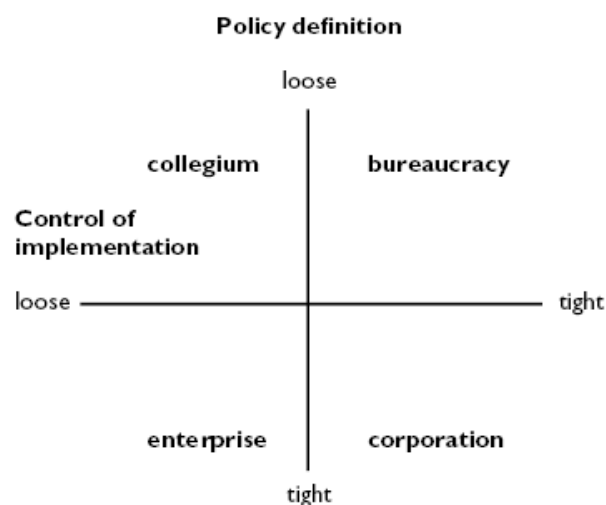
tight

Figure 9.1 McNay's model of universities as organisations (Source: McNay,1995, p.105)

Awareness of the institutional policy agenda was evident in lecturers' responses, although their responses were diverse. Some wanted more tightly defined policies and implementation strategies:

> I just think that this place is all talk and no action [in relation to the institutional policies supporting open and distance learning]. [Claudia]

> They want people to do things but there is nothing [to support or enforce change]... They've made it a rule in our faculty that everybody has to submit through Turnitin, they then went out and bought some large printers so that members of staff could print off and mark by hand even though they had been submitted electronically. Why not make them mark digitally? [Stuart]

However, others wanted to be 'left alone' without institutional involvement:

> I didn't go and ask anyone's permission... I use my own [server] as a test bed...[I] can actually find whizzy ways around things without kicking against the wall [of institutionally provided tools and structures]. [Jack]

This diversity, between those wanting to see tighter policies and those happy with the institution's laissez faire approach, appears to reflect the individual in a number of ways. Some academics see elearning developments as a possibility for their personal career development and this was clearly evident in Claudia's and Stuart's responses elsewhere in the interview. In addition, some people are more institutionally focussed in terms of their concern for the uniformity and quality of the student experience.

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The collegiate and supportive nature of the institution's culture was evident in most people's responses. Almost everyone commented on the range of support that they had received from individuals across the University, including those whose role it is to provide this support, for instance the learning technology advisers and academic developers, but also lecturers within their faculties and across the University. However on the negative side, several people commented that they experienced technicians as being too focussed on technology and not concerned with its impact on the teaching and learning outcomes.

Allied to the loosely defined policy and implementation was concern that there was limited senior management interest in their TEL work. Only two lecturers referred to awareness or direction coming from senior management (either senior management within their discipline area or within the University) although these two lecturers particularly valued this attention and support from by their managers. One lecturer commented particularly on her manager's lack of respect for her innovations using TEL practices and noted that her publications on TEL subjects were not valued as part of her scholarly output within her faculty. Indeed, she commented that the workload involved in running an online module was not understood to be commensurate with that of face-to-face lecturing. This was also reflected in the lack of acknowledgement that some lecturers felt towards the effort they were putting into changing their teaching and learning:

> I always feel that my decision to do that adds to my workload and adds to my stress levels and I'm not being prompted, and I'm not being prodded and I'm not being pushed to do this. (Richard)

In Chapter 7, *Identity, role and change,* the notion of the '*coerced employee'* was identified in some aspects of lecturers' responses. However if these quotes are examined again, the nature and extent of the institution's expectation of technology use is rather limited and does not relate to the affordances of Web 2.0 tool (that is the collaboration and participation potential which when harnessed can lead to more active student-centred forms of learning). Instead the institutional pressure relates to merely having a presence on the institutional VLE for convenience rather than for its pedagogic value:

> it feels that we are being pushed towards it [use of online learning] because it is more convenient but I am not convinced that it engenders better learning. [James]

> Putting our notes up on Blackboard - giving lecture notes in their entirety - it enables us to get the materials over to them very quickly. They take the stuff home and it discourages them from making their own notes and doing background reading. All this self learning that is supposed to happen is discouraged by putting them on Blackboard. [Rebecca]

The tension for institutions to get a balance between a tightly defined 'top down strategy' and a more fluid 'bottom up' innovation is a key issue highlighted in the literature and one that reflects other aspects of the institution and its management and culture (Boud, 1999; Lisewski, 2004; Salmon, 2005; Sharpe et al., 2006; Manches et al., 2010; Masterman and Manton, 2011). Luckin et al. (2006) demonstrate the necessity of having both 'top down' direction allied with people with key roles within the organisation who can support the intervention at key times in their paper on implementing a VLE at a research intensive university:

> The initiative was incepted 'bottom up' by Tom Browne and Simon Shurville and then managed 'top down' by Rose Luckin. The approach should interest sociologists of academia because it involved an alliance between 'hidden' workers and leaders. (2006, p.3)

Normative discourses

As early adopters of TEL, the lecturers in my study were often seen as innovators by others in the institution. Tutors commented on this quite frequently in relation to being different to those around them:

> I think that the gap is widening between the staff that are making their modules look new fresh and exciting or interesting (I think exciting might not be the word but you know) that there is a lot effort there and they are looking good and then you've got the others that are still doing very much… that the difference between them is becoming quite marked. [Rachel]

> this is one of my biggest frustrations that I've had is tutors who put their PowerPoint up and say that is a resource for the student. [Stuart]

> Problem based learning it is not very popular in the faculty some of my colleagues prefer just to chalk and talk write on the board, not even Blackboard. [Crista]

The ways that lecturers responded to being outside the normal ways of operating varied, some actively trying to challenge the dominant norms within their area. (These responses were sometimes accompanied by some quite extreme emotions of frustration, anger, humiliation which are discussed in Chapter 6, *The emotional journey*).

> I guess within the team, I do try and push them towards technological ideas more and having demonstrated them they have been adopted. [Stuart]

> I suggested to other tutors to use discussion boards but they didn't want to. I don't have the fight within me. [Emily]

> When I am asking an academic staff member to change what they do, or suggesting that they change what they do, I'm actually at the heart of it saying what they are going is inadequate. And that's why it is so hard. [Claudia]

The power of the dominant ways of operating to constrain innovation and to shape practice is seen in Emily's views below. In this example she is arguing that she would be willing to use a new social media tool (Facebook) if it was considered normal practice within the department:

> if there was a culture of us within the University of us all having a Facebook page for our own courses and I'd been indoctrinated into that culture, probably I'd have gone along with it, but it isn't something that I would necessary at the moment choose to do. [Emily]

Ellis (2010, np) has described normative discourse as "a way of thinking and talking about something whereby it is understood to be true that something is normal" and notes that lecturing is the quintessential example of normative discourse being embodied in "our job titles, our institutional architecture, our workload models, our quality assurance strategies, our timetabling software and countless other systems and principles that define and demarcate our working lives." Similarly, Ertmer (2005, p.36) argues that cultural norms, the "familiar images of what is proper and possible in classroom settings", guide teachers' practices rather than instructional theories. My research provides further evidence of the importance of recognising the power of normative discourses and the personal challenge that is involved in working against these.

Academic developer roles

Roles associated with learning technology are relatively new in organisational structures (McDonald et al., 2009). Within this institution the roles that support academic development in relation to learning technologies have mainly been faculty-based learning technologists. During the duration of my research, two roles were established (one newly created and one refocused). Both of these roles have a wide ranging remit to support staff and help to steer the direction of the institution in terms of their use of learning technologies, but one is more technically focussed whilst the other is more pedagogical in its focus. Both provide advice and support on use of learning technologies but neither is sufficiently resourced, given the size of the institution with around 600 full time staff, to allow them to give academics detailed in depth and ongoing support in terms of developing their learning designs.   Lecturers in my study spoke, without exception, positively of these new roles, but three colleagues commented on needing an additional more design focussed support:

> at one particular conference I've med a lady from Teeside who has a developmental role on the Blackboard. She is like an ideas developer so if you throw her ideas she'll develop learning materials. She is a module developer. [Adrian]

> I remember when I first got here I wanted to find my Susie[13]. I wanted to find the woman who had helped me at [previous institution]. I wanted to find that person for me here. I discovered that... she did not exist. [Claudia]

> All these projects are being carried forward by people who believe in them and find their own personal time to deliver them and hopefully reap the rewards from them in terms of positive rewards for their students, but it is a lot of effort and as supportive as the academic team here are we are all trying to do our own things and somebody like that [learning designer] would be great. [Jennifer]

McDonald et al. (2009, p.9) comment on the emerging nature of the learning technologist which is a hybrid role spanning the gap between academics and IT service providers. In addition, Vogel (2010) explored the role of academic developers in relation to TEL and has identified eight conditional success factors for the role. It is beyond the scope of my study to consider the nature of the learning technologist's role further, however, my findings identify the value placed on a range of support, both central and faculty based, and suggest that several colleagues would like to see these roles better resourced.

Revisiting the *Digital Practitioner Framework*

Turning the focus now to the second aim that this the chapter addresses:

- to examine the skills needed and how these are acquired when teaching using with Web 2.0 tools. (Aim 4)

Sharpe and Beetham's (2010) framework for the development of students' digital literacies was introduced in Chapter 8, *The Digital Practitioner Framework,* and was used to conceptualise lecturers' characteristics as digital practitioners. Sharpe and Beetham (2010) placed arrows going up their model showing that experience and appropriation of technologies supports learners to move from access level up the pyramid to skills, practices and attributes levels, see Figure 9.2. Similarly, there is a downward arrow showing that having an identity as a digitally confident learner motivates students to try out new practices, acquire new skills and to purchase new devices and explains the movement down the pyramid. The data from tutors was interrogated to see if similar movement and drivers were evident.

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[13] Susie was the learning designer at Claudia's previous institution.
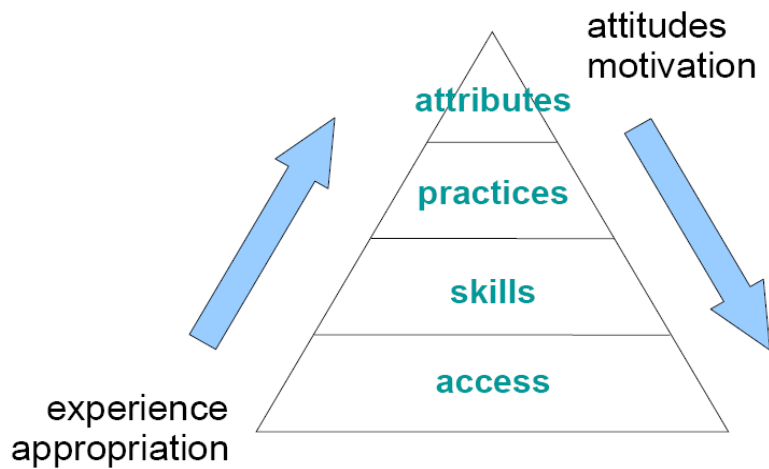
Figure 9.2 Framework for development of students' Digital Literacies (Source: Beetham and Sharpe, 2011, np)

Does access drive uptake? Movement up the pyramid

Most lecturers are not very interested in the technology for its own sake. In many cases they only wanted to use tools when they have a role in supporting their teaching and learning practices. However, they recognise that they need to invest time in order to understand the tools and to assess their potential. They are aware of the time consuming nature of learning to use new tools and that these skills were not stable and thus subject to frequent updating, which then involves a further time commitment from lecturers to update their skills. This led to diffidence in their approach to developing skills. Some lecturers demonstrated a lack of interest in the technology, evidenced in the following quotes:

> I'm using the technology because if I don't I'll get left behind... My engagement with the technology shouldn't be read as a statement of approval. [Emily]

> But there was nothing that drew me in those early stages that made me think I'm going to gain something through going through this learning curve. [Richard]

In the following quote it is evident that Richard is reluctant to learn a new tool for the sake of it, but is aware that it is only through learning the tool that he will be able to assess its value as a tool to help him with another aspect of his work (research);

> I recognise that this is a changing landscape and I'm aware that some people use more Web 2 technologies for research. So for example I've never got into using

Twitter and I know that perhaps I could use it in the context of research and perhaps I'd see a purpose. [Richard]

There was some evidence of tutors who had technological skills from their use of a tool in their personal life and applied this knowledge to develop their teaching practices. Wendy was a regular user of Facebook in her private life and these skills and knowledge led her to decide to use Facebook to support her students:

I've got my own personal Facebook page, but I've also set up Wendy Brown the lecturer profile... I've got two profiles one for my friends and one for this group so I've not got anything personal [on the lecturer profile]. I don't want anyone to see me in my bikini on holiday quite frankly. [Wendy]

However there was one example where an interest in the tools for their own sake was evident. In addition to this curiosity in the technology, though, Catherine was keen to explore the tool and to see how it might be used to support her work:

I'll sort of hear about a new tool, so this morning there was one on Twitter, I can't remember what it's called now, but I've kept a log of it. It's a survey tool that you can embed within any web page and I'm thinking that that would be very useful to me. So someone's mentioned it to me so I'll go off I'll find the web site. I'll sign up and I know I'll figure it out. [Catherine]

What was also clear was that although most lecturers were not particularly interested in the technical skills per se, they often needed to understand the tools in quite a detailed way in order to make appropriate use of them in teaching practices:

I think if I use Grademark again I need to set it up better. I've still got loads and loads of things to learn so initially it is more time consuming, but I don't think it is once you get going with these things. You need to invest a bit of time sometimes. [Rachel]

They've got a new version [or a wiki tool] now it looks very nice but it is a bit more complicated to set up in terms of access for the students, because what I had previously was each team had one user name and password so that was quite easy to organise and set up. The new version each student has an individual password, so it was a bit more complicated to set that up. [Abigail]

We tried to use the Blackboard one [wiki] for art and design students particularly, because I've got textile design and surface design. It was very hard to make it visually strong. They didn't like the fact that it loaded in alphabetical rather than chronological order. [Jennifer]

One of the things that I really liked was that it didn't have to be open to the whole world. It didn't have to be a Facebook where you had to worry about the privacy settings and worry about who was going to walk in. I was able to, not exactly control it, although I could have done, I was able to see what was going on in each group. [Jack]

Lecturers were much more interested in the application of the tools to support teaching and

learning practices than they are to learning technological tools for the sake of it. Typically Rachel comments:

> one thing I am very conscious of is that I don't want to use technology for the sake of what it looks like it is whizzy and exciting. I only use it when I think it benefits them... I think that is the key to any of this technology is that you should only use it if you can see a clear benefit to the students and that is why sometimes I've been a bit slower putting new things in because I waited until they were ready developed or I was ready or the module was ready, because if you put technology in for technology's sake they don't like doing it, but they do like doing it if it serves a purpose. [Rachel]

Hence the pattern of skills and experience driving appropriation did not, generally, appear to be evident in the data. Teachers did not talk about the affordances of the tools with particular interest or awe, instead they focussed on their potential to support teaching and learning. However, there was evidence of people experimenting and trying out tools in their practice to see how they worked:

> Alison suggested that we used that because she'd evaluated it. I was happy to go ahead with that and to take her advice. And that's proved to be true really... I couldn't be more delighted with what they'd achieved. [Jennifer]

> It all started because I went to a lunch time taster session one that John[14] did that was on wikis. He said at that stage a blog would be better than a wiki. So that was the process of making it a blog. [And it was] successful on lots of levels. [Emily]

This analysis has shown that, just as Ermer (2005, p.27) has argued, whilst in general uptake of TEL practices is driven by a lecturers' belief in the value of technology to enhance learning, there are occasions when the successful adoption of a tool can change a teacher's beliefs. This accords with the pattern noted by several researchers that access to technologies does not on its own lead to innovative and student-centered use (Surry and Land, 2000, p.146; Ertmer and Ottenbreit-Leftwich, 2010, p.257). As Ertmer and Ottenbreit-Leftwich (2010) note "Although knowledge of technology is necessary, it is not enough if teachers do not also feel confident using that knowledge to facilitate student learning" (p.261).

Thus the Figure 8.5 has been modified, see Figure 9.3, to add an arrow going up the pyramid, with its colour intensity increasing towards the top of the arrow, to show that, in general, the movement up the pyramid is weak, but that where practices are adopted and are seen to be successful, then these can lead to changes in lecturers' beliefs.

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[14] The faculty Learning Technology Advisor

Experimentation and appropriation

I am
confident in my attitude to TEL;
willing to experiment with technology and how it can be used in teaching and learning;
able to balance risks of change with its potential.

attributes

I design learning activities to suit my students' needs using TEL as appropriate.
I facilitate learning using appropriate technological tools.
I explore the capabilities of technology.
I behave ethically in contexts where the digital is blurring boundaries.

practices

I can:
evaluate the affordances of TEL tools to suit my needs;
manage the blurring of boundaries between private and work time.

skills

I have access to:
networked devices and applications;
media devices;
people who can support me in using technology.
I have allocated time to:
experiment and evaluate with new technologies.

access

Figure 9.3 Developing the *Digital Practitioner Framework* to show weak movement up the pyramid

Do attitudes and motivation drive uptake?
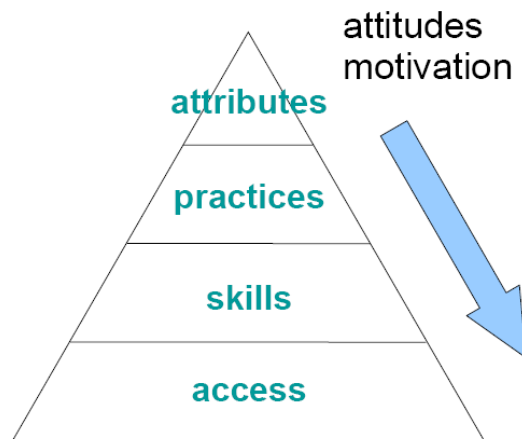
Figure 9.4 Movement down Beetham and Sharpe's model (After Beetham and Sharpe, 2011, np)

This section considers movement down the pyramid, that is, whether attitudes drive the adoption of practices, development of skills and improve access. Sharpe and Beetham (2010) suggest that learners' attributes, their sense of identity with and as a digital scholar, motivate them to acquire new practices, to learn new skills and to improve access. This is depicted in Figure 9.4. It was clear from my study that this applied to lecturers too. There was plenty of evidence that the motivation to acquire skills was driven by a desire to improve a lecturer's teaching and learning practices:

> It [learning to use video] was more through necessity as I recognised that it would be a really good way of doing things. [James]

> I just thought this looks really interesting. I didn't think, "oh, it's going to take [time]". [I think] I'm going to make time for it. Like any other thing that I'm impressed with that is going to be good for the students. [Abigail]

> Because I'm teaching in a new context that has new affordances there is scope to do different things as a teacher that you wouldn't normally do and so you then have to thinking through for yourself is that pedagogically a good decision? Is it ethically a good decision to do it in that way? ... I do it.. for a couple of reasons; one is that I think there might be benefits to teaching and learning and that is a central reason why you do anything isn't it? [Catherine]

One of the lecturers with most experience of TEL, Claudia, expressed her motivation to spend time learning a new tool very directly. Her simple clarity around her motivations gives weight to the notion that one's identity as a confident digital practitioner is a significant motivator for learning new skills and practices:

> it [investing time] doesn't worry me much; I'm quite motivated to do it. [Claudia]

These quotes are typical of the sentiment expressed by the other practitioners. It was evident that colleagues are committed to improving their practice in order to deliver high quality learning for their students. As Jephcote and Salsibury (2009) comment, lecturers place great emphasis on meeting the needs and interests of their students, which they call the "principled ethics of care" (p.971). Hence a key finding for my study is the importance of a lecturer's attributes in driving forward their adoption. The attributes evident in my study included, not just confidence or sense of self efficacy in relation to use of technology, but also a belief in its value. Beliefs give rise to motivation which Masterman and Manton (2011) also found critical to TEL adoption. As they comment "intrinsic motivation and a sense of ownership are key factors in their uptake" (p.227). Likewise, Ertmer and Ottenbreit-Leftwich (2010) argue that self efficacy and a belief in the value of technology are critical factors to the uptake of TEL practices.

The Final *Digital Practitioner Framework*

Figure 9.5 shows the *Digital Practitioner Framework* developed from Figure 9.3 to include a downward arrow showing how motivation and attitudes drive adoption of the lower levels of the framework. It has also been refined to exemplify aspects of the digital practitioner's attributes, practice, skills and access evidenced in the discussion in this chapter.

Experimentation and appropriation

attributes

practices

skills

access

Attitudes and motivation

I am confident in my attitude to TEL; willing to experiment with technology and how it can be used in teaching and learning; able to balance risks of change with its potential; convinced by the radical potential of technology to enhance and transform learning; willing to invest time in exploring and evaluating TEL.	
I design learning activities to suit my students' needs using TEL as appropriate. **I facilitate** learning using appropriate technological tools. **I explore** the capabilities of technology. **I behave** ethically in contexts where the digital media is blurring boundaries. **I evaluate** my practices. **I reflect** on innovations in my practice. **I experiment** with tools in my practice.	
I can: evaluate the affordances of TEL tools to suit my needs; manage the blurring of boundaries between private and work time.	
I have access to: networked devices and applications. media devices. people who can support me in using technology. a network of people with ideas for using technology.	

Figure 9.5 *The Digital Practitioner Framework*

How skills and practices are acquired

Many of the lecturers in the sample had participated in formal accredited learning either focussed on pedagogical skills or on using TEL. These were seen as valuable by all (bar one) of the lecturers in terms of their development. (However it should be noted four of the lecturers had studied on one such an accredited TEL course, for which I am course leader, and this will have had an impact on the way that they answered the questions related to pedagogic and skills development.) Lecturers gave specific examples of how they had used these formal academic courses in a number of ways; to critically examine their own teaching practices, as a source of ideas to try out in practice, and because they provide a structure in which to experiment with their own practice and reflect upon it.

Informal methods were commonly employed by lecturers' in their development too. These included trial and error in terms of exploring the technology and applying it to their teaching, gaining support and advice from more knowledgeable colleagues. Some lecturers also recognised the value of informal networks for support.

Surprisingly, technologically focussed staff development training courses did not feature in anyone's discussion of how they learnt skills or how to apply them. Indeed, a couple of lecturers commented in particular on that courses, such as the European Driving Licence, which address technical competencies decontextualised from their application, were unhelpful in that the skills soon become out of date and lecturers were unsupported in the process of applying them to help their particular context. Ermter and Ottenbreit-Leftwich (2010) agree commenting that developing lecturers' technical skills is unlikely to be successful, in part, because the technology is in a constant state of flux so teachers can feel that they are 'perpetual novices' in their understanding of the tools (p.261).

Lecturers' development as TEL practitioners

The process by which new teaching practices are tried out and trialled has been discussed by a number of writers;

- mimicry trying to ape what others have done (Clegg, 2006, p.95; Ertmer and Ottenbreit-Leftwich, 2010, p.268);

- ventriloquism, adopting a new set of strategies, repertoires and resources without necessarily buying in to them (Winberg, 2008, p.355);

- modelling, applying a theoretical approach to your own teaching practice. (Ertmer and Ottenbreit-Leftwich, 2010);

- vicarious or developing practices through unintended exposure to others' practices (Ertmer, 2005; Ertmer and Ottenbreit-Leftwich, 2010, p.269).

The distinction between the terms mimicry and ventriloquism is fine grained, but profound. Meyer and Land (2005, p.377) use mimicry to suggest not merely copying what others have said, but also the epistemological and ontological shift that is associated with adoption of new knowledge: it involves not just copying or reproducing what others do but also an attempt to understand the new and troublesome knowledge. This contrasts with ventriloquism where new practices are 'tried on' without the commitment to them. However as new practices become more familiar, Winberg (2008, p.355) comments that

"ventriloquation can develop into a revision of the identity narrative" and thus a deeper level of adoption can takes place.

My data showed examples of all of these processes. Particularly noteworthy was the process of mimicry where practices that lecturers had experienced as students, or through teaching with online learning in other contexts, were adapted and used in their own teaching practice.

Mimicry	I am using an example that I learnt from MSc elearning to ask the students to present themselves. It is actually a discussion board in Blackboard. [Crista]
	[In response to how have you learnt pedagogical skills?] Being a student. I've looked at the way that you and Jane have delivered the Saturday schools and I've adopted some of those in the way that I've been delivering my Saturday schools. [Emily]
Ventriloquism	I came across the Gilly Salmon model there [the Open University]. And I also met her at the staff conference and she said just use the model and it does work and it really does work. [Claire]
Modelling	I did a huge amount of work on reflection so I just went out and read about Jenny Moon and all the stuff you do, the classic models. [Sue]
Vicarious	I was inspired by the people who came in and spoke to us a few Saturdays ago but what I'd like to do is create an online forum [Emily]
	The other way I've learnt is through peer observation. I know a lot of people grumble about it but I learn a lot through peer observation and working collaboratively. For example, some teachers may have a little thing that they do and you might think ah what a brilliant idea why didn't I think of that? [Emily]

Table 9.1 Examples from the data of lecturer development mechanisms

Implications of *Digital Practitioner Framework*

The *Digital Practitioner Framework* (Figure 9.5) can be applied to understand how to support lecturers in their development in terms of TEL. The model suggests that it is important to focus on the top level, that of attitudes towards TEL. However the ways that beliefs and attitudes are shaped and developed is more implicit and obscured than the development of skills or practices. As Ertmer (2005, p.30) notes "in general, beliefs are created through a

process of enculturation and social construction; they can be formed by chance, an intense experience or a succession of events". She goes on to argue that beliefs can be informed by positive experiences and that one implication of this is that change is more effective if it occurs in small steps. Here is a key rub, as the challenge of introducing Web 2.0 tools are in many ways not small steps but may involve significant changes to a teacher's practice in that they involve less face-to-face contact, more use of technology and they tend to imply a change in pedagogical model from a didactic approach to a student-centred constructivist one.

It is beyond the scope of this chapter to propose how these processes might be developed in practice, however, Table 9.2, adapted from Ertmer and Ottenbreit-Leftwich (2010) and building on the findings of this study, provides some recommendations for facilitating lecturers' use of web tools.

Chapter conclusions

As with all aspects of professional identity, the institutional context frames the development of practices and identities in relation to TEL. The case study institution, like many other HEIs, has a loosely defined and coupled elearning strategy and this allowed the early adopters particular freedoms in relation to their innovation. Many valued this freedom, although some, particularly those with career ambitions in relation to elearning, wanted to see elearning policy being given a greater emphasis. More importantly, the normative discourse that positions online learning as different from the normal ways of operating within the institution, were seen to curtail digital practitioners in the process of innovating. This was partly as a result of the emotional cost of challenging the norms (identified in Chapter 4, *The emotional journey*) partly due to the challenge of convincing students to change adopt a new pedagogical model, and partly because aspects of the institution's structures and processes did not value or fit with TEL.

Knowledge and Skills	Exposure to and practice with technology uses that directly relate to existing Pedagogical Content Knowledge to encourage adoption and incorporation into current practices
	Support small steps toward teacher change
	Discussions with other lecturers related to how technology tools can be used in specific ways to increase student learning outcomes
	Situated professional development efforts that enable lecturers to learn about technology tools within their own discipline contexts
	Intense professional development experiences, followed by continued support and community discussions
	Opportunities to practice managing technology in the classroom by providing additional help
Self-efficacy	Opportunities to share success stories related to using technology to facilitate student learning, at discipline-based teaching meetings.
	Opportunities to witness other lecturers using technology in their classrooms
	Encouragement/expectation of small changes with technology over extended time period
	Implementation of a culture that encourages and supports experimentation
	Support staff available to ensure initial uses with technology are successful experiences
Pedagogical beliefs	Professional development initiatives that align teacher beliefs (identify lecturers' existing beliefs to help design professional development programs)
	Observations of other lecturers' successful technology practices that are based on new ideas about learning and teaching
Institution/subject culture	Development of shared vision for technology use and definition of 'good' teaching
	Expectations that professional development plans include technology
	Regular meetings to monitor progress in technology professional development
	Participation in professional networks designed to integrate technology into teaching for purposes of facilitating student learning
	Professional development designed to nurture lecturers' roles as professionals and action researchers

Table 9.2 Recommendations for facilitating lecturer adoption of Web 2.0 tools (After Ertmer and Ottenbreit-Letwich, 2010, p.266)

This chapter has applied the *Digital Practitioner Framework,* proposed in Chapter 8, to consider how lecturers become skilled and confident digital practitioners. The model has been refined and developed through the discussion in this chapter and is presented in Figure 9.5. It has been used to show that lecturers are motivated to develop their teaching and learning practices (and to acquire new skills and to improved access) if they have the attributes of the digital practitioner, that is, if they hold beliefs about technology and its value to enhance the learning process, and believe in their own abilities in relation to TEL. The model was also used to show that the opposite was only weakly in evidence, that is, the pattern of skills driving lecturers' appropriation was not, in general, evident, although a successful experience in practice can lead to changed beliefs.

Understanding adoption of technology using the *Digital Practitioner Framework* (Figure 9.5) has implications in terms of how lecturers are supported. My analysis showed that the process by which lecturers adopt technology within their teaching is best supported by focussing on the top level, that of attributes, because this is what drives adoption. Lecturers have a range of influences which have had an impact on their development. These included both formal courses and informal contacts and support mechanisms. The most influential way that lecturers develop was through the process of mimicry, that is, drawing from their direct experience and adopting it, whereas skills based courses did not have a significant impact. This suggests that teaching lecturers about the tools is not likely to lead to uptake, whereas finding ways that lecturers can experience the new methods as a 'student' is likely to be most successful.

The following chapter summarises the ideas discussed in this thesis.

Chapter 10 Conclusions

Rationale for the study

The potential of Web 2.0 tools to transform higher education has been commented upon by a number of writers: Conole and Alevizou (2010) have discussed the wide ranging potential of Web 2.0 tools to support more active forms of learning in higher education using constructivist principles. The Committee of Enquiry into Changing Learning Experience (CLEX) have argued that constructivist principles should be more widely adopted within higher education (2009, p.36). However, the use of Web 2.0 in higher education teaching and learning practices is in its infancy, as Armstrong and Franklin (2008, p.2) comment "The potential transformation of the practices themselves is yet barely understood or encountered" and as Bradwell notes the *"radical new forms of teaching are not yet the norm"* (2009, p.42).

Technology Enhanced Learning, TEL, covers a wide spectrum of learning activities; on the one hand the institutional VLE may be used as a repository for holding slides from a lecture, whilst on the other there is the potential for active, participatory, collaborative learning using Web 2.0 tools and services. Evidence from across the HE sector is that uptake of Web 2.0 tools is much lower than the uptake of the VLE as a store (Mot and Wiley, 2009; Steel and Levy, 2009, p.2; Browne et al., 2010, p.26). New pedagogical models have been proposed based on the collaborative and participatory potential of Web 2.0 tools and services. They include Downes' learning 2.0 (2005), Siemens' Connectivism (2004), Davidson and Golberg's participative learning (2009), Williams et al.'s emergent learning (2011) and Cormier's rhizomic learning (2008) and they have a number of common features: they promise more student participation, students on their own journey of self discovery, students participating in creating and sharing knowledge and in learning as part of networks and as part of learning communities. However, there has been criticism of these new theories as lacking an empirical base (Mackness, 2011; Conole and Alevizou, 2010, p.43). Where the new pedagogies have been applied to practice it has frequently been in relation to courses which have particular unique features, such as Massive Open Online Courses, MOOCs (Cormier, 2008; Bell, 2010). Kop (2010) is one of the few writers to explore the application of Connectivism to more conventional courses. Her doctoral study of the application of Connectivism to a formal adult education course found that Connectivism presented particular challenges. These included adult learners' levels of autonomy and their need for a human element in learning where affective issues such as trust and a connection with the "place" of learning are valued (2010, p.271). Thus there appears to be a disjuncture

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between the radical aims of these new pedagogies and their implementation to conventional educational courses. My study set out, like Kop, to explore the extent to which these new forms of learning were evident in practice in one HEI.

Focus for the study

My study was concerned with the tutors' perspective on Web 2.0 pedagogies and gathered data from a sample of lecturers across all faculties in one university in the north of England. The aim was to learn from these early adopters about what drove their uptake, how they managed the challenges that the tools presented and how they were supported in this process. The premise being that they have a reservoir of 'lived experiences' of the realities of the adoption in practice. In doing so, this study has responded to the comments from several writers on the paucity of the literature related to the teachers' perspective on the use Web 2.0 tools in education (Crook, 2008, p.54; Attwell and Hughes, 2010, p.5; Kop, 2010, p.278). The study drew on Rogers' (1983) five classifications of adopters of an innovation; 'innovators', 'early adopters', 'early majority', 'late majority' and 'laggards' (Figure 10.2) I identified lecturers who fell into the categories of 'innovators' and 'early adopters' to participate in my study. Underpinning this perspective was the notion that many of those lecturers in the 'early majority', 'late majority' and 'laggard' categories when asked about the barriers to the uptake of technology reel out a set of what has been described as 'the usual suspects' that is lack of time, money and their technical skills (Cooke, 2008, p.28; Browne et al., 2010, p.8). Hence rather than explore these barriers, instead, the perspectives of those using the tools were sought, the 'early adopters' and 'innovators'.

Whilst the study focused on some practical aspects of tools, skills and pedagogy, it was also concerned to examine individuals and their response to change. The perspective taken was to reject the discourse which presents Technology Enhanced Learning as "an essential modernising tool for education" (Facer and Sandford, 2010, p.75) and instead to explore the ways that practices are shaped both by individual agency and the existing social structures. As Facer and Sandford (2010) point out, this perspective requires both an understanding of the affordances of the emergent technologies, but also the ways in which they are "appropriated or resisted in social contexts" (p.77). Hence the focus was on how lecturers responded to the challenges, the situated nature of their particular discipline context and how the institutional (and national) policy context shapes this process.

The study responds to the call, from Cooke (2008) and Committee of Inquiry into the Changing Learner Experience report (2009), for a better understanding of the effective appropriation of technology to enhance students' learning in higher education. Vogel (2010), in the conclusions of her study of the role of academic developers, identified a number of questions which remain unanswered. These are areas which she considered need to be explored by others working in the field. They include:

- How do academics themselves conceive of critical engagement with TEL? How do these conceptions vary between disciplines? In other words, what do academics feel they would need to know or feel in order to engage critically with TEL? This may include evidence of the success of TEL, skills, cases, a belief in their students' ability to participate, a feeling that the technologies in question were consonant with their own professional identity.
- What institutional factors enable or impede engagement? In particular, the idea of time needs to be probed. Does time refer to time solving technical problems or preparing contingencies? If so, this is a matter of better technologies, skills and support. Alternatively, does time mean prioritisation of TEL over something else, in which case it is a matter of better aligning TEL activities to professional identity, or of relieving academics of bureaucratic activities?
- Given the absence of findings which can be generalised, what do academic developers need to know about their institutions, their academic colleagues, and themselves in order to choose wisely from the various approaches open to them? (Vogel, 2010, p.45).

Vogel's questions have significant overlap with the aims of my study (albeit Vogel's were expressed in a more nuanced way), both focus on how teachers experienced using Web 2.0 tools in their practice, the institutional context which supports this process, and the way that skills and practices in use of TEL are developed. To recap, my study's aims were:

1. to explore how HE teachers make use of Web 2.0 tools within their teaching and learning practices.
2. to consider how lecturers are supported and/or hindered by the institutional context in which they work in terms of innovating their teaching practices.
3. to examine any changes in lecturers' identity and role brought about through the adoption of Web 2.0 tools and techniques.
4. to examine the skills and practices needed and how these are acquired when teaching using with Web 2.0 tools.

5. to theorise the underpinning relations between data collected and thus to contribute to knowledge in these areas.

These questions were addressed using in depth, one to one, interviews with sixteen early adopters making use of Web 2.0 tools in their teaching and learning practices at one 'post-92' HEI in the north of England. The group of early adopters was chosen from a range of disciplines and to include use of a variety of Web 2.0 tools. However, the group was far from homogeneous in that it included those with extensive and varied use of Web 2.0 tools as well as those relatively new to TEL practices. Thus the study's findings reflect, not just the characteristics of the experienced, confident TEL practitioner but also the process by which lecturers become a digital practitioner based on understanding and theorising the individual trajectories of the study's participants.

The study's findings are concluded under four subheadings; the '*Digital Practitioner Framework*', Technology in Practice, Digital Practitioners' Personal and Professional Journeys, and Turbulence and the *Digital Practitioner Framework*. These subheadings cut across the study's aims rather than addressing each aim being addressed discretely.

Digital Practitioner Framework

The study's overarching thesis and contribution to knowledge is represented in the *Digital Practitioner Framework*, Figure 9.5, repeated here in Figure 10.1. The framework was developed from Sharpe and Beetham's (2010) work on students' digital literacies and applied to the characteristics of the early adopters in this study. The framework represents the notion of the 'digital practitioner' proposed by Ecclesfield et al. (2012) to describe lecturers who are confident in their use of TEL, have a self-managed approach to adoption, a willingness to experiment and a willingness to invest time in exploring the tools and tools they might be applied to teaching and learning practice. The framework suggests that there are some attributes that digitally confident practitioners share that build on their access, skills and practices. These are represented in a hierarchical relationship with the most fundamental features, related to 'access' to tools and support at the bottom, moving up the pyramid to 'skills', then to the application of the tools to their teaching and learning 'practices', and, at the top, the more stable dimensions of personality 'attributes'. One of the frequent barriers to uptake of TEL practices is a belief that lecturers do not have technological skills (Cooke, 2008, p.28; Browne et al., 2010, p.8) however this study illustrated that lecturers need, not just the technological skills, but equally an understanding

of how the technology impacts on the content and pedagogy. This new knowledge has been labelled as TPCK by Mishra and Koehler (2006) and challenges the prevailing view that "technicalities should be subordinate to educational concerns" (Vogel, 2010, p.14).

Experimentation and appropriation

Attitudes and motivation

attributes

practices

skills

access

I am
confident in my attitude to TEL;
willing to experiment with technology and how it
   can be used in teaching and learning;
able to balance risks of change with its
   potential;
convinced by the radical potential of technology
   to enhance and transform learning;
willing to invest time in exploring and evaluating
   TEL.

I design learning activities to suit my students'
   needs using TEL as appropriate.
I facilitate learning using appropriate
   technological tools.
I explore the capabilities of technology.
I behave ethically in contexts where the digital
   media is blurring boundaries.
I evaluate my practices.
I reflect on innovations in my practice.
I experiment with tools in my practice.

I can:
evaluate the affordances of TEL tools to suit my
   needs;
manage the blurring of boundaries between
   private and work time.

I have access to:
networked devices and applications.
media devices.
people who can support me in using technology.
a network of people with ideas for using
   technology.

Figure 10.1 The *Digital Practitioner Framework* (Repeated from Figure 9.5)

The study set out to explore what motivates the uptake of TEL and I have shown on the *Digital Practitioner Framework,* Figure 10.1, how this was found to operate based on my study's findings. The framework shows arrows going up and down its levels to depict the development of digital practitioner. The downward arrow indicates that attributes, in general, motivate the adoption of new practices, the development of new skills and also motivate the acquisition of tools and support at the access level. However, there were also a few

examples where experimenting with practices led to lecturers developing their confidence and thus their identity as a digital practitioner, that is, where movement up the pyramid was evident. This is shown by the upwards arrow which has its colour intensity increasing to illustrate that it is less prevalent route for development. It was rare that increased access or skill level drove adoption into teaching and learning practices, hence the upward arrow starts at the practice level.

Technology in practice

The study has explored the use of new tools, their affordances and how these were understood by the early adopters. Whilst some of the early adopters had particular interest in technology, most were not driven by a love of the tools or awe at their potential. Although the technology does have affordances which provide some unique features which inspire uptake, it was evident that lecturers were driven, not a desire to use these affordances, but by a desire to serve their students and to deliver the best possible learning experiences.

The study identified that many of the early adopters saw the concept of online space as a new entity with different potential for changing learning with features of persistence, asynchronicity, different online behaviours, controllability and ownership. These properties make it unique and different from existing off-line learning environments and thus open up a range of new ways that lecturers can design learning activities. Kennedy and Lefevre (2009) have identified three pedagogical functions and six affordances associated with Web 2.0 tools' use in teaching and learning. My study extended these functions by an additional three; community building, capturing and sharing a learning experience and "integrating several functions". However my study has identified that many of these early adopters consider the potential of the tools holistically and see online space as having multiple new features rather than disaggregating tools into their component affordances.

Chapter Four proposed the notion of a 'killer affordance' to provide the driver or motivation for adoption. The killer affordance was the reason why lecturers adopted the particular Web 2.0 tool: it was the backbone for their learning design, providing a rationale for adoption and also served to motivate them to overcome the challenges often experienced when making changes one's learning practices. Online space with its attendant properties was the 'killer affordance' for many of the early adopters.

Many of the most experienced of the early adopters in my study understood the radical potential of Web 2.0 tools to facilitate students' learning that is autonomous, self directed and personal. They were driven by a commitment to learner-centred approaches to learning and teaching. They valued the potential of the web to increase students' access to sources of information and of Web 2.0 tools, in particular, to support alternative forms of knowledge building activities. The radical potential of Web 2.0 to challenge existing forms of knowledge building and distribution, to challenge the authority of the academy and to allow student agency in relation to the curriculum content, structure and direction, in ways that are in evidence in MOOCs and Connectivism, was evident in some lecturers' visions. At the same time lecturers were also aware of the need to balance the radical with realism. They did so, not because they did not believe in the exciting transformative potential of the tools, but because they were constrained by a range of factors, in particular, those of the institutional context. They were also aware of the need to support their learners' intellectual journeys, to help them to manage the cognitive load associated with study, to balance the many other demands on their learners and to be aware of the affective dimensions involved in the learning process.

When considering lecturers' attitudes to technology it was apparent that they did not, in general, foreground the importance of technology: it is just one facet of their professional identity. However there were aspects of the technology that raised some particular challenges for some lecturers, for instance the ease of distribution and permanency of digital resources, the challenge of maintaining a professional identity across social media platforms used for home as well as work. Others welcomed aspects of the technology, for instance the opportunity to create and maintain more equal relationships with their students. There was a range of views about the blurring of boundaries between home and work, with some lecturers welcoming the flexibility whilst others found it challenging to separate work and leisure time. In addition many lecturers felt their technical skills were less good than their students but this was not a concern for them, instead they managed this situation using a range of strategies.

Digital practitioners' personal and professional journeys

The study was concerned to understand the early adopters' personal and professional journeys as they made use of Web 2.0 tools in their teaching and learning practices; their motivations, their challenges and their responses to these challenges.

In Chapter 2 a range of possible tensions associated with the use of Web 2.0 tools was discussed. However the story told by the early adopters sampled in my study was very different to the perception gained from the literature Lecturers, rather than seeing the tools as fraught with danger and risk, instead, had a much more positive attitude to these tensions: many they rejected outright, whilst others were managed or worked around: sometimes lecturers developed ways of harnessing the challenges, to make them a feature in their learning designs or lecturers developed strategies to manage the tension. As Ecclesfield et al. comment "teachers have developed the ability to navigate their way through a range of technology options and uses" (2012, p.49-50). In addition, my study identified the power of the 'killer affordance' to motivate lecturers in their uptake of the tools and drove them to find ways to overcome these potential problems.

Crook (2008, p.34-35) identified a fundamental tension in that the use of Web 2.0 tools leads to greater student control and thus may be experienced by teachers' as undermining their authority. Conole and Alevizou (2010) echo this concern in their discussion of the challenges to formal education in the way that knowledge is established and validated through the use of Web 2.0 tools (p.57). However, my study did not find evidence of this concern: none of the participants experienced Web 2.0 tools as a challenge to their authority and expertise. This was true irrespective of their subject discipline, including those from traditions which commonly challenge orthodoxy of the academy, such as critical theory and post colonialism, but also scientific traditions, such as nursing, pharmacology and control engineering.

There was little evidence that these early adopters found moving into new teaching and learning territory as being particularly risky. Whilst most early adopters took a robust and reflective approach to risk, many also identified with the notion of liminality which has some facets of risk associated with it. There is a contradiction apparent between these positions. Rogers (1983), in his classification of the characteristics of the early adopters, comments that early adopters are more able to cope with risk than the 'early majority' and 'late majority' groups (Figure 10.1) so it appears that whilst the early adopters experience risk, do not focus on it and instead focus on the beneficial potential that the change could bring about. As Fullan (1999, p.77) has argued creativity and anxiety go hand in hand, while Ecclesfield et al. (2012) have also suggested the digital practitioner is willing to experiment with technology and balances risks of change with its potential (p.49).

Making changes in an individual's professional practice has been linked to personal challenge when it has an ontological dimension (Smith, 2010). However, whilst lecturers

experienced changing their practice as unsettling and many recognised feelings of liminalty, none felt that they were challenged ontologically. This suggests that early adopters are drawn to online teaching because it accords with their conception of teaching (Prosser and Trigwell, 1993) and because it fits the potential of the tools to support active, student-centred, constructivist learning principles. The research design did not set out to establish this connection and this would be an interesting avenue for further study.

Willingness to experiment, to play with the technological tools, is a defining characteristic of the most confident adopters. They saw the time that is required to understand the nuances of the tools as time that is invested, in that it may be accompanied by time savings later, but this is not the only, or main, reason for investing time to learn new ways of operating. The underpinning reason for the early adopters' attitudes (for instance their attitudes to time, to risk and to experimentation) was their belief in their duty of care to their students and the importance that they placed on delivering the best possible learning opportunities alongside their belief in the potential of Web 2.0 tools to help them to provide this. Stronach et al. (2002) called this the 'ecology of practice' and contrast it with the 'economies of performance' whilst Jephcote and Salisbury (2009, p.696) have noted, lecturers take very seriously their responsibilities towards their students and often privilege their students' needs and interests over their own needs as they juggle and prioritise change. In addition, lecturers believed passionately in the possibilities that Web 2.0 tools could bring to support a more constructivist, student-centred, participatory and collaborative form of learning.

Whilst the early adopters in my study learnt, in part, through exploration and experimentation, they also valued a range of other opportunities to learn, both formal and informal. The processes of mimicry, ventriloquism, modelling and vicarious learning were evident but the most frequently cited was mimicry. The process of mimicry, in which lecturers experience other people's teaching style, often as a student, then adapt it for their own use was also noted by Ertmer and Ottenbreit-Leftwich (2010, p.275) as a successful mechanism of development.

Turbulence and the development of the digital practitioner

I have argued that the early adopters' attitudes, practices, skills and access can be modelled using the *Digital Practitioner Framework* but the framework tends to represent an uncomplicated approach to adoption of TEL. My study illustrated that this was far from the case and there were many ways in which the complexity of the process of adoption was

subject to turbulence. Turbulence was particularly experienced in relation to the institutional context and the way that it framed lecturers' engagement. I will now outline four particular ways in which this turbulence was experienced.

Firstly, whilst many of the lecturers in this study are driven by visions of the radical potential to adopt the tools and practices, at the same time, they are also aware of the need to balance the radical with realism. They did so, not because they do not believe in the exciting transformative potential of the tools, but because they are constrained by factors including the limitations of the institutional context. Like Steel and Levy (2009), my study identified that the learning opportunities were limited by the institutional nature of the VLE in that its modular structure demarcated learning in ways which constrained the learning opportunities as well as hampering the possibilities for social forms of learning. Lecturers were also aware of the need to support their learners' journeys, to help them to manage the associated cognitive load and to balance the many demands on their learners; a finding which echoes that of Steel (2009, p.415).

Secondly, adopting new teaching and learning practices does, however, come at a human cost to many early adopters and this research has illuminated a range of negative emotional reactions to undertaking change. These emotions included anxiety, fear and vulnerability related to their own skills and knowledge. They also included a range of negative emotions which resulted from them 'carrying the can' or 'taking the flack' for errors which were not of their own making. The analysis of the language of emotions including the way that proximity, distance, emphasis and ownership illustrated this human cost that the early adopters carried. In addition, some lecturers experienced the adoption of new technologies as a challenge to the prevailing norms within the institution and these challenges were associated feelings of humiliation and anger. The metaphor of fighting or battling was evident and illustrates the strength and depth of the emotional cost that some lecturers experience. Ellis (2010) discusses this process as challenging the normative discourse within the institution and Conole and Alevizou (2010, p.22) comment that there is a dominant culture in teaching which operates to constrain and limit the application of new teaching practices and this was clearly evident, with associated negative impact, for some of the participants of this study.

The notion of one's professional identity is complex and multifaceted. Stronach et al. (2002) use the term 'shard' to indicate its multiple and conflicted nature. Chapter seven, *Identity, role and change*, explored and extended Stronach et al.s (2002) shards of identity. Stronach et al. (2006) suggest that these tensions are resolved, but my study suggests that they were

accommodated and in that lecturers lived with the conflicts in these multiple identities juggling them as they deal with the complexity of their role.

Finally, the data showed that some of the early adopters grappled with the decision to maintain their use of Web 2.0 tools in their practice and the notion of 'giving up' was evident in their stories, even from the most experienced and confident Web 2.0 users. There were three groups of experiences which led to feelings of 'giving up': firstly, when lecturers ended up carrying the can for others' mistakes. The second group arose in relation to the discussion of challenging normative discourses in that some lecturers experienced working in new ways which were different to the dominant paradigm in their discipline as emotionally draining to the extent that they felt like giving up. The third group consisted of those lecturers least experienced in use of Web 2.0 tools: for them the notion of 'giving up' was evident in that their confidence and commitment to the tools was much less secure. Whist the feeling of wanting to give up was not by any means a universal feeling, it evident from across the sample including both the most experienced and confident Web 2.0 users as well as the least experienced. The way that lecturers respond to feelings of wanting to give up was framed by the institutional context and in particular the importance and rewards it attaches to implementing its elearning strategy. Whether lecturers would actually give up on their use of Web 2.0 tools is a matter of speculation, although, for the most experienced adopters the evidence is that they have continued to use these tools despite being at the vanguard for several years and have thus learnt to live with these feelings motivated by their commitment to the potential tools to deliver a rewarding learning experience for their students. However for the least experienced, there appeared to be more likelihood of them relinquishing their use of Web 2.0 tools.

Although the preceding discussion emphasises the negative aspects of the institutional support, this was not the only or even the main feeling, there majority experienced colleagues as supportive and the central support available for TEL as being helpful and skilled, if somewhat under-resourced.

Implications of the study

As with any research the findings are limited by aspects of the methodological approach. The sample was relatively small in size, consisting of sixteen, lecturers, but this sample provided a rich and detailed source of data. The sample size is consistent with other similar interpretive studies to exploring lecturers' uptake of technological tools (see for example

Clegg et al., 2006, Steel, 2009, Kirkup, 2010). Whilst the sample did not aim to reflect the whole population, it did attempt to get a balance between the faculties at the case study institution and particularly to explore how the nature of the subject intersected with the issues of adoption. No significant differences were apparent between even quite diverse subjects such as critical theory, control theory, pharmacology and nursing. In addition the study was set in a single case study institution and so the experiences retold to me need to be viewed within this limitation. I have identified some of ways in which the institutional strategies and practices impact on the data, in relation to the institution's elearning strategy and its implementation. Although further research is needed to explore how my findings can be applied or compared to the experiences in other institutional contexts.

Whilst the phenomenological approach was consistent with the philosophical orientation of the study, there were ways that data gathering might have been strengthened. Firstly, the boundaries of the study could have been more tightly drawn so as to avoid collecting data that was beyond the scope of this thesis to interrogate and report on. In particular, the focus on such a broad range of tensions which encompassed not just the challenges of working with Web 2.0 tools, but also the issues of plagiarism, of information digital literacies and of managing group work, moved beyond the direct focus of the study to explore more general aspects of teaching. Secondly, the notions of identity and role were handled in the interview in rather a blunt fashion. With hindsight, the way that the questions were phrased or perhaps not even asked directly, may have led to more subtle and reflective engagement with the issue. Thirdly, the notion of the emotional dimension to the lecturers' response to change was one that emerged from the data analysis. The format of interview did not draw attention to emotions directly, and the research design did not consider how they might best be elicited. With hindsight, other methodological approaches might have been explored to capture a broader range of emotional associated with the process of innovation.

This study focussed on 'bottom up' innovation, that is, where lecturers had initiated change in their practices rather than change resulting from an institutionally driven agenda. The value of this approach is that it has captured the 'lived experiences' of those that are innovating and exploring the potential of new tools in their classroom practices but there are also dangers in this approach, as Jephcote and Salisbury (2009) comment, the structures that define our working lives may be internalised by practising teachers and thus not open to critique and reflection. However, the stories of the early adopters richly illustrate what it is to be using these new tools, with all the complexities that arise in practice, including how problems are experienced. The findings from my study help to understand the journey that

the 'early' and 'late majority' will be travelling and are thus a part of the process of widening their use.

There is some evidence of the power of the 'bottom up' initiatives to drive more strategic adoption. The QAA (2009, p.10) states that "Strategies for ICT, particularly in smaller institutions, tend to build on innovative developments within particular subject areas or levels of provision" and later in the report they highlight a case study where a particular VLE based approach was adopted and incorporated into the institution's employability strategy (2009, p.26). They describe this approach as an example of a 'bottom up' or 'grass-roots' initiative impacting on strategy (p.26). However, there are limitations in the power of the 'bottom up' initiatives to impact on more wide scale change. Moore's model, derived from marketing, outlines what he calls a 'chasm' between the adoption by early adopters and by the early majority, see Figure 10.1. Moore argues that it takes significant effort to convince the early majority to adopt a new product (1991, p.18). The implications of this chasm is that the lessons from the early adopters do not diffuse across to the majority so, as discussed in Chapter 9, a balance of 'top down' with 'bottom up' strategies has been demonstrated to be most effective, see for example Liseweski (2004); Sharpe et al. (2006); Masterman and Manton (2011). The area of institutional strategies and approaches to promotion of TEL is beyond the scope of this study but is covered by a number of writers, see for example Bates (2000); Luckin et al. (2006); QAA (2009); Kelly (2011); Stiles (2011).
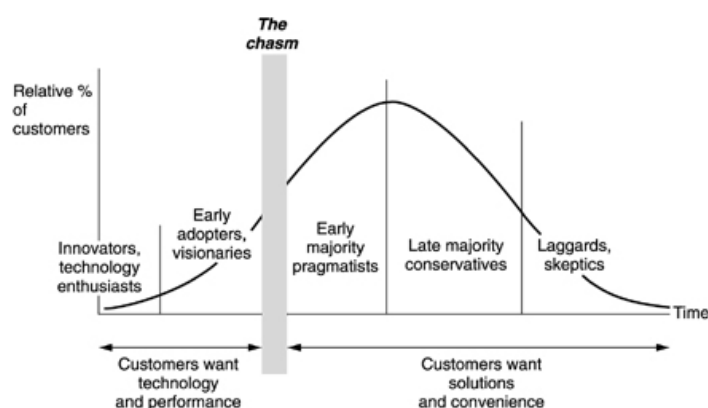

Figure 10.2 Moore's Technology Adoption Cycle (Source: Moore, 1991, p.16)

My study has not attempted to map the chasm between the 'early adopters'' and the 'early majority's' uptake of Web 2.0 practices or the processes by which it might be bridged. However, Table 9.2, *Recommendations for facilitating lecturer adoption of Web 2.0 tools,*

suggests ways in which lecturers' adoption of Web 2.0 tools might be facilitated. It will be relevant to lecturers, their managers, academic developers, learning technologists and senior managers with responsibility for teaching and learning in that it can be used to develop lecturers' use of TEL and to develop an institutional TEL strategy. Likewise, the *Digital Practitioner Framework,* Figure 9.5 (and repeated in Figure 10.1), provides a way to visualise and articulate a holistic approach to lecturers' adoption of TEL. The amplification of each level, on the left hand side of the figure, is a tool to help lecturers to understand their current attitudes towards, and skills and practices in TEL and can be used as part of an individual development plan or as part of a professional development or staff development programme.

Areas for further enquiry

This study was small scale and interpretative in character and explored only the experiences of those in Rogers' (1983) 'innovators' and 'early adopters' categories. Alternative avenues for research might include the drivers and patterns of adoption in the early majority and to examine the mechanisms and processes by which 'chasm' between 'early adopters' and 'majority adopters' is straddled.

The study was set in one particular HEI with its particular elearning strategy and policy. As discussed in Chapter 9, *Developing the Digital Practitioner*, the study's findings, in general, and the individual's responses to change, in particular, need to be understood within the context of the particular institution and its elearning strategy and policy. Hence it would be valuable to explore the extent to which the institutional context influences the findings of my study.

A different approach to the study of Web 2.0 tools is suggested by Lea and Jones (2011). They believe that an effective way to study the educational use of technology is to use the lens of digital literacy and that digital literacies have an ability to focus on critical questions about how learning is mediated inside and outside the curriculum and to explore the institutional context and how it influences students in making meaning. In particular, they suggest that framing using digital literacies helps to ensure that research into Web 2.0 tools has greater relevance and longevity in the fast moving world of technology. Chapter 8, *The Digital Practitioner*, identified that lecturers felt adequately skilled in relation to their own digital literacy but felt strongly that this is an area of need for students. Very few, if any, elaborated on mechanisms, or activities that they used to develop these skills in their

students. The extent to which they felt this to be their responsibility could be a subject for further investigation.

My study took a broad perspective on the range of topics. With such a breadth the depth of the treatment has been limited. Instead, any of the topics could have been interrogated further to illuminate them in a more nuanced way. For instance, notions of structure and agency and structuration theory (Giddens, 1984) have been used by Hotho (2008) to understand change related to professional identity and this might have resulted in an interesting and more theoretical, less practically orientated focus to my study.

There are other questions that have been suggested by the findings:

- Given the emotional journey associated with challenging the normative discourses, how is this journey experienced in other institutional contexts with a more 'tightly coupled' elearning strategy? To what extent do the findings apply to those lecturers using Web 2.0 tools in their practice because there is an expectation of compliance from the institutional?
- Can teachers' conceptions of teaching (Prosser and Trigwell, 1993) be used to understand the reluctance of some of the 'early and late majority' in relation to adoption of TEL?
- Are the findings of this study consistent for a larger number of early adopters representing more disciplines than those represented in this sample?
- How do teachers address the skills of inquiry required to make such judgements? (p.48)
- Where does the responsibility for developing the critical and confident attitude to understanding Web 2.0 knowledge reside with students, teachers, librarians or study skills tutors?
- In what ways can digital literacies be embedded in practice and how might the roles of the librarian, academic skills tutor and lecturer be conceived to ensure a holistic approach to developing skills and practices of students learning in a digital medium?

A doctoral thesis is required to show that it theorises and contributes to knowledge in an academic field. The field under consideration here is empirical, in that it has been concerned with the application of TEL tools to practice, but it has also married this practical focus with conceptualising lecturers' development and contributed to this nascent area.

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Appendix A Interview Schedule

Preliminaries

Introduce myself (if necessary)

Thank them for agreeing to participate

Ask for their agreement to tape the interview. Switch the tape recorder on.

The aims of the study are;

- to explore how HE teachers make use of Web 2.0 tools within their teaching and learning practices with particular focus on teaching vocational subjects.

- to consider how lecturers are supported and/or hindered by the **institutional** context in which they work in terms of innovating their teaching practices.

- to examine any changes in lecturers' **identity** and **role** brought about through the adoption of Web 2.0 tools and techniques.

- to examine the **skills** needed and how these are acquired when teaching using with Web 2.0 tools.

- to theorise the underpinning relations between data collected and thus to contribute to knowledge in these areas.

Explain that all responses will be treated **anonymously** and will be confidential between the respondent and possibly the supervisory team for this project. Explain that data is used in research contexts – e.g. for analysis and for presentations at conferences or in academic journals, where the source of the data or their names will never be used. Ask them whether they are happy to proceed on this basis.

Explain that the interview should last about 45- 60 minutes and check that this is OK with them.

The focus of this research is what is commonly referred to as Web 2.0 tools by which I include web based tools which enable **user generated content**. See examples - give out sheet with list of Web 2.0 tools.

Semi-Structured Questions:

Could you identify which Web 2 tools you use and how your use them in your teaching. Pick one learning and teaching activity that uses one of a Web 2 tool and describe how you've used it ?	*Ensure the focus is on tools that are used to both participate and to make public/semi public thus make the participatory and collaborative* *Explore range of reasons including;* 1. Access to teacher's thinking and understandings of the subject 2. Access to current information about a topic 3. Sharing students' resources 4. Developing students' skills eg critical thinking, written media 5. Developing a learning community, critical friendship groups 6. Extend learning outside the day schools, 7. Range of media 8. Alternative assessment 9. *ICT skills* 10. *freshness*
Could you tell me about **why** you chose this tool? DRIVERS	*Explore complexity in choices* *Explore inside/outside VLE* *Pedagogical models*
Could you tell me about **how** you went about planning the activity?	*What design tools used?* *What pedagogical models/influences used?* *Conservatism versus radical*
Would you describe the use as **successful**? What made it successful?	*Examples of what has happened*
How did the students' respond to the use?	*Examples of students liking/disliking participation, probe exceptions*

Tensions Exercise; Talk out loud how they would categorise their views about the significance of these tensions when designing or running an activity.	And how they managed the tensions Any <u>pedagogic strategies</u> for designing and running activities (including knowledge of tools)
How has your **identity**, by which I mean how you think about yourself as a teacher, been changed with adoption of this tool?	Identify <u>personal attributes</u> and <u>disposition</u> that support adoption eg attitudes to change and to risk, authority
How do you see your authority as a provider of knowledge changing in Web 2.0 world?	*Cut this if already talked about authority in tensions*
Clegg et al. (2006) talk about liminality as an in betweeness an unsettled and uncertain state. Sikes (2010) says change involves questioning what you are doing and for some this leaves feelings of inadequacy Do either of these descriptions resonate with your experiences of change? In what ways did you experience change?	*Probe tutors' responses* *identity/confidence/support/organisational factors*
How have you learnt the **technical skills** involved in using this technology in teaching?	
How have you learnt the **pedagogical skills** of using this technology in teaching?	
In what ways has the **institution supported** or hindered your work with technology?	
Is there anything you'd like to add	

Can you suggest any other lecturers who are using Web 2.0 tools who might be interested in being interviewed?	
Complete respondent summary sheet	
Complete ATI	
Complete anonymised consent form	

Finally Thank them for their participation.

Examples of Web 2.0 tools or services

Defined as participatory web based service which may or may not be collaborative (has the potential to be used by many people) as well

- blogs
- wikis,
- Collaborative editing sites eg Google Docs
- tagging and social bookmarking eg del.icio.us
- multimedia sharing services eg Flickr, Youtube,
- content syndication, podcasting eg iTunes.
- Social networking sites and social presence eg Facebook, Ning, Twitter
- Discussion forum
- Instant messaging eg MSN, Skype
- Massively multiplayer online gamine mmog eg SecondLife

Classifications of subjects in HE from Becher (1989 cited in Lindblom-Ylanne) based on cultural and epistemological differences

- Pure hard e.g. chemistry. Knowledge is cumulative in nature; Teaching is linear, straightforward and uncontentious. Instructional methods such as lectures and problem based classes are most favoured. There is a focus on retention of facts and the ability to solve structure problems.
- Pure soft e.g. history are characterised as holistic and qualitative. Teaching methods include more fact to face class meetings and discussions and debates. Creativity and fluency of expressions are valued.
- Applied hard e.g. medicine These subjects have a linear sequence and are based on factual understanding. Teaching methods focus on simulations and case studies in relation to professional settings. There is more emphasis in on practical competencies and on application of theoretical ideas to professional context than for pure hard sciences but here is still an expectation that students need to learn facts.
- Applied soft e.g. education. Knowledge is built through a reiterative process. The teaching methods adopted are closer to the 'pure soft' disciplines but here are an emphasis on personal growth and intellectual breadth.

Appendix B Rogers' Characteristics of adoption types

Each adopter classification is ascribed characteristics which are widely used in diffusion research - adapted from Rogers, 1983, p.248-269.

	Characteristics	Communication	Role in the innovation process
Innovators	Eager to try out ideas. Desires the risky. Willing to accept occasional set back. Venturesomeness	Connected outside peers to other innovators	Gate keeper
Early adopters	Respectable, respected by peers	More integrated into local social system	Role model Helps to decrease uncertainty about a new idea by adopting it. Convey evaluation of innovation to peers.
Early majority	Deliberate Follow with deliberate willingness. Seldom lead	Interact frequently with peers but seldom hold leadership positions	
Late majority	Sceptical cautious Adopt when the weight of social norms favours the innovation. Influence by peer pressure.		
Laggards	Traditional Last to adopt. Suspicious of change and resistant to change.	Isolated	

Appendix C Tensions Exercise

		Most important	Least important	Hadn't considered or didn't apply	Disagree with	No different to offline world
1.	I need to ensure that students have adequate technical skills					
2.	Concern over my technical skills					
3.	Time consuming for me to learn to use new tools					
4.	Time consuming for my students to learn to use new tools					
5.	More teacher time is required to run a Web 2.0 learning activity than face to face activities					
6.	The University's reputation is a concern if using open web based tools					
7.	Access to IT equipment by my students impacts on the way I design learning activities					
8.	My technological skills are less good than some of my students					
9.	Concern for students' safety whilst working online eg online bullying					
10.	The reliability and robustness of Web 2.0 tools is a concern when designing learning and teaching activities					
11.	The web can be a permanent medium so students need awareness of this					
12.	Ensuring that students' contributions are judged on their content rather than merely participation.					
13.	My authority may be undermined					
14.	Loss of teacher's control of what is going on when students use Web 2.0 tools					
15.	Using a VLE for Web 2.0 limits exposure to the wider internet					
16.	I am challenged by how to assess collaborative group work activities.					
17.	Some students prefer to work as individuals than to undertake group work					

		Most important	Least important	Hadn't considered or didn't apply	Disagree with	Disagree with
18.	There is a loss of certain aspects of the learning process when we move to online learning. For example intimacy, pace, rhythm, and flow. Students want personal contact with me					
19.	There is a requirement to cultivate fluency and sensitivity in new forms of expression (eg visual or video)					
20.	Concern over exposure of my (teacher) expertise in terms of subject expert (rather than technical skills).					
21.	I need to teach the skills of inquiry required to judge the authority of sources when researching in a Web 2.0 environment.					
22.	I need to teach students an understanding of what constitutes plagiarism					
23.	Some Web 2.0 tools use informal systems of data organisation for instance information is validated by being popular eg wisdom of the crowds and user generated organisation systems eg folksonomies and these are not necessarily authoritative					
24.	I need to know that the knowledge that students have access to is valid and reliable					
25.	I am concerned that my position will be undermined through students accessing other sources on the web					
26.	I need a better knowledge of how to use technology within my teaching					
27.	I need better skills of enquiry into web based information sources					
28.	Students have quite conservative expectations of learning and teaching.					
29.	I fear the boundary between my personal and professional space and time will be further eroded through using these tools.					

Appendix D Table summarising data collected from sample

	Date of interview (s)	Length in minutes	Total length minutes
Richard	June 09 22/3/10	35 57	92
Catherine	12/2/10 25/1/11 13/7/11	30 13 30	73.
Emily	24/3/10	74	74
Rachel	19/3/10 25/3/10	24 19	43
Stuart	31/1/11	54	54
Crista	7/2/11 11/2/11	32 52	84
James	15/2/11	64	64
Rebecca	24/2/11	21	21
Claudia	1/3/11	60	60
Wendy	4/3/11	56	56
Sue	3/3/11	61	61
Abigail	30/3/11	72	72
Jack	1/4/11	102	102
Adrian and Jennifer	6/4/11	75	75
Claire	6/4/11	35	35

Appendix E Consent Form

HE practice, epistemology and Web 2.0

Liz Bennett

Interview consent form

I have been fully informed of the nature and aims of this research and consent to taking part in it.

I understand that I have the right to withdraw from the interview at any time without giving any reason, and a right to withdraw my data if I wish.

I give my permission/do not give my permission for my interview to be tape recorded.

I give permission to be quoted (by use of pseudonym).

I understand that the recording will be kept in secure conditions at the University of Huddersfield.

I understand that no person other than the interviewer will have access to the recording.

I understand that my identity will be protected by the use of pseudonym in the research report and that no information that could lead to my being identified will be included in any report or publication resulting from this research.

Name of participant

Signature   Date

Name of researcher

Signature   Date

Two copies of this consent from should be completed: One copy to be retained by the participant and one copy to be retained by the researcher

Appendix F Final Coding Template and coding definitions

Tutor –

    Attitudes

        To teaching and learning generally

        to technology (diffidence, enthusiast)

        to change

    Feelings- change including liminality (uncertainty or anxiety), confidence, risk

    Identity what they believe about themselves

        Role changed

        Agency ie self managed and directed, Willing/forced/Lack of agency

        Epistemology/Experts

    Skills, knowledge

Strategies for managing tensions –

\-   accommodated

    Turned

    Managing expectations/taking students with you

Opinions of the tensions

    Hadn't thought of

    disagree

    Important

    tension online-same (as f2f)

Institution   learning designer/tech support

        Culture (normative discourse)

        Processes (staff development, systems)

        Colleagues

Students   Conservative

        Digital natives/immigrants

Technology

    Affordance

    Appropriation of tool whereby technology not used as it is intended

    Web-terms

    Ped-v-tech

    Subject-know

Design

    Models

    Vision

    Assessment

    Trigger

    Planning

    Drivers

    Student initiated

    Online vf2f

    Literacies

    compromise

    Iterative nature of design

    Complexity

Outcomes –

    success

    failures

    unexpected

    Tipping point – when something works with students

Metaphors

Tutor Attitudes An attitude may be an emotional response or a more intellectual response.

> **Attitudes to teaching and learning**; beliefs about what lecturers want in their teaching and learning practice. It has an overlap with lecturers' vision and their identity but vision is a specific goal for a design and identity is about relationships with self and beliefs about self (see tension 13).

> **Attitudes to technology** (diffidence, enthusiast)

> **Attitudes to change**

Feelings- descriptive category for lecturer's emotion response to their situation including Liminality (uncertainty or anxiety), confidence, risk

Identity what they think, believe and feel about themselves; how they internally articulate aspects of their roles and personality. How they talk about their relationships to others within the professional sphere (ie colleagues, students, management)

> **Agency** when a lecturer feels in control of their work. For example where they are self managed and directed. **Includes** Lack of agency – the opposite of agency; where lecturers feel directed or controlled by their working context.

> **Role** Examples of where lecturers' perceive that their role and particular focus on how it has changed through use of technology

> **Epistemology/Experts** where there is reference to experts and to knowledge

Skills can be practical or can be intellectual. Has an overlap with strategies. Typical skills are time management, IT skills, management of self online, managing tensions, skill of design/planning and running online activities eg reacting to events, also the emotional skills of coping with failure, taking students with you, knowing how and when to intervene. They are more transferable to range of contexts where as a strategy is a skill applied to a particular context. The term skilled is generally positive and complementary. Also include those that are missing.

Strategies for managing tensions The term strategy is used for the application of skill to a particular context to achieve a particular end. Strategies are intellectual approaches to a particular challenge (tension) in their teaching. Can be conscious or unconscious acts.

> **Accommodated** – examples of how lecturers accommodate the tension

> **Turned –**examples of how lecturers turn what might be thought of as a tension into a facet of their teaching design.

> **Managing expectations/Taking students with you** examples of when lecturers find particular approaches or strategies that are focussed on winning over their students to this new way of working.

Opinions regarding tensions

> **Tension same online**(as f2f) – example of how lecturers see tensions as the same online as f2f.

> **Hadn't thought of –** where lecturer hadn't considered this tension in their design.

> **Disagree –** example of where a lecturer disagrees with the label tension in the design of online learning

> **Important** examples of tensions that lecturers consider to be the more important than other tensions

Institution   features of the institutional setting that impact on the lecturers.

> **Learning designer/tech support**   descriptive category used to identify when the role of a learning designer or technical support is mentioned.

> **Culture** Where the values and norms of the institution are mentioned. **Includes** the notion of normative discourse ie what is the dominate way that parts of the institution operated.

> **Colleagues** ways early adopters relate to their colleagues

> Institutional **Processes** eg staff development, systems, structures

Students features/mentions of students by lecturers in particular;

> **Conservative** where lecturers comment on students' reserve in trying out new things.

> **Digital natives/immigrants** examples of where lecturers cite the generational take up of technology by students born from 1990s onwards. (or where they don't agree with this label.)

Technology

> **Affordance** (of technology eg persistence, low entry threshold, complexity in choice, wizardry, simple,) property of a technology

> > **Includes** Inhibiting facet of the technology in terms of pedagogy

> > **Includes** Enabling facet of the technology in terms of pedagogy

> **VLEness –** examples of where the institutional nature of the tool is key to the design. **Includes** where it isn't too.

> **Appropriation** of tool whereby technology not used as it is intended

> **Web-terms** ways in which lecturers use Web 2 and web 1 terminology

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Ped-v-tech examples of where the dichotomy between technological and pedagogical knowledge are challenged or reinforced.

Design

Design features

Trigger something that was the trigger for a change

Drivers the contextual factors which lead tutors to adoption of an approach.

Planning things that tutors do in preparation for an activity.

Student-initiated examples of where students have initiated change within the teaching or where students have

Vision where a tutor has a clear picture or rationale for what they are trying to achieve.

Pedagogic Models where a clear dominant pedagogic strategy is invoked or evident.

Online/off line boundaries and issues

> **Includes** Online learning different an aspect of the design that uses the uniqueness of online learning compared to face to face.

> **Includes** Online same an aspect of the design that uses the similarities between the online and off line design principles

> **Includes** Online mimicking where the design is particularly constructed to mimic the off line world

Assessment-carrot where the assessment is used as an incentive for motivating students' uptake of the technology/design

Literacies evidence of digital literacies including online identity, development of students' online academic skills,

Compromise an aspect of the design which is a compromise in some way

Iterative nature of design examples of the iterative nature of the design of teaching and learning rather than a one off design.

Complexity/includes Contextual examples of the complexity in the design process and related to a particular context

Subject-know examples of where the design is specific to the subject content.

Outcomes – examples of when the outcome of the TLA design

      Outcome success

      Outcome failures

      Outcome unexpected

      Tipping point –an event or occasion when things turn a corner in a positive way, includes tipping points for students and tutors

Metaphors where metaphors are invoked in the lecturers' responses

Appendix G Range of responses to pedagogical tensions

Tension	Examples of the range of responses
1. I need to ensure that students have adequate technical skills	You think they are all using Facebook. They'll be fine with the wiki, but I think you've got to recognise that it is still a new tool [Adrian]
	I don't have a whole lot of technical skills so it doesn't bother me because you have to learn. [Jennifer]
	I don't worry about that very much. I design to the lowest common denominator. What I expect is that a students can edit a word document [Claudia]
	I do think that it is important thing... Because they are working in groups there is usually someone in the group who can use the wiki spaces so I think that sometimes what happens is that students who aren't that confident delegate that to other people in the group. [Richard]
	I feel that business students are fairly technical so I don' t worry so much about that. I just think if one of them can't do it another can and they learn [from one another] [Rachel]
	Yes it was a concern for me because of the nature of the students, the variation in age the variation in background. I think if they had all been 18 I would kind of assumed that they would be able to do it. We have a two hour session right at the beginning where we show them, make sure that they can all log on and access the tools they all know their way around the interface. [Sue]
	Yes that's very important. We were getting to the point where we found that we had students in the course who were about to qualify and we found that they were struggling to put an attachment on an email, so when we did the last revision of the course we actually made it more IT. [Stuart]
	I kind of assumed that they would have just because so many young people were on Facebook. [Wendy]
2. Concern over my technical skills	Chapter 7
3. Time consuming for me to learn to use new tools	Chapter 7
4. Time consuming for my students to learn	It doesn't bother me. This is stuff that they'll learn how to do basically [Claudia]

	to use new tools	No because we have put it into the curriculum [Emily]
		I think that is important purely because we already ask students to do a lot in terms of their independent learning as we know some students manage their time better, some student have more time available to study, and some students have other commitments like their full time job. So the fact that a wiki is quick to demo and quick to start using, the fact that it is already integrated within Blackboard, those were all considerations really that meant that it would be less time consuming for the students to get to grips with it. [Richard]
		I wouldn't want to do it in now, when they've got a big assessment burden. [Rachel]
		I wasn't worried about my students learning new tools on the basis that they had to learn how to access Blackboard anyway. They will have to use the blog tool in other modules if anything that as a benefit. I felt that it was an advantage for those that are possibly a bit older or those that have been at home with children for a long time and maybe don't have internet at home to get them updated with some of those technologies because they will need them and to widen their awareness. [Sue]
5.	More teacher time is required to run a Web 2.0 learning activity	Chapter 7
6.	The University's reputation is a concern if using open web based tools	I did make students aware that you are using that you are using a tool that anybody can see. [Abigail]
		It is important. I do formative feedback on their blog and I see their blog and edit it and I say to them your personal profile is not "XX University." It is "University of XX". [Adrian]
		I very rarely consider that. I ought to. It does flitter across my mind at times. But I don't really consider it much because I see it as a barrier to what I want to do if I get too hung up on what the University wants to present as a public persona. [Catherine]
		I don't think I would want to use open web tools. I think it would be more about copy right issues, my work and students' work going out into the form that I would be concerned about. [Emily]
		I don t really think of it in terms of the University's reputation. I think about it in terms of the decision making that I've taken if I'm using an open web based tool if it is not a good tool I feel that it is my decision making that is being exposed, rather than the University's reputation. [Richard]
		It doesn't apply because it is within University VLE, but if you were doing it in wordpress or something it would be a different case. [Sue]
7.	Access to IT equipment by my students impacts on the way I design	I suppose that I just assume that they'll have access [Abigail]
		It is an issue but then so is the room we are in which has hampered what we've wanted to do because there are 90 of

	learning activities	them a tiered lecture theatre trying to do group work. [Jennifer]
		It does. It is the lowest common denominator stuff. I'm always making sure that if a student has wonderful kit good on them they can go to town, it won't necessarily give them a better mark because they've got that stuff. The same criteria would be used for those who only had a word document if they've used the document to its potential. [Claudia]
		A piece of feedback that we did get was "I don't have the internet at home and it made this assessment harder for me" and I think that's a consideration. [Emily]
		I think that is like a moderately important one. If you'd asked me 5 years ago then I'd have said most important... There has become a greater understanding even amongst people who wouldn't consider themselves to be very skilled IT users that... it is becoming just part and parcel of just using regular services like iTunes. [Richard]
		My argument to them, and many of them do have internet access at home, is that the library has been redone, we have 3 self study rooms, we have lots and lots of pcs. It is never that difficult to get on. They could find a way. And they just have to, just like they would find their way to the classroom. It is just another interface. [Sue]
		I'm conscious of not making things that are too resource hungry. I've deliberately steered away from flash in case of people using apple devices. [Stuart]
8.	My technological skills are less good than some of my students	Chapter 7
9.	Concern for students' safety whilst working online	I wouldn't say it was an issue for the group of students that I was teaching. [Abigail]
		I find them the majority of them to be very confident very savvy even the least confident ones seem quite mature. [Adrian]
		I don't think it is different to a classroom, if they are going to behave differently in an online setting then they get the same punishments as if they are in a face-to-facesetting. I don't design anything around it. [Claudia]
		No they are not children. [Jack]
		Not considered. [James]
		It is not something that has come up really because... I have used stuff within Blackboard. One example is when I've been using discussion boards in the past and there has been a sort of case of flaming where a student told another student to 'f' off and the module leader's take on this was this is about students working together in groups... [so] let's let them resolve that through the discussion forum. [Richard]
		I probably hadn't considered it for the wikis. For the social network project I think that is a different thing. We are thinking

	quite a lot about that and about safety and how it works, so I think it depends on the tool. [Rachel]
10. The reliability and robustness of Web 2.0 tools is a concern when designing learning and teaching activities	I did have to make sure that it wasn't going to collapse [Abigail]

Things go wrong don't they? And they've got to learn to be adaptable and to manage [Jennifer]

Yes that worries me... It is why I'd never require student to use a particular Web 2 tool just encourage its use.[Claudia]

I'm probably a bit more wary about that than I used to be, not so much the robustness, but the company behind them because I'd been stung by Ning and they took lots of money off me. [Catherine]

It is just a matter of educating people about security. [Jack]

They only very occasionally let you down. [Rachel]

That was a concern and it is why I went with Blackboard [Sue] |
| 11. The web can be a permanent medium so students need awareness of this | As their work online as their identity evolves they become more confident physically through their presence on line. [Adrian]

I don't think I've talked about permanence with students but I have talked about online identity and that it is something you have to develop skills in. I feel really strongly that it is like a new key skill almost but that we ought to be supporting learners and thinking about how we manage their online identity so that they end up with something that they are happy for the world to see and would help them to present a professional persona as well as a social persona because I think that we are busily presenting a social face on line but that there is much less going on in terms of how do you exploit these tools in order to present themselves professionally. [Catherine]

I don't really understand what that means to be honest. [Emily]

Haven't considered it in relation to what I do, but in the professional based stuff that I teach in year 3 we do consider the use of Facebook and I try to get across to them that you have to be very careful about the type of thing that you put on there. [James]

I wonder whether that's still partly old school thinking that there might be something bigger underlying this but actually some people who use this technology might not feel that their private boundaries exist in the same way and that they might not have qualms at all about having a photo of them puking on a Friday night. Perhaps that kind of editor has never really developed because they kind of got on to using social networking quite a young age and it has always been a way of sharing. [Richard]

It isn't a conversation I've had with the students about concern about the web because we are using a closed system. If we went externally next year, which I would like to do, because I'd like to integrate much more with a portfolio system that they could keep for themselves and continue to use if they so |

	wished. [Sue]
	Yes important. They are making comments about their placement providers saying "they are working me for this many hours and I hate it". If someone from the placement happened to see that especially if I'd responded in a negative way perhaps it could affect both the student and the University as well. [Wendy]
12. Ensuring that students' contributions are judged on their content rather than merely participation.	Their contribution might be just can "we arrange a meeting for next week", and that is valuable the content wise. So it was the fact that they had initiated something. [Abigail]
	That is really important to me because I think that one good contribution can turn a project around, whereas lots of random uploading can actually is just noise in the background isn't it. I think going back to the traditional methods in art and design, the annotation and the visual notebook sketch books they are notoriously done the night before and I would say maybe 10% of a group are carefully constructed and annotated and then reflected upon and reworked. With the blog there seems to be a lot more care and quality of upload and linking video and reflecting on what you do post and how it is constructed as a journal compared to the traditional. [Jennifer]
	Yes that's very important but that's why I ensure one of the reasons that I have assessment criteria that's quite explicit. [Claudia]
	Yes that was very important. I'm not quite sure that we got it right because the difficulty here is that if you are going to say to a student you've got to submit this assessment in a novel way and that is by creating a blog and you have to do that and it is part of the learning criteria, but at the same time you say the blog isn't important it's the content that matters it is a contradictory message that you're given isn't it? I don't think we'd thought it through carefully enough and I don't think I've got a solution [Emily]
	I felt that because they were first years and many of them it was a new experience, reflective work, in general, let alone online reflective work, and also I wanted them to come on every week in order to do the specified exercises and engage with the system and stuff. I did say you do need to log on every week, you do need to look at this every week, you should be posting every week. [Sue]
	They have to include 3 submissions by themselves and 3 quotes from the forums and 3 submissions from other people. It is not just about participation it is also about the content. [Stuart]
13. My authority may be undermined	Chapter 7

14. Loss of teacher's control of what is going on when students use Web 2.0 tools	Chapter 7	
15. Using a VLE for Web 2.0 limits exposure to the wider internet	The blogs, we did make them private... Having the knowledge that it was only the tutor and themselves that could see what they were writing and they were told that as well, I think it made them more likely to contribute. [Abigail]	
	The VLE doesn't have the real feel that we're trying to get them to do in industry. [Jennifer]	
	Yes that is a concern. I must say I'm being a little bit of a coward as it is easier to hide in the VLE. [Claudia]	
	I think it does but I think it is necessary within the University context as we've discussed. [Emily]	
	Web 2 is something about being much more savvy with a range of tools. It is like borderless. So the whole idea of the University network being this contained environment I think Web 2 is the antithesis of that really and if you don't feel that you have got that freedom to use some of those other platforms it feels like you are doing Web 2 in a really constrained artificial way. [Richard]	
	I am quite happy to stay within the limits of Blackboard because it is really for them to find out more about a particular example and to share the example with each other. But they are not for wider consumption they are not that technical. They are not that well researched. [Rachel]	
	I think that this is true to an extent. It seems to be true in the way that we've designed this module. I feel that's one of the things that we need to think about how we can encourage exposure to wider [world]. I think we do do links and things but that's slightly passive. What I'd really like is something that allowed them to have some engagement with the wider internet but actual engagement as opposed to just reading [Sue]	
16. I am challenged by how to assess collaborative group work activities.	They did their collaborative team presentation which was formatively assessed and the wiki was a group task as well but then what was actually assessed was their individual report so the actual assessment was individual even though it was based on group work. They had to reflect on and evidence their contribution. So we assessed them individually but it was all based on their group work. It is a challenge you really have to think about how you do it. [Abigail]	
	I've taken the approach of telling the students from the very beginning that their mark will be a team mark, because that's what I'm trying to get them to do, to learn collaborative skills and to work in a team, because that is what they would have to do in industry. I did say that too them "I can look at your contributions and see who has contributed" but it wasn't	

		necessary. [Jennifer]
		I've figured out how to do that. Online collaborative group work is much easier to assess. If it is all done on line you could see who's done what it is much easier to give them an individual mark. [Claudia]
		I don't think that I am challenged by how to design. I know that they are going to submit in a portfolio based on their reflections and based on their participation. [Catherine]
		I am whether that is VLE or sitting around. I'm challenged by it because I've never really thought about it before and I haven't given myself the head space to figure out how I would do it, but I know that colleagues do do collaborative assessment, so I'd go and talk to them and get some advice really. [Emily]
		I don't think so. Because I'm actually there in the labs with them and I actually engage with all the individuals within every group every week... So this year every 4 weeks they go through a peer assessment exercise. So... they have this audit trail of this is what we said then this is what we said then. So they could see for themselves how it had progressed, and they had learnt the language that they need to use. [Jack[
		I think that this is always a challenge whether you are using technologies or not. [Richard]
17.	Some students prefer to work as individuals than to undertake group work	Yes I would agree with that... I did a whole session on team work and I've got really good videos of Learn Higher web site that follows a group of students through the trials and tribulations of preparing a team presentation. [Abigali]
		They do. We do a little bit of work on Belbin which helps them to understand that not everybody's the same and that they can contribute in different ways. [Jennifer]
		No different for off line. [Adrian]
		I always designed group work so that students could only benefit from other students behaving badly, because if they could be seen to be handling it well then it would do them favours. [Claudia]
		I think it is different to face-to-face...one of the things about using the blogging platform [rather than a discussion forum] was to experience creating an online persona which was an academic one where they expressed some of their ideas for wider consumption either within the cohort or possibly even beyond it. I think the ones who would like to hide within a discussion forum had their own space which they had to fill. [Catherine]
		Yes they were quite reluctant to work in the group. It is necessary because one of the employability skills required by industry now it is being a good team member. [Crista]
		They do but that's tough luck because it is all about transferrable skills. But I have never put students into a group for an assessment a summative assessment and I wouldn't

	know how to manage that. [Emily]
	But that's just life. It isn't just connected with online at all. [Jack]
18. There is a loss of certain aspects of the learning process when we move to online learning. Students want personal contact with me	[The module isn't] wholly online. It is a traditional lecture space plus something going on online at the same time. So I think in that way they feel supported and it would be different I agree it would be different if it was totally online. [Jennifer]
	They think they do but they don't. It is different. If you are trying to use an online environment to try to do what you do in a face-to-facethen don't do it. Face-to-face learning environment is the best place to do face-to-face learning. It is about different things. [Claudia]
	When we used etherpad [the pace] it went entirely. The pace that we had on the day school was excellent for the most part and the contributions were really excellent and it just evaporated, couldn't see any evidence of it at all. Nobody used it so I don't know why it was but it was . So when I was designing the activity I probably didn't consider it enough which means I'm a bad designer. It [design of learning activities] is multi factorial and it is like some sort of witches brew you have to get it exactly right a touch too much of something and it all goes pink tongue? [Catherine]
	I think online learning can be more intimate actually and I also think it can be more pacy that really depends on how I manage my workload. [Emily]
	To try and run this as a purely on line thing would work differently. It would slow it down. It is quite a visual and intense activity. You do need to be able to see what people are doing right there and then so you need people to be online at the same time. Parts of the work can be done remotely and it doesn't matter if you've got temporal discontinuity as to when things are going on. I encourage all of the groups to have at least one face-to-face meeting so that they can thrash out anything between then and it gets dealt with there and then. ...There is the possibility that things can fall apart if things are wholly online. [Jack]
	Although I'm a big advocate of online learning for me it has all got to be in context so putting stuff on VLE or using a particular web based package... And I do think that for a lot of students that will be destabling and particularly for health care students and I think sometimes the politics of it are that it feels that we are being pushed towards it because it is more convenient but I am not convinced that it engenders better learning. I think there has to be a balance between the two. [James]
	I think a lot of the things that you see with web based tools ... it is quite didactic and therein lies the problem... You will disengage students unless it is very cleverly designed. Don't get me wrong and I think it can be employed well. But I think it is often done badly because they either haven't got the technical skills or they haven't thought it through properly and

	contact time is essential with health care professionals but I do think it can sit alongside it, but you have to have do it really really well. [James]
	There are losses in some qualitative ways, there are also some <u>gains</u> as well. I think as long as students know how they can have that personal contact. [Richard]
	I do think the learning process changes in online learning, because they are more in control of the process, the speed and so on, but they are still getting that diversity. I think that if materials are well written and designed for the purpose that they are trying to be used for then it doesn't impact on the learning, it just changes the medium that they are going through. And I think that is the key to any of this technology is that you should only use it if you can see a clear benefit to the students. I don't think contact has to be face-to-face. It can still be personal without the face-to-face. I don't see that as a limitation. [Rachel]
	We actually built in some workshops to actually compensate for that. Which you could argue is cooping out, but that's the value of blended learning. [Sue]
	Absolute rubbish. It can be the case if it is done badly. If people believe that using Web 2.0 is just throwing a PowerPoint up on Blackboard and telling the students to read it, then absolutely. But the intimacy, you can get a far greater dialogue. Because even when you start a discussion within the forum you can take it onto email. It can be more obvious if you did it in the classroom where if you said can I have a word with you when everyone else is going for coffee. But this way you can do it quietly and subtly. Pace and flow – that is part of the challenge of the facilitator to make sure that that happens. I've seen it done really badly. You could argue that you could be rubbish at face-to-face teacher whereas others are good. It is who does it. Too many people want to blame online. People have been taught how to do normal tutoring then suddenly expected to be able to morph into online tutors without any extra education. [Stuart]
	I think that there is more intimacy and if the students want personal contact with me to know how they're feeling then they can do that via the private messaging function. [Wendy]
19. There is a requirement to cultivate fluency and sensitivity in new forms of expression (eg visual or video)	It means allowing students to find a way of communicating that suits them best. This is a very important aspect of tertiary literacies/graduate attributes. For them to find their voice and for them to find their way that works best for them is absolutely vital. If we just keep requiring people to submit essays when essays are not the way that they communicate best. If you just give students free rein then it will all collapse. So making sure that they are making informed and supported choices is what I'm talking about. [Claudia]
	It is a digital literacy sort of thing isn't it that there are lots of different ways in which you can convey your thoughts online

	that you don't have access to, if you just presenting your work in writing. Yes so that is something that you have to think about when you are designing it. I should do more of it next year. [Catherine]
	I have tried [using video for their online reflections]. A couple of them said "I don't like doing that and I'm not going to do it". And it was good [for] those who did it. [Catherine]
	You got to be aware that nowadays information is presented in a host of different formats so to engage academically we need to be able to analyse and evaluate not just text but other forms of information. It is a whole new skill. I agree I made far too many assumptions that students would be able to. We need to do more for this blog thing to be successful in the way that I'd hoped, we need to do more work on how to deal with different types of resource. Which we didn't do. [Emily]
	Absolutely, it's really important that you do it [present a video] in a way that works [by] being yourself on the video not being too wooden. If I was to listen back to this conversation I would sound really broad Yorkshire and then I'm not the slimmest person in the world. I do think they are real considerations... but you see the benefits that can be achieved. [James]
	I think the idea of visual literacy and digital literacy in general is an important one... We have had such a historical legacy of static text based literacy that I think it is unreasonable to think that we would have moved to complete fluency with this multimedia environment in the space of what 15 to 20 years. [Richard]
20. Concern over exposure of my (teacher) expertise in terms of subject expert (rather than technical skills).	Chapter 7
21. I need to teach the skills of inquiry required to judge the authority of sources when researching in a Web 2.0 environment.	Off line world things need to go through an editor, a publisher there are steps before it gets out there. They need to be more aware of what they are reading. [Abigail]
	Yes but that's equally in written work that isn't very good one. It is important generally. [Jennifer]
	It is no different to any authority of things so it doesn't bother me so much. [Claudia]
	On balance I probably should pay more attention to getting them to the point when they've more of a critical reader of what they get on the web. [Catherine]
	They can get an explanation about certain problem but what about the source that is giving that solution? Because it could have marketing purpose. [Crista]
	Completely agree with that. But I think that the teaching that we are doing is not successful at the moment. I've just marked

	a second year and the reference was Wikipedia. That's all that was referenced. I don't know what to do about that. I think it is lazy but maybe I'm being unfair to the students. [Emily]
	We talk to them about the validity of web based sites and how you can look whether it is current and whether it is peer reviewed. A little bit like you talk to them about journal use more than anything else and we give them guidance in the form of putting them on half a dozen good sites, then as part of an ice breaker we chuck a few sites up which are not as robust as we'd like them to be. I think they get the message. [James]
	I think it is most important. I'm still quite surprised at the uncritical ways in which some learners will use web sources and I'm surprised by people's sort of refusal to go beyond the first page of Google results. And it is frustrating in an age of so much really useful stuff on the web. [Richard]
	I think students even after a couple of years still aren't' very good at distinguishing between academic and non academic or reliable sources of information. And I think when they are enquiring they still need to be guided on how to make that judgement that that is valid what they are looking at so they can rely on it. [Rachel]
22. I need to teach students an understanding of what constitutes plagiarism	I do teach that. I try and do it in a more positive way, looking at the referencing and who you should acknowledge and use a wide range of research to build an argument. I do talk about when you cut and paste.[Abigail]
	Yes completely agree with that and if anything the Web 2 makes detection easier because you run the online stuff about as you've alluded to I can't know what all the books in all the libraries. I don't think that they plagiarise very often. I think that they don't understand referencing well and I think that can be a bit lazy. [Emily]
	I have had some students who have said we don't work collaboratively because they think it means plagiarism [Jack]
	I think there are a lot of cases where students just don't understand the significance of copying and pasting without actually indicating that as a quote in your actual written material ... that's despite sessions on referencing and plagiarism and some students have said to me "it was OK to do this at college." [Richard]
	I don't know whether they don't understand what plagiarism is, or whether they just think... "as long as I've stuck a few references in" or I still think even though you tell them all these things they have a very poor concept of what taking somebody else's work is. [Rachel]
23. Some Web 2.0 tools use informal systems of data organisation	No I haven't taught that specifically. [Abigail]
	No I don't think I'd be concerned with that. [Adrian]
	It is just another aspect of thinking critically about the resources

	that you use. [Jennifer]
	So folksonomy is a very important part of post colonial enquiry and it is linked to challenging that authority of the institution. [Claudia]
	Just because you've got 2000 likes somewhere doesn't necessarily mean it's any good. [Jack]
	Web 2 obviously introduces the possibility of something being categorised on the basis of use amongst users rather than formal systems of categorisation and it is interesting to see how that categorisation based on use is enacted in the Web 2 environment and for the same reason that I would never say to students don't use Wikipedia to gain an understanding of something or to point you in the direction of something, but perhaps steer clear of citing it, because there are issues associated with the authenticity the validity and reliability, although as we know there have been studies that have been done that have kind of said that actually the information is pretty reliable. [Richard]
	But the culture of authenticating information on the web is very different from the culture of authenticating information. It is not peer reviewed. It is very meritocratus . Really brilliant pieces of scholarship that aren't supported by a university. There are also some really dodgy ones that might be, so it is a levelling out and it does provide a very meritocrutus sources of information but you need to have good knowledge of your subject to distinguish what's good and what's not in a new topic area for any of us. [Emily]
	It is not something I'd actually considered as a part of an issue when we were designing the module, but it is something we perhaps need to look at by building in more work with delicious. [Sue]
24. I need to know that the knowledge that students have access to is valid and reliable	There were tools that librarians produced on the web, resource discovery network, where librarians picked useful sites that were authoritative eg bubl and things like that. We have shown students things like those apart from using Google. They are more authoritative because librarians have identified them. It is quite static, quite librarian led and not participative. It is a bit dated now. Our fashion and marketing students they want to access newspapers, an academic journal might not necessarily be appropriate. So it is what is appropriate for the task. It is developing those skills and judgements. [Abigail]
	I think we load up examples or benchmarks of something that we think is Ok or good practice and then they've got something to compare it to. [Jennifer]
	no doesn't bother me they can figure that out for themselves [Claudia]
	I think it is important that they think about this. On the PGCE it is a really big thing that they check their sources and make sure that it is reliable and peer reviewed. [Catherine]

	I can't know that [students have access to information that is valid and reliable]. I know that some of the information that students have got access to isn't going to be. [Emily]
	I usually find that their own peers will take the mick out of them if they are gullible enough to believe something which is not likely to be true. You kind of rely on them to do most of their self policing in that sense. [Jack]
	I think to appreciate what good knowledge is they need to see the other side of it. If I picked half a dozen web sites for my students and I said this is the sort of thing that you need to be looking at, if that is all I did and they didn't see the other side of it, we'd give our students a completely blurred view. I'm not sure that all the learning takes place then. [James]
	I think some of them are just naturally able to do that [judge the validity of a source]. [James]
	I'm not sure it [teaching information skills] is a priority. After all if they are coming here to learn nursing. [James]
25. I am concerned that my position will be undermined through students accessing other sources on the web	Chapter 7
26. I need a better knowledge of how to use technology within my teaching	Chapter 7
27. I need better skills of enquiry into web based information sources	Chapter 7
28. Students have quite conservative expectations of learning and teaching.	Students expect to be taught quite a didactic way. There is an expectation of being taught. Very content led rather than them becoming independent learners going out for themselves. [Abigail]
	They have quite a traditional expectation of university to sit in a huge lecture theatre and take notes. It has changed like everything around us has... We found using social software is that students happily use facebook to organise social lives but using those tools in an educational environment they hadn't made that transition yet to use the tools for teaching and for learning. I think that will change. [Abigail]
	I would agree with that [Adrian]
	Yes I think that is true. I think managing student expectations is really important. I think a lot of students and a lot of academic staff are in a co-dependent relationship to do with instructional paradigms of teaching and learning; students want

to just be told what they need to do to pass the course and academic staff just want to be able to tell students to pass the course. Moving to constructivism is a hell of a lot scarier than that and I want my students to take intellectual risks and I want them to scare themselves, but it means that I have to scare myself as well... I think if you lay the ground work at the outset that this is going to be a process of enquiry about intellectual risk taking then I think you get a lot less of that kick back. It is something that I spend a lot of time thinking about so it is important to me. They have quite a conservative expectation because most of my colleagues have conservative expectations. I think if you set expectations for students they tend to meet them. If you have low expectations they tend to meet them. [Claudia]

They can be quite conservative. [How do you take them with you?] Support them as much as you can through it and by the end of it they have trusted you and see the positive outcome. [Claire]

It is diverse, some stretch you, but others are lagging a long way behind. In the main though the pattern for me is that most are quite conservative. [Catherine]

The international students yes because they come from a teacher cantered educational system so they believe in what the lecturer is saying and they are expecting you to really come up with every answer to every question so it took me some time to really make them understand that it is they need to have the active involvement in the learning process. [Crista]

Yes I think they do. We can either make that strength and maintain those conservative expectations or we need to challenge them in the first year. For example when I said let's do this on a blog some were ok with it, some of them were like woo and some of them hit the carpet and just couldn't cope at all. They all did cope at all. They all did manage it. [Emily]

The students who I'm teaching at the moment don't have those expectations. They want to be learning by doing... I think if you told them that they had to sit in a lecture theatre for an hour they would fall asleep. They want to be actively engaged in what they are going. Learning needs to be active and interactive rather than passive. So no I don't find that. [Jack]

I disagree with that quite strongly. I don't think they do. I think they are modern students, particularly if they are coming from schools which have had innovative teachers, the students that we get almost have an expectation of the technology - the ways that we do things these days. I think that it is quite the opposite. I think that they want very dynamic interactive means of teaching you know. [James]

I think sometimes in relation to the whole elearning issue and Web 2 technologies it can be more conservativism on the part of teachers rather than students. Where I think students can be quite conservative is with this real concern for learning outcomes that we've instil in them and how they demonstrate

	the things through assignments.. that strategic approach is kind of a form of conservativism. [Richard]
	I still think that they think that teaching is coming in and sitting down and doing lessons and then using some other materials as well, but it is amazing how many of them don't make full use of the other materials. They still see the lessons as when you are taught and they don't think that they should be reading or I think they <u>are</u> quite conservative. [Rachel]
	Any type of online learning is not seen as valuable as if you were there present with them. That is clearly an issue for any kind of [elearning] and we definitely come across that. [Sue]
	There was a group of students who wanted more face-to-face So whereas before they were used to having all day lectures now they were being told to come in at lunchtime having spent the morning being given some directed studies but what was missing was they didn't spend the first period discussing what they'd done in the morning. It was like that's done and it wasn't joined up. It depends how it is sold to the student if they understand the value of what they are doing and the value behind it. [Stuart]
29. I fear the boundary between my personal and professional space and time will be further eroded through using these tools.	Chapter 7

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Appendix H How the tensions were coded.

	Strategies for managing tensions			Opinions about the tensions			
	Accommodated	Managing expectations	Turned	Same as f2f	Haven't thought	Important	Disagree
1. I need to ensure that students have adequate technical skills	3	0	0	0	0	2	1
2. Concern over my technical skills	2	0	0	0	0	0	2
3. Time consuming for me to learn to use new tools	0	0	0	0	1	0	2
4. Time consuming for my students to learn to use new tools	2	0	0	0	2	0	1
5. More teacher time is required to run a Web 2.0 learning activity	0	0	0	0	0	0	4
6. The University's reputation is a concern if using open web based tools	2	0	0	0	4	0	0
7. Access to IT equipment by my students impacts on the way I design learning activities	1	0	0	0	0	1	1
8. My technological skills are less good than some of my students	0	0	0	0	0	0	3
9. Concern for students' safety whilst working online	2	0	0	0	1	0	1
10. The reliability and robustness of Web 2.0 tools is a concern when designing learning and teaching activities	2	0	0	0	1	1	0
11. The web can be a permanent medium so students need awareness of this	3	0	1	0	2	1	0
12. Ensuring that students' contributions are judged on their content rather than merely participation.	1	0	1	0	0	3	0
13. My authority may be undermined	0	0	0	0	1	0	4
14. Loss of teacher's control of what is going on when students use Web 2.0 tools	0	2	1	0	1	1	2
15. Using a VLE for Web 2.0 limits exposure to the wider internet	0	0	0	0	1	0	1
16. I am challenged by how to assess collaborative group work activities.	2	0	1	0	1	1	0
17. Some students prefer to work as individuals than to undertake group work	2	0	0	1	0	1	0
18. There is a loss of certain aspects of the learning process when we move to online learning.	0	0	0	0	0	0	3
19. There is a requirement to cultivate fluency and sensitivity in new forms of expression (eg visual or video)	0	0	0	0	0	1	1
20. Concern over exposure of my (teacher) expertise in terms of subject expert (rather than technical skills).	0	0	0	1	0	0	1
21. I need to teach the skills of inquiry required to judge the authority of sources when researching in a Web 2.0 environment.	0	0	1	1	0	2	0
22. I need to teach students an understanding of what constitutes plagiarism	0	0	0	3	0	0	0
23. Some Web 2.0 tools use informal systems of data organisation	0	0	0	0	2	0	0
24. I need to know that the knowledge that students have access to is valid and reliable	1	0	2	0	0	0	0
25. I am concerned that my position will be undermined through students accessing other sources on the web	0	0	0	0	0	0	1
26. I need a better knowledge of how to use technology within my teaching	1	0	0	0	0	0	0
27. I need better skills of enquiry into web based information sources	0	0	0	0	0	0	1
28. Students have quite conservative expectations of learning and teaching.	1	4	0	0	0	2	2
29. I fear the boundary between my personal and professional space and time will be further eroded through using these tools.	0	0	0	0	0	0	2
Totals	25	6	7	6	17	16	33

Appendix I Claudia's responses to the Tensions Exercise

Tension	Claudia's responses
I need to ensure that students have adequate technical skills	I don't worry about that very much. I design to the lowest common denominator. What I expect is that a students can edit a word document.
Time consuming for my students to learn to use new tools	It doesn't bother me. This is stuff that they'll learn how to do basically.
Access to IT equipment by my students impacts on the way I design learning activities	It does. It is the lowest common denominator stuff. I'm always making sure that if a student has wonderful kit good on them they can go to town, it won't necessarily give them a better mark because they've got that stuff. The same criteria would be used for those who only had a word document if they've used the document to its potential.
Concern for students' safety whilst working online	I don't think it is different to a classroom, if they are going to behave differently in an online setting then they get the same punishments as if they are in a face-to-face setting. I don't design anything around it.
Ensuring that students' contributions are judged on their content rather than merely participation.	Yes that's very important but that's why I ensure one of the reasons that I have assessment criteria that's quite explicit
Using a VLE for Web 2.0 limits exposure to the wider internet	Yes that is a concern. I must say I'm being a little bit of a coward as it is easier to hide in the VLE.
I am challenged by how to assess collaborative group work activities.	I've figured out how to do that. Online collaborative group work is much easier to assess. If it is all done on line you could see who's done what it is much easier to give them an individual mark.
Some students prefer to work as individuals than to undertake group work	I always designed group work so that students could only benefit from other students behaving badly, because if they could be seen to be handling it well then it would do them favours.
There is a loss of certain aspects of the learning process when we move to online learning. Students want personal contact with me	[They think they do but they don't. It is different. If you are trying to use an online environment to try to do what you do in a face-to-face then don't do it. Face-to-face learning environment is the best place to do face-to-face learning. It is about different things.
There is a requirement to	It means allowing students to find a way of communicating that

cultivate fluency and sensitivity in new forms of expression (eg visual or video)	suits them best. This is a very important aspect of tertiary literacies/graduate attributes. For them to find their voice and for them to find their way that works best for them is absolutely vital. If we just keep requiring people to submit essays when essays are not the way that they communicate best. If you just give students free rein then it will all collapse. So making sure that they are making informed and supported choices is what I'm talking about.
I need to teach the skills of inquiry required to judge the authority of sources when researching in a Web 2.0 environment.	It is no different to any authority of things so it doesn't bother me so much.
Some Web 2.0 tools use informal systems of data organisation	So folksonomy is a very important part of post colonial enquiry and it is linked to challenging that authority of the institution.
I need to know that the knowledge that students have access to is valid and reliable	no doesn't bother me they can figure that out for themselves.
Students have quite conservative expectations of learning and teaching.	Yes I think that is true. I think managing student expectations is really important. I think a lot of students and a lot of academic staff are in a co-dependent relationship to do with instructional paradigms of teaching and learning; students want to just be told what they need to do to pass the course and academic staff just want to be able to tell students to pass the course. Moving to constructivism is a hell of a lot scarier than that and I want my students to take intellectual risks and I want them to scare themselves, but it means that I have to scare myself as well... I think if you lay the ground work at the outset that this is going to be a process of enquiry about intellectual risk taking then I think you get a lot less of that kick back. It is something that I spend a lot of time thinking about so it is important to me. They have quite a conservative expectation because most of my colleagues have conservative expectations. I think if you set expectations for students they tend to meet them. If you have low expectations they tend to meet them.

Appendix J Emily's responses to the Tensions Exercise

Tension	Emily's responses
Time consuming for my students to learn to use new tools	No because we have put it into the curriculum
The University's reputation is a concern if using open web based tools	I don't think I would want to use open web tools. I think it would be more about copy right issues, my work and students' work going out into the form that I would be concerned about.
Access to IT equipment by my students impacts on the way I design learning activities	A piece of feedback that we did get was "I don't have the internet at home and it made this assessment harder for me" and I think that's a consideration.
The web can be a permanent medium so students need awareness of this	I don't <u>really</u> understand what that means to be honest.
Ensuring that students' contributions are judged on their content rather than merely participation.	Yes that was very important. I'm not quite sure that we got it right because the difficulty here is that if you are going to say to a student you've got to submit this assessment in a novel way and that is by creating a blog and you <u>have</u> to do that and it is part of the learning criteria, but at the same time you say the blog isn't important it's the content that matters it is a contradictory message that you're given isn't it? I don't think we'd thought it through carefully enough and I don't think I've got a solution
Using a VLE for Web 2.0 limits exposure to the wider internet	I think it does but I think it is necessary within the University context as we've discussed
I am challenged by how to assess collaborative group work activities.	I am whether that is VLE or sitting around. I'm challenged by it because I've never really thought about it before and I haven't given myself the head space to figure out how I would do it, but I know that colleagues do do collaborative assessment, so I'd go and talk to them and get some advice really.
Some students prefer to work as individuals than to undertake group work	They do but that's tough luck because it is all about transferrable skills. But I have never put students into a group for an assessment a summative assessment and I wouldn't know how to manage that.
There is a loss of certain aspects of the learning	I think online learning can be more intimate actually and I also think it can be more pacy that really depends on how I manage

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process when we move to online learning. Students want personal contact with me	my workload
There is a requirement to cultivate fluency and sensitivity in new forms of expression (eg visual or video)	You got to be aware that nowadays information is presented in a host of different formats so to engage academically we need to be able to analyse and evaluate not just text but other forms of information. It is a whole new skill. I agree I made far too many assumptions that students would be able to. We need to do more for this blog thing to be successful in the way that I'd hoped. We need to do more work on how to deal with different types of resource. Which we didn't do.
I need to teach the skills of inquiry required to judge the authority of sources when researching in a Web 2.0 environment.	Completely agree with that. But I think that the teaching that we are doing is not successful at the moment. I've just marked a second year and the reference was Wikipedia. That's all that was referenced. I don't know what to do about that. I think it is lazy but maybe I'm being unfair to the students.
I need to teach students an understanding of what constitutes plagiarism	Yes completely agree with that and if anything the Web 2 makes detection easier because you run the online stuff about as you've alluded to I can't know what all the books in all the libraries. I don't think that they plagiarise very often. I think that they don't understand referencing well and I think that can be a bit lazy.
Some Web 2.0 tools use informal systems of data organisation	But the culture of authenticating information on the web is very different from the culture of authenticating information. It is not peer reviewed. It is very meritocratus . Really brilliant pieces of scholarship that aren't supported by a university. There are also some really dodgy ones that might be, so it is a levelling out and it does provide a very meritocrotus sources of information but you need to have good knowledge of your subject to distinguish what's good and what's not in a new topic area for any of us.
I need to know that the knowledge that students have access to is valid and reliable	I can't know that [students have access to information that is valid and reliable]. I know that some of the information that students have got access to isn't going to be.
Students have quite conservative expectations of learning and teaching.	Yes I think they do. We can either make that a strength and maintain those conservative expectations or we need to challenge them in the first year. For example when I said let's do this on a blog some were ok with it, some of them were like woo and some of them hit the carpet and just couldn't cope at all. They all did cope at all. They all did manage it.