"Tension, Frustration and Compromise in the Field"
An Exploratory Study of the Habitus of Educational Technologists

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Abstract

Information and communications technology has radically transformed many aspects of modern life. However, this is in marked contrast to its impact on education, where disappointingly educational technology has done little to transform our higher education system. This is in spite of the emergence of the formal role of educational technologist, the improved ICT infrastructure and the evolving recognition of the importance of teaching and learning within the sector. It is apparent that within a given academic community there are many individually motivated innovators i.e. those characterized by their willingness to experiment with new approaches and embrace change. Whilst there are also many who resist and avoid any possible alterations (or interference) in how they teach their subject matter.

But what do we know of the characteristics and motivations of the practitioners currently operating in the field of educational technology? Indeed can we treat the domain of educational technology as a legitimate field and worthy of study in its own right? These two questions represent the main thrust of this exploratory study which demonstrates that Pierre Bourdieu's' concepts of habitus, field and capital provides a suitable lens with which to seek explanations and insights into these and other issues, and in particular theorise about the practice of an educational technologist.

The methodology adopted was influenced by both arts based and narrative enquiry, designed to capture the voice of the practitioners using focus group discussions prompted by a range of visual media. Grounded theory guided the subsequent analysis of a rich collection of opinions, values, beliefs and motivations on a range of issues impacting on higher education. The subsequent findings describe the tensions and frustrations of practitioners functioning within existing structures and balancing the demands from learners, academics and management. The inherent characteristics of the field as described by the participants are analysed using Bourdieu's constructs of capital, habitus, doxa and hysteresis.

The explorations and explanations afforded by these constructs are the foundations on which the final arguments and conclusions are based, including a call for an alternative doxa that will redefine the role of an educational technologist and allow the field to evolve into a recognised professional discipline.

Acknowledgments

I would like to take this opportunity to thank all of the staff in the Department of Adult Education and the Department of Education at NUIM for their inspiration and guidance through all the stages of this programme. Their energy and enthusiasm was a critical ingredient in creating a wonderful space for adult learning, Thursdays will never be the same again! In particular, to my supervisor Dr. Bernie Grummell who adroitly steered me through the design, delivery and completion of this study and Dr. Rose Malone who introduced me to the work of Pierre Bourdieu.

I would like to acknowledge the ongoing encouragement and support from my colleagues at the Institute of Technology, Blanchardstown.

To my family, Kathleen, Eoghan and Siobhan who were my constant companions on this journey and provide an endless source of inspiration. I would like to sincerely thank them for their patience and selflessness in allowing me to pursue my dream.

Dedication

I would like to dedicate this work to the memories of Ita McNutt and Paddy and John Devine.

Chapter 1: Introduction

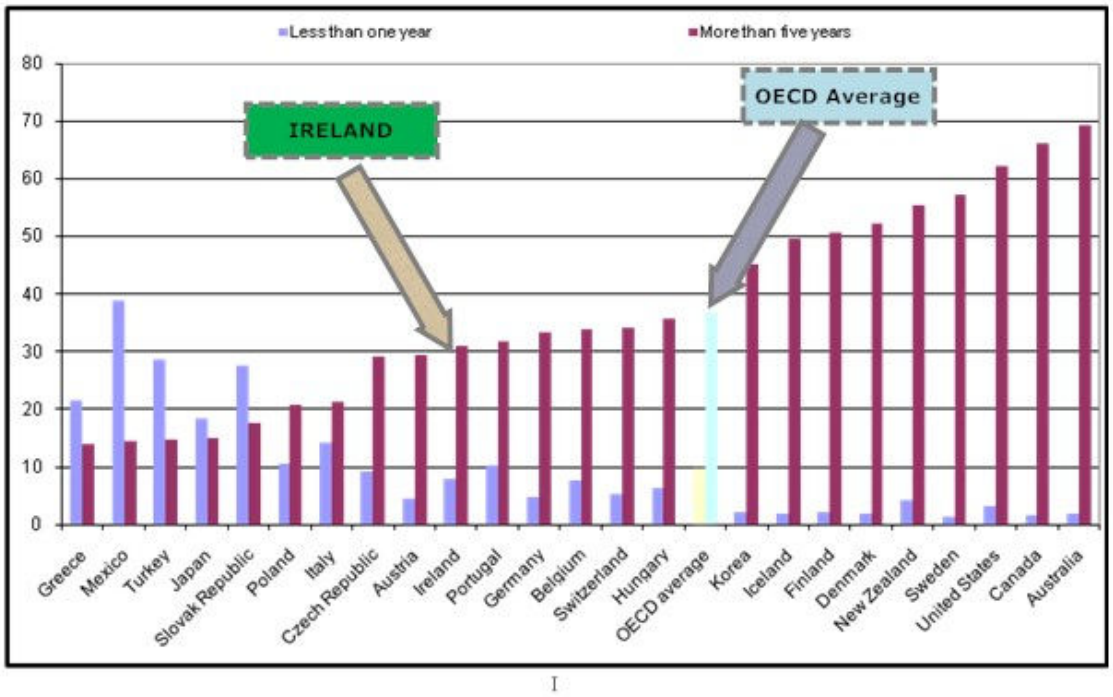
Setting the Scene: Technology and Education in Ireland

There are a number of annual events in Ireland that demonstrate a high level of activity in the field of educational technology. The first is the annual *Computer Education Society of Ireland Conference* (www.cesi.ie) – a gathering of enthusiastic teachers from all levels proudly demonstrating their application of technology in the classroom. Teachers teaching teachers, providing advice and guidance from the coal face – often characterized by modest budgets, limited technical support and constraints imposed by an already packed programme of study. The second event captures similar levels of energy and enthusiasm but was a student oriented forum. The annual finals of the Formula One Technology Challenge – teams from around the country compete in the design, development and racing of a CO_2 powered model racing car[1]. The *F1 in Schools* is a technology challenge that enables second-level students to get their hands on the latest technology from the worlds of engineering and manufacturing. This activity is part of a national initiative to encourage more students to consider careers in science and technology. Activities such as these are designed to address one of the main concerns of the OECD[2] report on the computer usage of Irish students which ranks Ireland low in comparison to other EU countries (See Figure 1-1). The Irish Learning Technology Association's[3] annual conference EDTECH also provides a glimpse of innovative approaches to the design and delivery of a variety of education programmes within the higher education sector – online, blended and problem based learning methods have all been adopted by practitioners.

The conference provides a venue for the sharing of experiences and an open debate and discussion on the pros and cons of various technology platforms. Educational technologists address the problems that the education arena now presents and adopt the position of reflexive practitioners.

[1] http://www.f1inschools.ie/public/index.html
[2] The Organisation for Economic Co-operation and Development (http://www.oecd.org/)
[3] http://www.ilta.ie

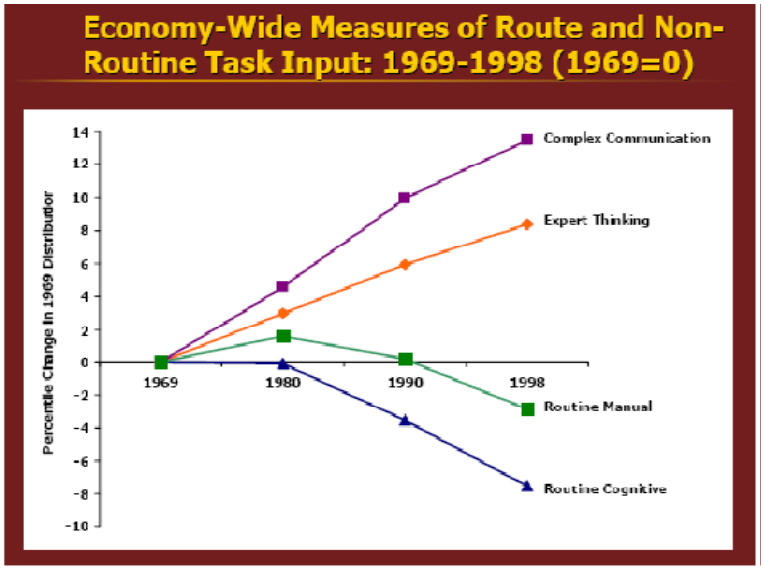
Figure 1-1: Percentage of 15 year olds using computers – by numbers of years of usage 2003



At first glance this appears to be a cause for celebration as remarkable change is brought about by these innovative and creative uses of technology. This new technology industry only recently celebrated the fiftieth anniversary of the first computer introduced into Ireland by the Irish Sugar Company in 1957. In that period Ireland has witnessed a period of unparalleled economic growth and continues to experience major social and cultural change (Kuhling and Keohane, 2007).

The transformation of civil society by technology on an international scale has been captured by Murnane & Levy (2003) who documented the changing profile of knowledge and competencies required by employees in the US economy (See Figure 1-2). The demand for routine cognitive and routine manual competencies has declined significantly over the 30 year period many of these tasks have been automated. This period has also seen a rise in the demand for other competencies such as "expert thinking" and "complex communication".

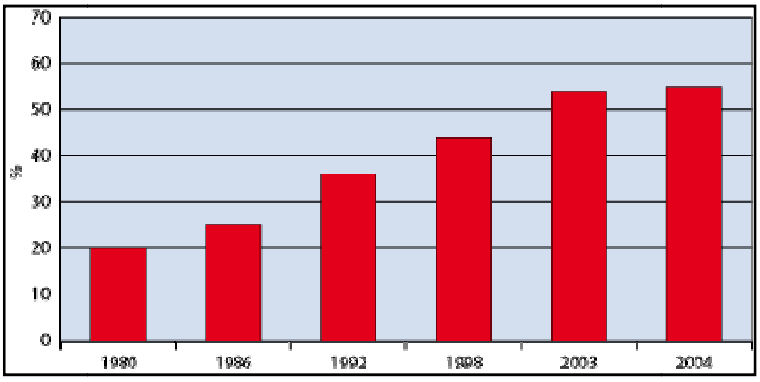
Figure 1-2: Economy-Wide Measures Routine and Non-Routine Task Input



However, when I started to investigate the impact of technology on the Irish education sector I was presented with a very different scenario. This is evident in the Department of Education and Science report "*Education Trends: Key Indicators on Education in Ireland and Europe*[4]". This report indicates that although admission rates to higher education have undoubtedly risen, participation within local districts is still largely determined by socio-economic group (See Figures 1-3 and 1-4).

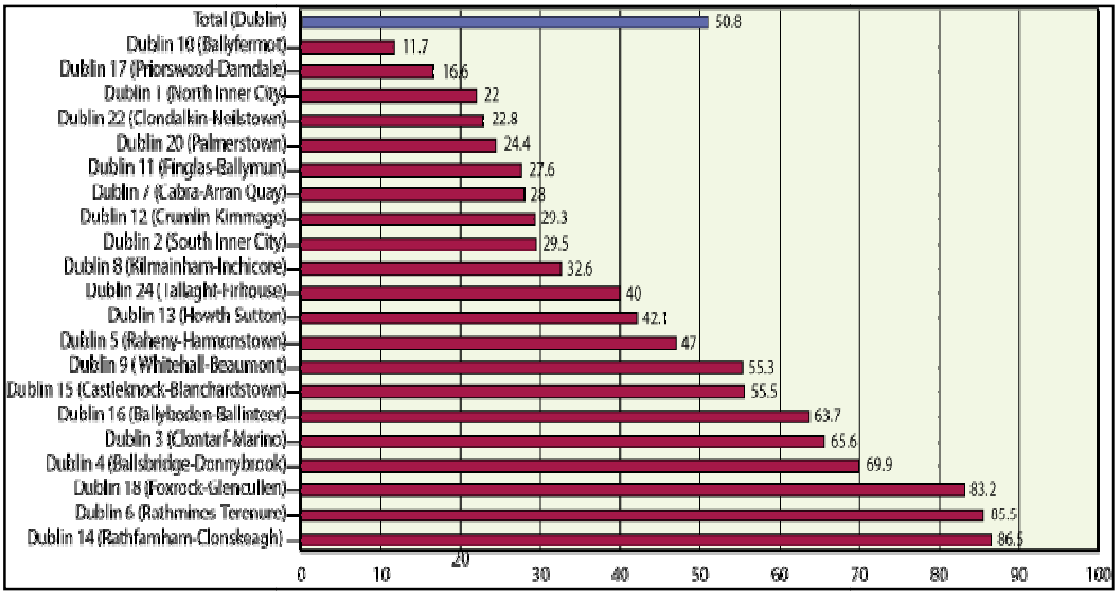
Figure 1-3: Admission Rates to Higher Education

1980 – 2004



[4] Available on the Department of Education and Science website (http://www.education.ie/)

Figure 1-4: Admission Rates to Higher Education by Dublin Postal District, 2004 (%)



A concern captured by Newman (2005) who states that

"*Despite some evidence of an increase in participation rates by lower socioeconomic groups, they continue to be underrepresented at third level…..In addition students from higher socioeconomic backgrounds are highly represented in universities…"* (p.295).

This is also echoed by Lynch (2006) who states that years of research evidence on the patterns of class inequality in education has shown little class mobility over the past fifty years.

Pillingers's (2003) report addressing the needs of people with disabilities also paints a sobering picture.

> *Disabled people experience high levels of exclusion and marginalization in Europe. These can be seen from low levels of participation in work and society. 17% of people in the EU have a chronic illness or disability; 15% of these are of working age…..only 30.5% of the disabled labour force population is employed. (p.4)*

The National Adult Literacy Agency contends that In Ireland nearly 30% of the workforce has only a Junior Certificate or less[5], while 10% has only primary level education or no formal qualifications at all. Furthermore, 25% of adults still lack functional literacy and numeracy skills.[6]

A sharp juxtaposition is presented by the apparently limitless potential afforded by technology over the past fifty years, as compared with the modest changes in our education sector. This provided the motivation and backdrop for this study as I realised that the criticism levied by Snyder and Palmer (1986) over two decades ago still represents a valid comment today.

> *.....the computer has done little that is educationally significant. What it has done is capture our imagination, and prompt us to finance possibly the biggest unfocused research effort in the world at a cost, for hardware and software alone, projected to exceed $8 billion in 1987. (p.13)*

I found their commentary two decades ago refreshing in its bluntness and at the time daring, to be seen to criticize the emerging giants of the personal computer industry was viewed as heretical. For me this scenario posed a real challenge for educational technologists to address as we wonder why has technology seemingly contributed to the reproduction of our education sector rather than its transformation?

Goodman (2003) captures the current situation on a global scale

> *I have previously examined education in the broad context of our culture, looking at our present situation as a crisis in which our civilisation and indeed all life on earth is threatened. I suggest that the crisis exists because the taken-for-granted assumptions of our society are no longer appropriate and that our education system, which is based on the same assumptions, perpetuates the situation. (p.8)*

[5] Junior Certificate is the state examination taken by students who have successfully completed the three year junior cycle of secondary education

[6] http://www.nala.ie/index.cfm/section/page/ext/Literacy_in_Ireland/

The rationale for this study is the recognition that there is an opportunity for educational technology to become a radical force in the transformation of education in Ireland. It needs to become a catalyst for change and not simply a cog in the wheel of reproduction. At the moment, debate and discussion is dominated by a techno-utopian discourse which is offering more than can be delivered (Boshier & Onn, 2000, p7). This is a term introduced by Boshier and Onn (2000, p.3) who describe four competing discourses which dominate the intense politics of online learning and education. These are referred to as techno-utopianism, techno-cynicism, techno-zealotry, and techno-structuralism (See Figure 1-5). Of interest to this study are the definitions provided for each label: **techno-utopians** are optimists who believe the Web leads to greater access to education; **techno-cynics** do not believe the Web is a wired utopia for learning or education or much else; **techno-zealots** often appear naïve and upbeat, power relations are irrelevant because technology has inherent value and **techno-structuralists** are willing to give the web a try and are not interested in whether it is good, bad or neutral.

Further evidence of this dominant discourse can be gleaned from the key headlines in the Times Higher Education Supplement newspaper during the academic year 2006/2007 dealing with educational technology were reviewed (See Table 1-1). This provided a useful snapshot of the noteworthy key issues and challenges which characterize the educational technology domain.

Figure 1-5: Competing Discourses

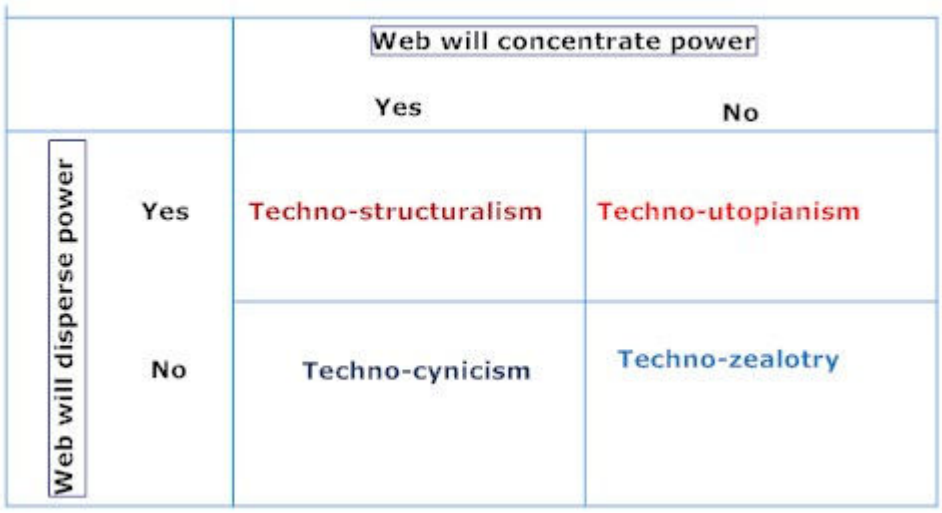


Table 1-1: Technology Related Headlines

"Virtual Learning Environments can betray the privacy of individual users and stifle their learning experience" [15th September 2006] **[1]**
"Demand for online course at Open University Australia could soon outstrip supply" [22nd December 2006] **[2]**
"The latest chart topper on the digital music download Website iTunes is a series of lectures on Kant's epistemology by a senior lecturer at Glasgow University"[15th December 2006] **[3]**
"In the internet age, plagiarism is far from straightforward, which off course is why confusion reigns" [23rd June 2006] **[4]**
"In the era of proliferating technology, the spectre of digital distraction is increasingly vexing US faculty..." [2nd June 2006] **[5]**
"Academics feel isolated by heavy workloads and the lack of shared areas" [26th January 2007] **[6]**
"Online assessment not only evaluates what students know, it can develop their understanding" [19th January 2007] **[7]**
"Networks are becoming even more vital to academic life as the exploit technology to help researchers find colleagues and sustain work in novel fields" [19th January 2007] **[8]**
"Most school regimes force teenagers to function at a time of day that is suboptimal…" [5th January 2007] **[9]**

Table 1-2 groups these topics into both **positive** - emphasizing the benefits and success of technology and **negative** – emphasis on concerns and/or implications of technology.

The apparent dichotomy and associated opposing views would suggest that as a research domain educational technology is indeed promoting and encouraging open debate and discussion.

Table 1-2: Summary of Messages

Positive	Negative
Online courses in demand [2]	Concerns over privacy [1]
Podcasting successful [3]	Digital Distraction [5]
Technology exploited to help researchers find colleagues [8]	Academics feel isolated by heavy workloads and lack of shared areas [6]
Online assessment can develop student's understanding [7]	In the internet age plagiarism is far from straightforward [4]

However, what also struck me was the notable absence of any reference to the underlying beliefs and values of the educational technology protagonists. This has also been recognized by Oliver and Conole (2007, p. 220) in discussing the contested nature of the e-learning area and the work that is ongoing which they contend is not "neutral".

"*Any designs, claims, practices involve taking a position on what e-learning is, how it should be done and which aspects of it are important*"

Oliver et al (2007, p. 37) also reflects on this issue and states that a fundamental issue in this complex, contested area is clarity about the researcher's position. In this context, it is seen as a necessary condition for establishing the credibility of the subsequent research findings. It would appear that many projects in the educational technology domain, have allowed the dominant voice of technology to silence the personal voice of the educator. This is not posed as a criticism but as an observation that I believe could provide some insights into why educational technology is not having the impact that has long been predicted.

As commented by Linda Pratt (1994, p50)

"*Philosophical habits of mind do not come quicker through fiber optics. Clear thinking is not aided by better dot resolution. Understanding ourselves and feeling for others does not come with a software upgrade".*

I was slowly coming to realise that educational technologists (I include myself in this group) had overemphasised the technology at the expense of a formal discussion and debate on the educational issue being addressed. We did not value or encourage any formal record of our own views and opinions in relation to key challenges facing education today.

This is also echoed by Bob Seidensticker (2006) who claims that the result of this is that

> *"….. that we don't see technology clearly; we don't soberly weigh today's new development against the technologies we already have. The value of today's technology is inflated, and some revaluation is needed to restore a balance" (p.68.)*

In order to restore this "balance" I had come to the opinion that educational technologists need to articulate their rationale in human terms. They need to capture their own beliefs and views and give voice to them rather than assume that the technology will speak for them.

"*Beliefs and values need to be the primary context in which material interests and social practices occur*" (Goodman, 2003, p3).

This dilemma is also referred to by Oliver et al (2007, p.29) who in their discussion of the various perspectives on learning technology state that their primary position is to challenge the hold that "out there" epistemologies have over the institutions of cultural reproduction. However, they also recognise the importance of this tension and state that

"In the quest for shared understanding and commonly valued knowledge, the various communities of researchers working in the field run the risk of producing grand narratives that close down discussion and constrain both creativity and productivity"

There is an opportunity to articulate and communicate the underlying beliefs and aspirations of technology advocates. The current debates regarding the benefits of educational technology are using a vocabulary that has limited impact and agendas that are not debating the core challenges facing education and society today. This is a language that is often driven by a narrow economic rationale, at times disguised in the language of educational pragmatism (Boshier & Onn, 2000)

> *Since the creation of the World Wide Web, educational institutions have been embroiled in discussions about the knowledge-based society, best practices, distributed learning, and empowerment through knowledge and technology. These discussions are nested in discourses that construct "reality." Discourses are not a reflection of some objective condition, but socially constructed to serve some interests better than others. They arise from relationships between power and knowledge. (p.1)*

The failure of educational technology to have a significant impact on our education system presents a wider canvas with which to position and explore the underlying factors and influences that have contributed to this scenario. This study proposes that the characteristics of the key players provides a suitable conduit with which to gain a greater understanding of this apparent paradox. However, this will not provide a comprehensive explanation for the failure of educational technology.

Investigating the field of educational technology

I now had some clarity of my area of study which was to investigate the ever increasing and important entity in higher education i.e. the educational technologist. A key element in this work is to uncover the underlying beliefs and assumptions of these technology advocates. At this stage I must admit that I place myself in this domain i.e. an enthusiastic promoter of the potential benefits of technology. However, I had become increasingly disillusioned with the techno-centric research agenda which now characterises the field of educational technology.

My first challenge was to design a study that would capture the collective sense of assumptions and presuppositions of practitioners working in the field of educational technology. The core brief was to consider the possibility of capturing our reflections on why we are here, where we have come from and our vision of where we would like to go – what would it look like? Would it be a collection of disparate individuals without any shared values or beliefs brought together by a common interest in technology? Or as we explore these issues is there a common set of fundamental principles about education in general that has influenced our desire to exploit the potential of technology in an educational setting?

The second challenge presented by this study was deciding on how best to proceed. My background and training have forged my approaches based largely on a scientific/quantitative methodology. I was very comfortable with surveys, questionnaires hard data, and statistics and of course accuracy to at least two decimal places. But I also knew that my personal "instincts" were attracted to an alternative approach which I was now immersed in as part of my EdD studies – an approach that adopted a post-positivist frame of reference. The quantitative methods seem to be rigid and impersonal in attempting to delve into some of the areas that are to be explored

I was also guided in this particular endeavour by an introduction to the work of Pierre Bourdieu, whose work on the key concepts of field, habitus and capital suggested a suitable methodological approach. This approach seemed to offer an opportunity to apply both theory and empirical research to this subject. Jenkins (2002) quotes Bourdieu's comment that "theory without empirical research is empty, empirical research without theory is blind" (p. 10). The benefits of this approach are articulated by Webb and Danaher (2008)

> *It is clear that for Bourdieu theoretical notions (such as habitus or cultural capital) aren't simply theoretical filters which process social practices; rather, they are technologies which are transformed, and need to be rethought, as they are applied. How generally applicable are Bourdieu's theories? They are so to the extent to which they can be used as temporary constructs to provide evidence for, and demonstrate the specific properties of, social groups and practices.* (p.49)

For some unknown reason the concept of habitus, individual and collective, resonated with me. Perhaps from a recognition that the "*privately vociferous but publically voiceless*" (Brookfield, 2005, p. 211) educational technologists are reflecting their dominated position within the wider field of power i.e. higher education. Similarly, Brookfield (2005, p. 3) claims our actions as educators are often based on understandings we hold about how the world works. The call to delve somewhat deeper into the habitus of educational technologists was an opportunity that could yield some insight into some major questions relating to this field. As Apple (1979, p. 13) would contend, we need to question what is unquestionable. He addresses the dilemma of the unquestioned and unspoken assumptions accepted by educators

> *There is nothing very odd about the fact that we usually do not focus on the basic set of assumptions which we use. First, they are normally known only tacitly, remain unspoken, and are very difficult to formulate explicitly. Second, these basic rules are so much a part of us that they do not have to be expressed. By the very fact that they are shared assumptions, the product of specific groups of people, and are commonly accepted by most educators (if not most people in general), they only become problematic when an individual violates them or else when a previously routine situation becomes significantly altered.* (p. 126)

In the context of this study one such unquestionable question is the place that technology has in education and does it simply serve to reproduce a particular social order. This also gives rise to a supplementary question which would seek to establish if this a position that sits comfortably with key players in the field?
Is there a hegemony developing in the field of educational technology – a way in which people are convinced to embrace dominant ideologies as always being in their best interests (Brookfield, 2005, p. 10)

This concern is also echoed by Apple (1979, p.86) who comments that:

"the concept of hegemony implies that fundamental patterns in society are held together by tacit ideological assumptions, rules if you will which are not usually conscious as well as economic control and power"

The citizen is defined as a rational economic actor, essentially a worker and a consumer, as education has been redefined as a market commodity and universities into enterprises servicing the market (Grummell et al., 2009). Educational technologists must not ignore these developments, Bourdieu "*asserted vigorously the right, the duty indeed, of the public intellectual to engage with politics and the issues of the day, whether they be poverty, immigration or globalization*" (Jenkins, 2002, p. ix)

The field of educational technology needs to encourage a more reflective practice – providing a forum to give voice to why are we doing what we do in the ways that we do it. This public sphere would promote discussion and debate on current issues and put forward our position as educational technologist either individually or as a collective (Murphy & Fleming, 2006).

> *Civil society, by actively sustaining a public sphere for discourse, can insert moments of democratic accountability into the system world….the aim for Habermas is to inoculate lifeworld values of caring, ethical concerns and democratic principles into the system and so resist and reverse colonisation. (p. 30)*

The key objectives of this study are to explore the habitus of educational technologists whilst simultaneously attempting to capture their opinions and views on the major issues affecting the higher education sector. The approach adopted was based on Pierre Bourdieu's concepts of habitus and field, concepts which provide a suitable lens to investigate the practices of educational technologists.

The importance of habitus and field as "thinking tools" to explore current practice is highlighted by Bourdieu who contends that "*to understand practices we need to understand both the evolving fields within which social agents are situated and the evolving habituses which those social agents bring to their social fields of practice*" (Bourdieu, 1990, p.52).

A further contribution of this work is to provide an exploratory framework that will enable a shift from a status of probable to actual the presumption that educational technology exists and behaves as a field. Thus illustrating that the exploration of

educational technology as a field is worthy of study in its own right. This will also require an examination of several other concepts associated with the work of Pierre Bourdieu. In particular the evidence within the field of a dominant doxa; the existence of autonomous poles (specific capital unique to that field) and heteronomous poles (representing forces external to the field) and also the impact of hysteresis and the resultant changes to the field structure.

Summary

This chapter represents a journey of enquiry for me as I pondered this seemingly paradoxical situation of rapid change in technology with a concomitant lack of real change in education. The educational technologist inhabits both worlds – we see both sides of the coin – and for me I am quite perplexed. My own decision to return to study at NUI Maynooth has afforded me a space to reflect on why this dichotomy still persists. Technologies that can transform the world of commerce can seemingly only contribute to the reproduction of our core education systems.

The purpose of this chapter is to describe how I explored the field of educational technology from one key perspective – that of the individuals who adopt the technology and seek to change their current approaches. Whilst, innovation in education and the characteristics of the innovators has been the subject of research studies over the past decade, many of the approaches adopted attempt to identify the key characteristics of these innovative individuals.

Their personal beliefs, values and motivations are often absent from the public sphere at a time when they are needed to contribute to the debate on the future direction of education and the role that educational technology can play. The challenge is to establish how best to investigate the habitus of this group.

This thesis will capture the possibility that educational technology can become a radical force in the transformation of education. We must become advocates for change and not simply a cog in the wheels of reproduction. One way of doing so is to re-develop the role of the personal in technological development and educational processes. We need

to put the" I" back into educational technology – we need to articulate the rationale in human terms. In the next section I will outline the thesis structure – which suggests that I had a pre-planned itinerary before embarking on this journey, nothing could be further from the truth.

This was a journey of listening and telling, of seeking and reflecting on the stories of colleagues whose personal voices and experiences are rarely heard. A consequence of a society and a system that has diminished the value and worth of shared personal experiences based on values and beliefs. This space has been occupied by a new "breed" of storytellers who recount their experiences in terms of increased efficiencies, lowered unit costs and key performance indicators. The "feel for the game" has altered, the ruling "doxa" has a new mantra and the field of educational technology is in a struggle with dominant and adjacent fields who seek to colonise the potential of technology to serve their own agenda. The terms used in this statement i.e. "doxa", "field" and "game" were introduced to me through the work of Pierre Bourdieu – these concepts I believe offer an alternative lens for educational technologist to reflect and understand their practice. The vista of educational technology failing to yield a rich harvest of tools and technologies and enthused educators intent on transforming education was sufficient motivation for me to embark on this journey.

However, I would like to reiterate that I did not set out to establish an "answer" as to why technology has failed to deliver. But chose instead the challenge of establishing the existence of the field of educational technology by examining the habitus of its' key players and seeking to document their core values, beliefs and assumptions.
To propose that excavating beneath their practices offers an alternative approach with which to critically reflect on the current and evolving characteristics of the field of educational technology.

I am also aware that a key characteristic of the resulting narrative surrounding this study is that it will resonate with my own voice. For some readers this may lessen or devalue the findings and the accompanying story, indeed at times may seem self-indulgent. I now recognised that in much of my previous research work "*I protected myself from the exposure of the personal and the subjective by hiding behind academic references and review*" (McCormack, 2009, p.23).

I was also influenced by recent work in the field of auto-ethnography where Sparkes (2007) referring to the work of Pelias (2004) calls for a methodology of the heart that is located in the researchers body, "*a body deployed not as a narcissistic display but on behalf of others*" (p.1). Speedy (2005) refers to the space provided by the erosion of authoritative traditions by post-modernity, a space "*in which to speak with less authority about smaller parcels of knowledge-in-context and to tell more local stories*" (p.63)

I now realised that before I could encourage others in the field to engage in a process of self-reflection by highlighting the value and potential impact of capturing their own personal narratives of an evolving field, I needed to engage in this practice myself.

Whilst accepting this potential limitation I can with confidence reward your perseverance by acknowledging that the personal narrative presented is an authentic effort by an educational technologist who is no longer comfortable with separating his subjective values and beliefs from the field that he inhabits. A personal transformation that evolved as the study unfolded and is now presented as an important subtext to this work, an unexpected but valuable companion on this journey. The "roadmap" that emerged is outlined below including the bumpy surfaces and cul-de-sacs, the off-road detours and the unexpected road blocks, bringing to an end this stage of my journey, which I now realise is only the beginning.

The Thesis Structure

The remaining chapters are organised as follows:

Chapter Two will provide an overview of current literature in the field of educational technology and the allied fields of education innovation, identifying how the predominant foci of interest in these disciplines shape our understanding of education technology and its impact. A key feature of the literature is the neglect of the values and beliefs of educational technologists which has contributed to a primarily techno-centric discourse dominating the practice. The work of Pierre Bourdieu will be introduced and it will be suggested that the constructs of habitus, field and capital provide an alternative lens with which to review and reflect on current practices. The chapter will conclude with a summary of the main research questions and present a final argument on the need for a reflexive practice.

Chapter Three will describe the methodology and will commence with a discussion on my own predispositions or epistemological stance, followed by a review of accounts provided by other researchers on how the concepts of habitus and field can be used a method. A key element is to encourage the participants to tell their story and I needed to begin this process with myself. The end result was the creation of a web site www.mosceal.com and a set of resources that were subsequently used as part of the focus groups, which centred on seven main themes that formed the main topics for discussion. The chapter will conclude with a description of the approach taken to running the focus groups sessions and will provide a description of the experiences of using a qualitative data analysis tool *Atlas.ti* to analyse the data.

Chapter Four provides a detailed account of the approach taken to the analysis of the data. This account uses various diagrams and charts to describe how the data was analysed and captures the final summary – the challenge at all times was to ensure that the integrity of voice of the participants was maintained. The process of reading and re-reading each transcript, identifying the set of codes and code families will be described. It became clear that the original data did not neatly fit into the seven original thematic containers and the final section will describe the approach taken in the final analysis of the data, an off-road detour that revealed an unexpected landscape.

Chapter Five is the first of two chapters which presents the findings of the study. This chapter captures the voice of the participants in relation to the four main themes that have emerged. I decided to present their views without commentary, stories that capture the frustrations and tensions of their role, their views on the impact of current higher education policies, their personal influences and assumptions and much more. The concluding section will present a summary of these key findings.

Chapter Six presents a public gaze on the voices described in chapter five; it will weave the voices into the existing body of knowledge in the field. It demonstrates that there is a strong resonance with accounts in other research literature, however a number of fault lines emerge for which the current research framework is unable to provide adequate explanations.

In the final section I will argue that explanations can be provided by viewing the findings through the key concepts of habitus, field and capital. I will also propose and demonstrate how Bourdieu's constructs offers a suitable theoretical perspective with which to describe the field of educational technology and the habitus of its practitioners.

In **Chapter Seven** I will summarise my experiences on this journey into the field of educational technology and my encounters with the habitus of educational technologists. A journey that was triggered by my "gut" reaction to a chance encounter, an exchange at a conference which suggested to me that the true voice of educational technologists was being neglected. The challenge was to design an approach that would encourage their voice to be heard and an appropriate methodology to examine and explore its message. I will conclude this chapter by examining the limitations of my work and offer some suggestions for future developments.

I feel it appropriate to conclude with a comment from Bourdieu (1991) which reflects my own personal dilemma as this work unfolded as a person "educated" to expect answers to arrive neatly packaged to two decimal places:

> *To be able to see and describe the world as it is, you have to be ready to be always dealing with things that are complicated, confused, impure, and uncertain, all of which runs counter to the usual idea of intellectual rigour. (p.259)*

But who now realises that to truly see and describe the world of education requires two ears, an open heart and the space and time to listen.

Chapter 2: Literature Review[7]

Introduction

Is it possible that educational technologists contributed to the current crises facing our planet i.e. global warming and the collapse of the world economy? Or perhaps I should rephrase that question and ask did the higher education sector contribute to these unfolding catastrophes? This may seem preposterous, however I found myself pondering these questions recently, prompted by comments from two authors.

The first was Anne Goodman (2003) who commented that:

> *I have previously examined education in the broad context of our culture, looking at our present situation as a crisis in which our civilisation and indeed life on earth is threatened. I suggest that the crisis exists because the taken-for-granted assumptions of our society are no longer appropriate and that our education system, which is based on the same assumptions, perpetuates the situation. (p. 3)*

This led me to question the role that technology was currently playing in our rapidly changing higher education sector, where education along with other public services has been redefined as a market commodity. In response Colleges and Universities have adopted many of the frameworks of successful Corporations e.g. quality assurance frameworks, performance management systems, unit costing and strategic plans. This encroachment of neo-liberalism and commercialism into higher education is the topic addressed by the second author, Kathleen Lynch (2006) who argues that:

> *The neo-liberal position is fundamentally Hobbesian in character, focusing on creating privatised citizens who care primarily for themselves. The privatised, consumer-led citizenry of the neo-liberal model are reared on a culture of insecurity that induces anxiety, competition, and indifference to those more vulnerable than themselves. (p. 3)*

[7] This chapter appears in "Critical Design & Effective Tools for E-Learning in Higher Education" edited by Roisin Donnelly, Jen Harvey and K.C. O'Rourke (In Press)

It would appear that our education system reproduces the societal norms that currently prevail. It is a regime that is dominated by vested professional interests and limits class mobility, as chapter 1 illustrates this year's entrants to higher education will be largely drawn from the same higher socio-economic groups:

> *Years of research evidence on the patterns of class inequality in education have shown that not only has there been little class mobility in education over the last 50 years but there is little hope of social mobility through education for many even in prosperous countries like the USA. (Lynch, 2006, p. 2)*

Yet we live in a society in which we are witnessing significant changes in our daily lives enabled by the same technology which allows us to bank, shop and book exotic holiday destinations from the comfort of our own sitting rooms. The world of technology is at our fingertips and it is having a profound effect on how we experience and view the world. This conundrum is the background to this research – to investigate why the transformative capability of technology, when deployed in education, contributes to the maintenance of the status quo rather than leveraging its capabilities to address these inherent inequalities that characterise the modern higher education sector. A key element of this study is to engage in a dialogue with educational technology practitioners, to explore with them their shared values and beliefs and to encourage debate and discussion on issues impacting on the wider education agenda.

One recent trend in Higher Education in the past decade has been the establishment of Centres for Teaching and Learning and the creation of allied posts such as E-learning coordinators. In many instances these centres are staffed by educators who have an interest in technology and how it relates to the current challenges in the teaching and learning domain. A key role is to encourage and support academic staff to adopt alternative delivery models that exploit the advantages of digital technology. Oliver (2002) comments on the emergence of these "new professionals" and the importance of

"*learning about how and why these varied groups' work, in order to understand how their practices have developed to suit the current nature of institutions in the sector*" (p. 251).

A secondary issue in this area is to also recognise that faced with this "cauldron" of change many academics do not adopt new practices. The question that this scenario poses is described by Gunter (2000) as to "*why the individual researcher, lecturer, or professor does what he/she does and in the way that he/she does it*" (p. 625).

In the current climate where the dominant discourse of quality assurance prevails and performativity is the central tenet of measuring success, it would be simplistic to dismiss such resistance as Luddite without exploring the underlying beliefs and values of these academics. This perspective is shared by other commentators; Robertson (2003) contends that:

"*There is clearly a need for a different account of the attempts to transfer new information and communication technologies into school based education systems. Essentially rational explanation has proved inadequate*" (p. 340).

Within Higher Education, Kanuka and Kelland (2008) reflect that

> *the higher education literature on e-learning technology is replete with research that tinkers with, and then tests the effects of, instrumental practices. The ultimate aim is to determine, once and for all, what works and what does not – passing by the question of why. (p. 61)*

A fresh approach was needed to investigate the practices of educational technologists. There are a number of approaches that have been developed to categorise or describe the landscape of educational technology (Conole 2002, Beetham 2001, Oliver and Price, 2007). What is absent from many of these proposed models is a space for the views and beliefs of educational technologists to be expressed, and a recognition that any model of educational technology practice cannot be divorced from its practitioners.

Pierre Bourdieu's concept of habitus and field could provide an alternative set of "*thinking tools*" to explore current practice. A task in which we need not only "*to understand practices"* but *"we need to understand both the evolving fields within which social agents are situated and the evolving habituses which those social agents bring to their social fields of practice*" (Bourdieu,1990, p. 52).
Webb et al (2002) explain that

> *Habitus can be understood as, on the one hand, the historical and cultural production of individual practices – since contexts, laws, rules and ideologies all speak through individuals, who are never entirely aware that this is happening – and, on the other hand, the individual production of practices – since the individual always acts from self-interest. (p.15)*

For the purpose of this dissertation, the individual practices of educational technologists will encompass new specialists, including educational or technical developers, researchers and managers and academics who have a formal responsibility for learning technology (Oliver, 2002, p. 246).

This chapter will initially review existing research literature on the characteristics of innovators in other domains and consider how applicable their experiences are to education. This will be followed by a review of the field of educational technology and an exploration of the relevance and suitability of Bourdieu's concepts as the rationale for an exploratory study designed to examine and capture the characteristics of an innovative educator's habitus and field.

Fostering Innovation – characteristics of innovators?

There have been several papers investigating the characteristics of innovators over the past few decades. Innovation is not necessarily related to developments in technology. An early definition provided by Rogers (1963) suggests that innovators are the "first members of a social system to adopt new ideas" (p.252). Conversely, Uhl (1970) describes laggards as "the last group or segment of persons to adopt" (p.51), but importantly they do eventually adopt. So what do we know about the common characteristics of an innovator?

Hannah (1995, p.219) has described the key correlates of innovative people and also the key differences between public and private sector innovators (see Table 2-1). For public sector employees the rewards are intrinsic compared to the often financial incentives offered by the private sector. Hannah (1995) also adds that public sector innovators add an extra "very" to committed and persistent and importantly can work well within their political system.

This is an important characteristic for innovators in the education domain and is recognized as critical for the role of educational technologists who operate at the boundaries between academia and administration. This tension was captured by Gosling (2008) in a study of Educational Development Units (EDU) in the UK where they state that

"EDUs have to work hard to ensure that they work alongside academic staff, and learning support staff, in a way that is based on conversation and dialogue, and not on the assumption that ED professionals are always right" (p.43).

Table 2-1: Innovative People

Private and public sector innovators	**Public sector innovators**
See things from different angles; Have a broad perspective; Are risk takers; Communicate effectively; Know how to build support; Are flexible but committed Are persistent;	Often work alone; Depend almost solely on intrinsic rewards; Understand and work well with their political environment; Are very committed and very persistent;

There is no doubt that in an education setting "*educational change is technically simple and socially complex*" (Craft, 2000, p.175). A review of some of the literature examining innovation in education would certainly support this point of view. Kirschner et al (2004) investigated the success factors of large-scale educational innovation projects in Dutch higher education have noted that

"Innovating (or changing) the structure of an organization often comes up against a wall of resistance. Not surprisingly the human factor is often considered the most influential factor on the chance of success" (p.362).

Crawford & Gannon-Cook (2002) also comment that the rewards systems are of primary importance to faculty. Davis (1979) offered a different approach by exploring the variables that influence changes in the instructional behaviour of faculty members. People are not just "pushed" into action by drives; they are also "pulled" by incentives. The performance of the faculty member is determined by motivation and learning acting together. A criticism of many faculty development programmes is that they emphasize one or other of these two variables but not both.

Craft (2000, p.183) referring to the work of Hall and Oldroyd who have articulated the view that teachers will not commit themselves to innovations which:

- are not seen as beneficial
- cannot be clearly understood
- are at odds with their professional beliefs
- are inadequately resourced

In another study by Lee (2001) four categories of concerns were identified in relation to teacher's perceptions of technology:

Category 1	Concerns of individual incompatibility
Category 2	Concerns of unknown
Category 3	Concerns of organisational support
Category 4	Concerns of organisational incompatibility

A common theme in both studies is the recognition of the importance of taking on board the concerns of teachers from the first instance the project is initiated and giving due regard to their professional beliefs.

This area received further elaboration by Surry, Jackson, Porter, and Ensminger (2006) who describe Ely's eight conditions for implementation of educational technologies (1) to be motivated to accept change there must be dissatisfaction with the status quo, (2) all involved in the implementation process must have adequate skills and knowledge, along with (3) sufficient resources and (4) time to train, practice, and apply the innovation, (5) rewards and incentives exist, (6) participation in the decision-making process (7) commitment from senior management and administrators, and (8) day-to-day leadership through support, encouragement and procurement of resources, by direct managers.

It is apparent from these studies that the profile of innovators has taxed the minds of researchers for some time. Rogers and Beal (1958) make reference to the importance of personal influence in an individual's decision making process "*In most cases the people who interact have similar values, a common level of discourse and important referents to each other*" (p.329). This would suggest that access to formal and informal networks are considered a dominant factor in innovation.

Of particular note is a subsequent study by Rogers (1963) who describes innovators as "*venturesome individuals; they desire the hazardous, the rash, the avant-garde and the risky*" (p.253). In fact he describes innovators as *cosmopolite* – the cliques and formal organisations to which they belong are likely to include other innovators. He also comments that teachers who attend out-of-town meetings are more innovative. A similar observation described by Johnson (1984) twenty one years later who refers to a study by Evan's into the use of interactive television. The "pro-ITV" faculty were characterised as more pragmatic and cosmopolitan. This could be accounted for by the fact that Faculty with experience outside of academia have a more cosmopolitan perspective.

The online equivalent of the "out of town meetings" could be viewed as the membership of virtual learning communities. Allan and Lewis's (2006) recent study suggests that the impact of membership of a virtual learning community is significant on individual members.

Two different personal development processes were identified (1) some members used the experience to develop confidence and expertise to support their career progression through a process of incremental changes and (2) members at early stages in their careers appeared to work through a transformational process that enabled them to change their identity by identifying and working towards new career opportunities. We could be witnessing the virtual or online manifestations of the same characteristics of innovators identified in earlier research. If this is the case then these experiences could sow the seeds of interest for future innovations. As Oliver (2002) has indicated that the practices of educational technologists emphasise learning by doing, the importance of context and involve learning with an expert, which is a process that can be adequately described in terms of communities of practice (p.251).

It is interesting to note that although how we innovate may have changed many of the issues and indeed the characteristics of innovators have not. Of particular interest is the importance of taking into account the beliefs and values of individuals involved in any project designed to bring change to existing approaches and methods. The next section will take a closer look at innovations in the evolving field of educational technology in the context of the knowledge economy.

Educational technology and the knowledge economy

It is apparent that an innovative academic must be nurtured and supported by their organisational structure at all levels. However this may not be sufficient as commented by Hannah (1995) "*Innovative ideas and individuals however are not always enough. At some point, the idea must be adopted and institutionalized to have an impact*" (p. 222). The current dilemma for many Higher Education Institutions today is justifying why they should engage or support these activities. In particular why invest significant capital investment in educational technology and its related support and training requirements without any apparent significant return? To explore this question it is necessary to chart briefly the history of educational technology. The last decade in particular has seen a remarkable growth and subsequent decline in the educational technology marketplace. I use the word "marketplace" deliberately – it was the recognition that education and training could be productized that proved to be major incentive for venture capitalists.

Many Irish companies led the way – and still do, as *CBT Systems*, *Financial Courseware* and *Electric Paper* have carved out an international niche in the training market place.[8]

The technology was also developing and evolving offering the potential of greater functionality to eager learners. The BBC Micro heralded an era of colour; the Apple Mac an intuitive graphical interface with a pointing device (mouse); optical storage such as CD ROM offered greater storage capacity with the accompanying dynamic media such as video and animation. Our vocabulary changed to suit the evolution of the technology – Computer Based Instruction (CBI) became Computer Based Learning (CBL) to Computer Aided Learning (CAL) to Computer Based Multimedia Learning (CBML) to interactive multimedia (IM).

A similar burst of activity in the mid nineties as the internet heralded a new model – E-learning had arrived. A new age of computer mediated communications offering additional functionality to the weary stand alone multimedia CDROMs. Online courses, communities and activities – in fact E with everything!

An interesting comment by Bruce and Levin (1997) is that the classification systems used for educational technology are treated as universally valid rather than "*as a statement about a particular set of values and beliefs about technology, teaching and learning*" (p.2). The important aspect of these classifications is that each of them expresses a view of the world that has "*significant ontological, epistemological and pedagogical implications*" (Bruce and Levin, 1997, p.3). This would suggest that a person's ontological, epistemological and pedagogical views are a critical factor in their adoption of technology in an educational setting. Furthermore the marked shift in emphasis over the past decade from technology centered to a learner centered taxonomy would suggest that this area is being influenced by a greater range of practitioners offering a wider spectrum of viewpoints.

[8] The Irish Learning Alliance - http://www.irishlearningalliance.net/ is a consortium of e-learning companies and provides a useful overview of the scale of current developments in the e-learning space in Ireland.

The significance of this point is related to the earlier contentions that innovators tend to interact with people with similar values and that teachers will not adopt new innovations that are odds with their professional beliefs. Classification systems can also be used to normalize ways of thinking about educational technology which in turn can lead to the production of criteria for what is deemed "best practice". This in turn shapes the accepted possibilities for what educational technology can be deployed to address and just as importantly which cohort of students should benefit.

Technology, and in particular, educational technology has largely emerged from a positivist tradition (Hwang, 1996;Saettler, 2004; Reeves 2002; van Heertum, 2005) – however the current nature and use of technology with the advent of what has been termed WEB 2.0 and addressing the needs of the NET-generation – has witnessed a change in emphasis. Current usage patterns are predominately in the domain of communications (e.g. email/blogs/skype), end user content design and development (YouTube) and online communities (e.g. MySpace, bebo). This is user-driven and would suggest that current educational technology innovators are also drawn from a different discourse. A discourse that is learner centered rather than technology lead.

However we are still debating the benefits of educational technology using a vocabulary that has limited impact and in arenas that are not debating the core challenges facing education and society today. A language that is often driven by a narrow economic rationale, at times disguised in the language of educational pragmatism. There are two areas where the impact of this narrow economic rationale can be seen. Firstly, education and training are now recognized as an important factor in developing and sustaining economic growth. This is a cause for concern particularly as the rise of neo-liberal politics has redefined education as a market commodity and this trend has become a key tenet of international policy discourse (Grummell et al 2009). As pointed out by Bonal (2003) since the 1990s we have witnessed a growth in hegemonic neoliberalism.

"*Neoliberalism has been pushed by multilateral agencies and most powerful states as the major global project for economic growth and development" (p.163).*

This is also evident in the strategic imperatives underpinning some e-learning initiatives. Education is reduced to the production of a library of learning objects to be delivered in a cost effective manner to a population of learners whose profile fits the ”digital native” characteristics. Secondly, lifelong learning appeared to be on the political agenda, Brine (2006) refers to the EU 1996 “Year of Lifelong Learning” and the subsequent White Paper (CEC, 1995). She notes that this paper made two shifts in the discourse on lifelong learning:

> *The concepts of exclusion and societal risk inherent in the threat of the “dual society” were linked with differing degrees of knowledge and two types of learner: those that know (the high-knowledge skilled) HKS and those that do not know (the low knowledge-skilled) LKS. (p. 651)*

Furthermore, Brine (2006) contends that:

> *Despite, the very close association of the concept of lifelong learning with the knowledge economy, there is only one lifelong learner who is directly employed in it: the high knowledge-skilled graduate and postgraduate learner, a learner who, in contrast to the low knowledge-skilled learner below, is only ever referred to in terms of educational status, and whose particular learning needs are never identified. (p. 659)*

The importance of this issue for educational technologists is to question who is driving the agenda for investment in technology in higher education. At an organizational level in Ireland third level institutes have seen enormous change in relation to governance, funding, quality assurance, national qualifications frameworks and performance management systems. Metrics exist which will measure our success: throughput, retention, unit costs and funding. The integration of IT systems is already a hallmark of most Institutions – student registration, e-marketing, financial control and e-mail. E-learning fits neatly into this array of technology. There a danger that developments and support for E-learning will be viewed as another tool in a bureaucratic framework that will foster suspicion rather than innovation.

According to the Observatory on Borderless Higher Education (OBHE) resistance by faculty members to e-learning can be explained "*by a lack of time or motivation to carry out what is basically an additional task, since e-learning mostly supplements rather than replaces classroom based teaching*" (OECD, 2005, p. 5)

Another development that could inhibit innovation is the imposition of an "audit culture":

> *Much of the literature on innovation in higher education is often written from the perspective of change advocates rather than from the point of view of the persons – usually faculty members – who are expected to implement change. Consequently behavior that does not affirm a particular innovation may be labeled "non-innovative" and regarded as the root of the problem, whereas the difficulties may actually lie either in the innovation itself or in other factors, such as characteristics of the academic organization. (Johnson, 1984, p. 496)*

This is also echoed in the work of Grummell et al (2009) who state that "*The highly individualised capitalist-inspired entrepreneurialism that is at the heart of the new academy has allowed old masculinities to remake themselves and maintain hegemonic male advantage*" (p. 192). Academics must now show the relevance of their work in relation to new institutional mission statements a feature that is "*generating a mixture of anomie and alienation*" (Beck and Young, 2005, p. 184).

This concern is also raised by Barcan (1996) who describes contemporary academics as situated within three different models of professional practise i.e. scholarly, bureaucratic and managerial/corporate. However, the scholarly model sits uncomfortably with the service-provider model which promulgates the neo-liberal values of individualism and performativity. Beck and Young (2005) contend that probably those who have "*felt most traumatized and hostile to marketization*" (p.194) would have enjoyed high levels of autonomy earlier in their careers. The very ingredient needed to foster innovation in a public organisation.

It could be argued that innovation and innovators are being "colonised" by the normative processes and discourses of quality and accountability. Barcan (1996) contends that the requirements of the evaluation system soon comprise the academic practices under scrutiny – "*practices change in order to meet the evaluation criteria*" (p. 1). The ease of increasing the number of registered students on an online course may be the main criterion that dictates a continuation of funding and support by management rather than assessing its suitability as an optimal learning environment for a group of adult learners. Similar commentary is offered by Fleming (2008) who refers to the "*inappropriate deployment of technology*" and how E-learning offers another example of "*how system imperatives can invade pedagogical practice*" (p. 8). In fact the rationality of science and technology was an ideal device to create a new set of meanings of the "sacred" (Apple, 1979, p. 79).

Or as Peters (2006) remarks: *"Technology has become the new star ship in the policy fleet for governments around the world*"(p.95). Clearly, the juxtaposition of educational technology, innovation and higher education provides a fertile ground for discussion and debate. The research agenda in relation to educational technology has largely been dominated by investigations into all aspects of the technology – educational technologists are often criticized for being too concerned by the next "shiny new gadget".

Issroff and Scanlan (2002) refer to the work of Rowntree, one of the initial Open University innovators, who described educational technology as concerned with the design and evaluation of curricula and learning experiences and with the problems of implementing and renovating them. This is a very utilitarian view with no apparent scope for considering theory or indeed any underlying philosophy of education.

However by the nineteen eighties there was a noticeable shift. Issroff and Scanlan (2002) referring to the work of O'Shea and Self who suggested that educational technology was a branch of the behavioural sciences, which currently carries no commitment to any particular theory of learning

> *Educational technologists would not therefore consider the computer as just another piece of equipment. If educational technology is concerned with thinking carefully about teaching and learning, then a computer has a contribution to make irrespective of its use as a means of implementation, for the design of computer based learning environments gives us a new perspective on the nature of teaching and learning and indeed on general educational objectives. (p. 3)*

This redefined educational technology within the domain of teaching and learning, a domain that encourages self-reflection and the articulation of personal beliefs and theories with regard to pedagogy. Hammond (2003) also contends that "*Traditional ideas about pedagogy are already under question both through ICT use and through other demands on the HE system*" (p. 12).

A number of recent comments would support this view that a change of focus is needed, Robertson (2003) suggests that "*If teachers are to challenge the ideology of technopositivism, they must know it exists. If they are to make wise trade-offs, they must know what is on the table and why it is there*" (p. 293). Challenging existing ideologies and putting unspoken belief systems "on the table" is echoed by Conole (2002) "*research is also exploring the associated attitudes and perceptions of different key stakeholders and the resultant key issues of organisational change*" (p. 13). Kerr's work on proposing a "Sociology of Educational Technology" also emphasises that how learners interact and how educators are challenged to change their assumptions is of greater importance than simply focusing on the impact of technology on instruction

> *Educational technology's direct effects on instruction, while important are probably less significant in the long run than the ways in which teachers change their assumptions about what a classroom looks like, feel likes, and how students interact when technology is added to the mix (p. 136).*

So how can we encourage educational technologists to give voice to their values, beliefs, and motivations within the context of a rapidly changing higher education sector? The next section will attempt to answer this question by initially exploring the field of educational technology and subsequently examining the practice of educational technologists through the lens of their habitus which could be the key to unlock the answer to this question.

The field of educational technology

Habitus is a concept that mediates between relatively structured social relations and relatively "*objectified*" forms of social agency or interest (Sterne, 2003, p.375). The term "field" is used to describe "*groups of interrelated social actors*", and "*capital*" to describe the specific forms of agency and prestige within a given field".

As argued above one of the challenges facing the field of educational technology is to capture the collective sense of assumptions and presuppositions which contribute to the motivations, values and beliefs of many of the innovators in higher education today. According to Webb et al (2005)

> *Each field (medicine, philosophy, law, politics, economics) has its own set of discourses and styles of language, and that not only determines what is seen (for instance, philosophy tends to exclude the social, medicine tends to exclude abstractions), but what things are valued, what questions can be asked, and what ideas can be thought. (p.13)*

Turning our gaze onto the field of educational technology may allow us to answer these questions. To identify what things are valued by educational technologists; to identify the questions we are not asking and to ask what ideas can be thought.

According to Jenkins (2002)

> *a field in Bourdieu's sense, is a social arena within which struggles or manoeuvres take place over specific resources or stakes and access to them… A field, therefore, is a structured system of social positions – occupied either by individuals or institutions – the nature of which defines the situation for their occupants. It is also a system of forces which exist between these positions; a field is structured internally in terms of power relations. Positions stand in relationships of domination, subordination or equivalence (homology) to each other by virtue of the access they afford to the goods or resources (capital) which are at stake in the field. (p. 84)*

The field of educational technology is witnessing a number of developments that represent these "struggles or manoeuvres". Examples include attempts to define standards for learning objects and the associated accreditation of academic staff as teaching and learning "experts". The struggle could be viewed as exercising control over not just how learning is packaged – but who will be authorized to do the packaging and how. Bourdieu recognises that the game that occurs in social spaces or fields is competitive, with various social agents using differing strategies to maintain or improve their position (Thompson, 2008, p. 69). Within this struggle Bourdieu (1991) identified four categories of capital which he explained as follows:

> *These goods can be principally differentiated into four categories: economic capital, social capital (various kinds of valued relations with significant others), cultural capital (primarily legitimate knowledge of one kind or another) and symbolic capital (prestige and social honour). (p. 229)*

Within the educational technology field, examples of social, symbolic and cultural capital are evident. For example social capital could comprise membership of various communities of practice and representative organizations in the related fields of education and technology.

Cultural capital is evident in the struggle to gain formal recognition of teaching and learning knowledge and associated learning technologies. Whilst symbolic capital is the authentication of "best practice" either through the awarding of credentials following the successful completion of accredited programmes of study or alternatively in judgements made at national competitions which acknowledge particular innovative accomplishments.

However, this dynamic within a field is to be expected as Webb et al (2005,p.9) have stated "*Not only is the identity of a particular field always up for grabs to a certain extent but, as a corollary, so its relation to the social and political spheres of society*". The concept of a field is further complicated by the recognition that people occupy more than one social field at a time (Thompson, 2008). Currently, the field of educational technology often appears as a collection of individuals without any shared values or beliefs brought together by a common interest in technology. On other occasions a common set of fundamental principles about education in general are apparent. However there is no doubt that the field has its own distinct "logic of practice". As Thompson explains

"*It is a human construction with its own set of beliefs (or theodicies), which rationalize the rules of field behaviour –each field has its own distinctive "logic of practice*" (p. 70)

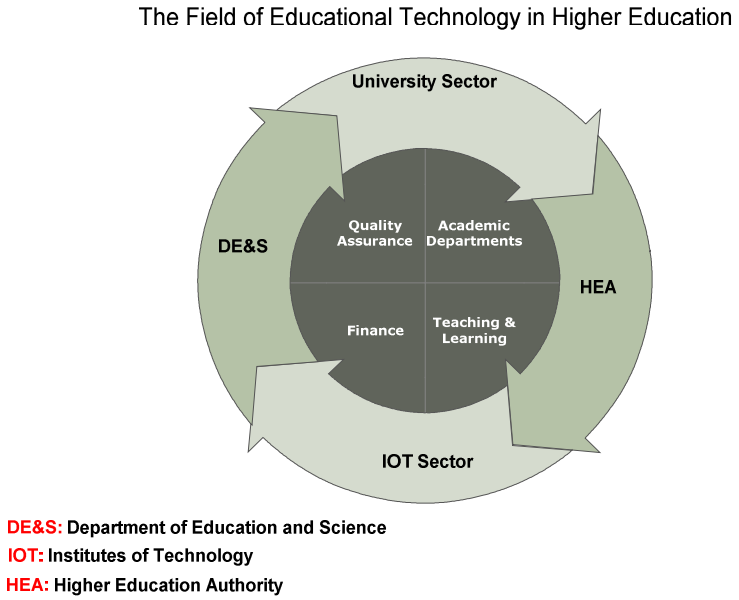
Similarly, Jenkins (2002) has suggested that the existence of a field creates a belief on the part of participants in the legitimacy and value of the capital which is at stake in the field. The establishment of Centers for "Teaching and Learning" (there are various other titles in vogue) which often control and direct the activities of the field in many higher education institutes would suggest a form of "legitimacy" in the apparent formal recognition by the "field of power". The "field of power" is Bourdieu's term to represent the dominant or pre-eminent field in any society; it is the source of the hierarchical power relations which structure all other fields (Jenkins, 2002, p. 86). The field of educational technology is clearly dependent on other subfields – e.g. quality assurance, finance, research, academic departments, teachers unions, government policy, demographics. As noted by Thompson (2008, p. 73) "*the fields that make up the field of power are not all on a level playing field: some are dominant and the game in subordinate fields is often dependent on activity in another*".

Diagram 2-1 below is one possible representation of the field of educational technology in Ireland and its various relationships with other dominant and associated sub-fields.

What is not captured on the diagram is the dynamic ever-changing characteristics of the field. These external factors include current Government policies in relation to the creation of the knowledge society; the parallel requirements of needing to up-skill those in employment and now the even greater challenge of addressing the needs of the unemployed. Much of this agenda is predicated on a need for greater flexibility which could be met by deploying technology.

> *The field is the crucial mediating context wherein external factors – changing circumstances – are brought to bear upon individual practice and institutions. The logic, politics and structure of the field shape and channel the manner in which "external determinations" affect what goes on within the field, making them appear a part of the ongoing history and operation of the field itself. (Jenkins, 2002, p. 86)*

Diagram 2-1: The Field of Educational Technology in Higher Education



This now leads to the important question of how we can use Bourdieu's concept of field to further explore the "world" of educational technology. To do this Bourdieu has suggested that his field must be understood as a scholastic device – an epistemological and methodological heuristic – which helps researchers to devise methods to make sense of the world (Thompson, 2008, p. 74).

He was also adamant that the notion of "field" was not a system stating that

> *A field is a game devoid of inventor and much more fluid and complex than any game that one might ever design……to see fully everything that separates the concepts of field and system one must put them to work and compare them via the empirical objects they produce. (Bourdieu and Wacquant, 1992, p. 104)*

The concept of habitus, field and capital constitute the most successful attempt to make sense of the relationship between objective social structures (institutions, discourses, fields and ideologies) and everyday practices i.e. what people do and why they do it.

The next section will examine Bourdieu's concept of habitus as an additional lens with which to examine the identity of educational technologists.

The habitus of educational technologists

Connolly (2004) contends that for Bourdieu "*our internalised modes of thought are not naturally-given (i.e. essentialist) but are socially constructed – developed and generated (i.e. genetic) from our lived experiences*" (p.85)

This is further developed by Maton (2008) who describes how the

> *choices we choose to make, therefore depends on the range of options available at that moment (thanks to our current context), the range of options visible to us, and on our dispositions (habitus), the embodied experiences of our journey. Our choices will then in turn shape our future possibilities, for any choice involves foregoing alternatives and sets us on a particular path that further shapes our understanding of ourselves and of the world. (p. 92)*

Bourdieu also wanted to use the concept of habitus to stress its formative qualities – in other words the way it moulds and shapes behavior.

A theme also reported in Barnett & Adkins (2004) referring to the work of Wacquant, that

> *The relationship between an individual and a field or domain of interest is mediated by the habitus, a collective and individual disposition that is unconsciously formed over time and exhibited through both cognitive and physical actions. (p. 4)*

This is a very exciting observation. As pointed out by Sterne (2003), habitus is a powerful concept because it is historical, it changes over time – our habitus confronts us as a "kind of second nature". Habitus can be used as a "*thinking tool*" to understand the predispositions of the players in the field of educational technology. It raises the question of whether it is possible that innovators share similar "second natures"?

Connolly's (2004,p.87) view is that "*habitus incorporates a more holistic understanding of the broader dispositions that individuals come to embody and which unconsciously shape and guide not only the way they think and behave but also the particular investments they have in certain forms of knowledge and ways of acting*".

Many educational technologists have contributed to the development of the field – for some this has been based on their own technology-related backgrounds which recognized applications in the education domain.

Others have been attracted to the field through their own positions within education and allied interests in pedagogical research. In addition individuals with skills sets from commercial multimedia or elearning companies have found new opportunities within the academic field. This rich tapestry of backgrounds and expertise within a field was anticipated by Bourdieu:

> *Social agents do not arrive in a field fully armed with god-like knowledge of the state of play, the positions, beliefs and aptitudes of other social agents, or the full consequences of their actions. Rather they enjoy a particular point of view on proceedings based on their positions, and they learn the tempo, rhythms and unwritten rules of the game through time and experience. (Maton, 2008, p. 54).*

According to Morrison (2005), Bourdieu's habitus operating as a theory of reproduction provides an explanation as to why teachers perpetuate practices that seem anti-educational. The imposed or self-imposed control operates to reproduce the status quo. However he also argues that in situations where new, emergent practices present themselves these are not easily explained by theories of reproduction, structuration and habitus. The habitus "*both enables creativity and constrains actions and practices*" (p. 314). Sterne (2003) contends that habitus is a generative principle; it does allows for creativity and improvisation.

This would suggest that the real challenge is how to examine and capture the innovative educator's habitus, rather than identifying and classifying shared characteristics of innovators as outlined in Table 2-1 earlier. One approach is to examine the use of theory in educational technology research. An eclectic mix with some disciplines represented including psychology, computer science and cognitive science whilst others are not e.g. sociology, business and education. The choice of theories (and also of research cited) in papers provides an insight into the habitus of educational technology researchers (Conole et al, 2002).

In relation to supporting and fostering innovation, Pagnucci (1998) comments that Bourdieu's concept of social power comprises not just economic capital but also cultural and symbolic capital.

In the context of academic departments or faculties – economic capital is represented by budget allocations, cultural capital could be staff qualifications; and symbolic capital as the "right" to teach about a particular discipline. As he discovered these disciplinary boundaries in themselves can prove to be an obstacle in the creation of a cross-disciplinary course, an issue that is also relevant for educational technology.

Connolly's (2004) work on "Boys and Schooling in the Early Years" provides a good example of how Bourdieu's concept of habitus can be adopted as a research method. In order to gain a better understanding of how children learn and develop through internalising the sets of social relations in which they are engaged, he used Bourdieu's concept of habitus. Reay's (1995) research work – looking at habitus in the primary classroom – concludes that habitus is a way of looking at data that renders the "taken for granted" problematic. For example how well adapted is the individual in the context they find themselves in? How does personal history shape their responses to the contemporary settings? These questions are just as relevant in understanding the spectrum of responses from educators in relation to adopting educational technology.

There have been a number of other interesting examples using the concept of habitus as a vehicle to explore similar issues. The areas explored have been quite diverse from Hulme's (2001) study on technology use; Reay's (1998) work on individual preferences; Dumais' (2002) on participation and Atkin (2000) on views of policy makers.

Could an innovative educator's habitus be the key that unlocks the creative desires and drives innovation? This is an important question in the current context where the main "vehicle" for fostering innovation in third level has been formalized through the establishment of Centers for Teaching and Learning. Many Centers endeavor to capture the essence of "best practice" in pedagogy and educational technology and offer staff development programmes designed to motivate educators to adopt, adapt and innovate within their current practice. However, it is now critical that we deepen our understanding of two key areas: (i) how the portfolio of best practice knowledge has been authenticated and (ii) what are the philosophical arguments underpinning the claims of superior pedagogic approaches.

We need to investigate the habitus of the teaching and learning staff in addition to that of educators who have engaged with these staff development programmes. The hope would be that this greater understanding would not only serve to enhance our understanding of the habitus of innovative educators but would also augment the integrity of evolving academic professional development courses. Such programmes developed and delivered by staff working in or associated with Centres for Teaching and Learning could be seen to represent the new "game" in relation to acceptable pedagogy in higher education. Academic staff engagement will reflect each academic's "feel for the game". However as stated by Cunningham (1993) the "feel" will be measured in accordance with the expectations determined by the habitus of the teaching and learning authorities.

Can educational technology transform education? I believe that it can however as suggested by Mezirow (1997) "*The process of transforming our frames of reference begins with critical reflection. What I mean by critical reflection is the process of assessing one's assumptions and presuppositions*" (p. 2). To achieve this there is a need to create and nurture a public sphere to discuss and debate these issues and to put forward the position of educational technologists either individually or as a collective.

Webb et al (2005) have outlined how Bourdieu has tried to explain the relationship between people's practices and the context in which these practices occur. Education is the mechanism through which the values and relations that make up the social space are passed on from one generation to the next. Bourdieu also points out that while academics are disposed to turn an inquiring gaze on others they are reluctant to turn the gaze onto themselves. There needs to be a self-reflective understanding of the person's own position and resources within the field they are operating. We need a reflexive relationship with our own practice

An interesting account by Kleiman (2004) reflecting on key themes in an article he wrote in 2000 accepts that in many places the myths persist and progress has been limited.

> *The investment in technology for schools resembles the investments being made in many "dot-com" Internet companies. In both cases, the investments are based on the potential of new technologies, in the hope that this potential will be fulfilled in the coming years. And in both cases, the investments involve significant risks and may be a long way from yielding adequate returns. (p. 7)*

Interestingly he also commented that one of the key determinants will not be the number of computers purchased or cables installed but rather "*…how we define educational visions, prepare and support teachers, design curriculum, address issues of equity, and respond to the rapidly changing world* "(2000, p. 14). It is critical that agents in the field of educational technology are encouraged to turn an enquiring gaze on themselves. The need for a reflexive practice has never been greater Brockbank and McGill (2007,p.112) have posed the question

"*What prevents practitioners investigating the impact of the very process that is supposed to promote learning? Why is there a tendency to hold back from the exploration of process?*"

The current unthinking commitment to the logic, values and capital of a field corresponds to what Bourdieu calls "illusio" (Webb et al, 2005, p.26)

> *The agent engaged in practice knows the world…too well, without objectifying distance, take it for granted, precisely because he is caught up in it, bound up with it; he inhabits it like a garment…he feels at home in the world because the world is also in him, in the form of the habitus" (Bourdieu, 2000, p. 142-143)*

A reflexive practice that's exceeds the bounds of a purely technocentric discourse would allow educational technologists an opportunity to voice their views and beliefs in relation to the challenges facing higher education.

The need to assert a greater influence on current policies and practices in the wider domain is of paramount importance. Rather than educational technology being viewed as simply an economically more advantageous means of "delivering" education – a commodity exchange model endorsed by current neo-liberal policies. However, it could also be argued that the emergence of Centres for Teaching and Learning signifies that it is too late, that these developments represent as Brookfield quoting Foucault contends the colonization of educational technology:

"*when members of the dominant group begin to recognize that specific practices could become economically advantageous and politically useful they become colonized*" (2005 p. 127).

Summary

This chapter explored the growing impact of new managerialism on higher education, leading to reproductive tendencies dominating educational systems. The transformative capability of technology is not in evidence within the education sector, even though there has been a significant investment in information and communications technology. The existing research literature is replete with examples of innovative technologies however the dominant focus is largely techno-centric. There is an over emphasis on the technical functionality of the solutions and the technical prowess of the innovators with a distinct neglect of their underlying values and beliefs.

This is an area that has received some attention within the literature on teachers and teacher education, the connections between a teachers beliefs and their practice is well recognised. There are various manoeuvres currently within the field of educational technology including the establishment of Centres for Teaching and Learning and the certification of teaching and learning qualifications. This provides an opportunity to revisit existing relationships within the field and to examine emerging tensions with adjacent or dominant fields.

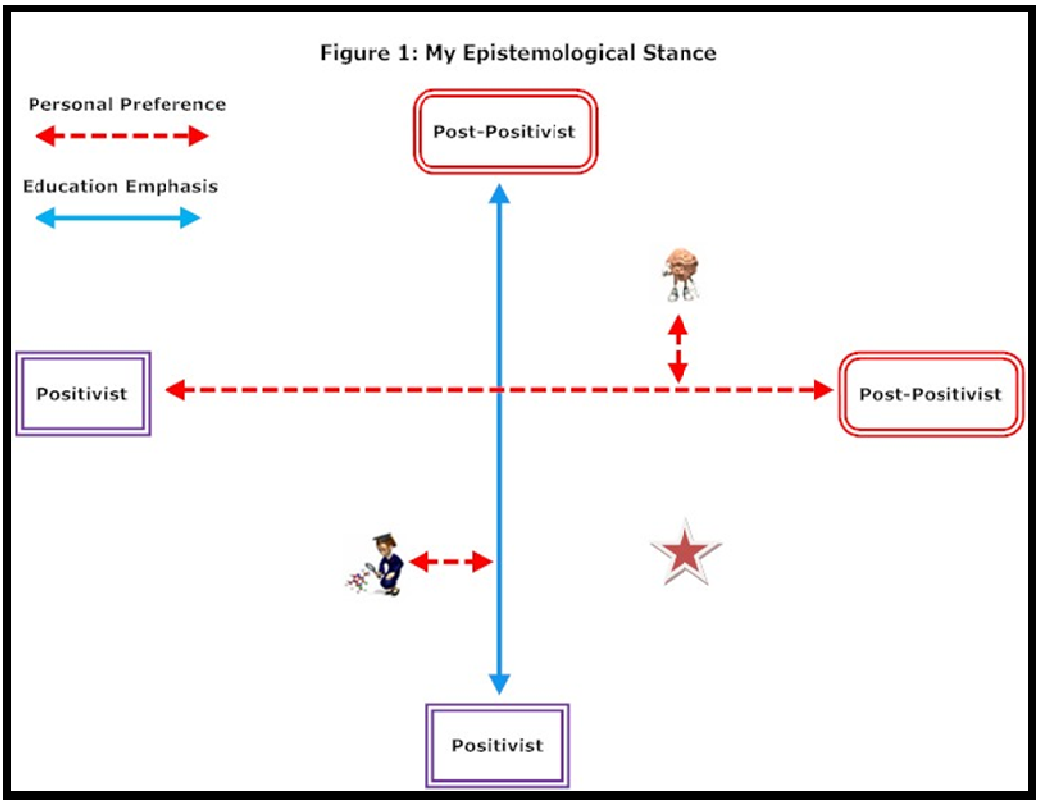
This chapter outlined Bourdieu's theory and associated concepts of field, capital and habitus as a method of rethinking these relationships, of exploring the values and beliefs that underpin this field and seeking to encourage the practitioners to give voice to their personal motives and assumptions. In the next chapter I will describe the journey towards a methodology designed to explore and examine these issues.

Chapter 3: Methodology

Introduction

The techniques or methods that I will describe throughout this chapter are not simply neutral procedures but are linked to the epistemological stance of the author (Antonesa et al, 2008, p. 74,). If I was to diagrammatically represent my epistemological stance it would be portrayed as in Figure 3-1 below. The horizontal axis represents my personal preference and the vertical axis represents the dominant paradigm from my own education and research experience to date.

Figure 3-1: My Epistemological Stance



My training was centered predominately on quantitative methods within a scientific theoretical framework. My worldview and underlying assumptions had largely lain dormant or at least unquestioned until recently.

What has emerged after this period of self-reflection and review is a recognition that my personal worldview feels much more at ease with approaches and methods that allow for a qualitative "*way of knowing*" (Oakley, p.724, 1998). As can be seen I inhabit the positivist/post-positivist quadrant - a split personality that battles with the attraction towards a post-positivist paradigm but I am continually drawn into my scientific comfort zone. The decision to use a positivist approach often influences many aspects of the proposed area of study including the methodology, the topics to be considered and just as importantly the denial of the relationship between the self and knowledge (Antonesa et al, 2008, p. 15). Hence, almost subliminally you are led away from considering a more holistic view of the research questions and excluding the impact your own perspective, values and beliefs on the design of the study. However, I have also found that quantitative methods applied appropriately can also yield a rich harvest of data and subsequent results e.g. the use of survey instruments and statistical analysis. As Oakley (1998, p. 715) states:

> *Many of the supposed differences between qualitative and quantitative ways of knowing are not a matter of hard-and-fast distinction, but on a continuum, with points on it where one would find it difficult to say which method was in ascendant*

But from my own experience when people are part of the study I always had a sense that an impersonal approach to data collection was somewhat akin to having a Big Mac for dinner i.e. you knew that what you ate was food and contained a recommended dosage of protein, vitamins and minerals but it wasn't fully satisfying. Data collected using quantitative techniques is valid, reliable and correct and can be analysed by SPSS but on completion the sense of fulfillment is at times lacking. There is a hidden agenda designed to ensure that the "*messy-on-the-ground realities of how research proceeds*" (Antonesa et al, 2008, p. 15) have been ignored and undervalued. Any suggestion that the work did not unfold as expected and according to the guidelines would be deemed a weakness in the study. This resulted in many stories and experiences remaining unrecorded and undervalued.

As I reflect on my previous experiences during my own MEd studies – the objective of the work was to design, develop and evaluate a multimedia based system for teaching computer programming. The final paradigm adopted could be classified as a mixed method to some extent – although the approach was quasi-experimental. The experiment consisted of two groups of students had access to the system at different stages on completion of the practical exercises tests were administered to assess their knowledge prior to and on completion of the laboratories. (Even as I write this now the notion that I carried out an experiment on a group of students rankles with me)

Whilst the data captured about the students was factual and impersonal there was significant engagement with the student cohort who engaged with the study. The discussion about the background and context of the work, their own excitement at using multimedia resources and of course their own fears and concerns in relation to the subject matter itself. However this was not captured in the final results; reflecting the limitations of the methods selected (i.e. survey and questionnaire were pre-designed and limited to the questions I had deemed important). If I was to revisit this research domain again, I would posit a different range of research questions. In particular the student engagement with learning to program is a multi-faceted issue, the approach described above offers only one lens with which to view this world. However, there has been a change in the research methods adopted within the field of educational technology. This shift has been noted by Savenye & Robinson (2001):

> *Educational technology research methods are changing as new questions and concerns arise. Assumptions, questions, methods, and paradigms that formerly dominated research in the field are changing. Research questions and methods that might once have been deemed unacceptable are gaining acceptability; studies using a variety of qualitative methods and based on alternate paradigms may now be published. (p. 1)*

Also Williamson, Nodder and Baker (2000) in reviewing educational technology research in New Zealand conclude:

> *We have seen a clear correlation between pedagogy and research paradigm; instructivist educators are more likely to produce quantitative research whereas the constructivist educator is more likely to be qualitative in their approach. Pedagogy, like research, is a continuum and this is seen in a large number of papers that triangulate quantitative and qualitative research. There is a definite pattern of qualitative research that focuses on current praxis, deducing from the researchers own experiences and the environment they are in strategies to take educational technology forward. (p.572)*

While my own background and training have forged my approaches into a quantitative range of methodologies my personal "instincts" are attracted to a post-positivist frame of reference.

A comment by Eisner (2007, p.135) resonated with me on several levels '*The university socialized me in social science methods but, alas, that socialization could not really compete with the inclinations of my heart*'.

This thesis proposed to explore the connection between habitus and innovation. Certainly it could be argued that either a positivist or post-positivist approach would yield interesting results. A positivist approach might use questionnaires, structured interviews or other such methods to capture opinions regarding the research hypothesis/questions. This would suggest that the questions would need to be somewhat concrete – with little 'wriggle room' to allow for the unexpected. Keep the boundaries of responses curtailed and don't encourage departures from the pre-planned script to facilitate systematic collection and analysis of data. But then what will go unrecorded? Or as the saying goes "if it is not counted – it doesn't count". Or as stated by Oliver et al (2007)

"*Importantly, some methodologies protect certain kinds of knowledge by hiding, rather than making explicit, the rules and assumptions through which knowledge is legitimated*" (p. 37).

A post-positivist paradigm would encourage a smaller sample, a less rigid structure to capture the personal accounts delivered in an unrehearsed open ended manner. It raises challenges about how best to structure these sessions – would a focus group encourage greater discussion or are elements of a person's habitus disclosed more easily in a more confidential/personal setting? I am also of the opinion that the participants should be able to share in the research study in some way. But I believe there is an opportunity to ensure that their co-operation is rewarded. My own inclinations were to provide a more holistic authentic approach to capturing the habitus of educational technologists. But this was merely a "hunch" I had no evidence as such to suggest that any particular methodology would be the optimal approach. However what did emerge early on was a recognition that I wanted to move away from a positivist or quantitative methodology. In many respects my research journey has allowed me to view these once familiar approaches from a different perspective. My overarching concern in relation to the field of educational technology originated from the lack of a voice of educational technologists in relation to issues impacting on the wider higher education sector. This is a voice prolific in the private sphere (at coffee breaks and during conferences) but mute in the public sphere. A qualitative approach appealed as it *"has much to do with making vivid what had been obscure*" (Eisner, 2007, p136).

My journey to a chosen methodology

This research study was carried out during the summer of 2008; however there were a number of other important events that were instrumental in the formation of the final approach that was adopted. Although they are presented below in a linear pre-planned manner, each represents an unrelated event. However, taken collectively they do chart the evolution of my own thinking and presented the opportunity for me to uncover my own beliefs and values in relation to the field of educational technology.

1. In **May 2005** for a presentation at the Irish National Learning Technology Association EdTech conference, I had interviewed a number of the academic staff in Institute of Technology Blanchardstown (ITB) who have been very innovative in their use of educational technology. When I reviewed these interviews again subsequently I realized that there was a notable similarity in relation to what was not captured in these clips. There was a distinct absence of any reference to the individual and their personal values or beliefs.

2. In **September 2006** I commenced my EdD studies at NUI Maynooth and Dr. Rose Malone introduced me to the work of Pierre Bourdieu. His concepts of field, habitus, and social capital struck a chord with me immediately – but I was still unsure as to why. This was followed by a cascade of inputs covering the work of Freire to Mezirow and many others addressing the idea of transformative learning.

3. In **November 2007** I participated in an European Union funded research project called E4 in ITB. At the concluding conference our partner in the Netherlands presented their findings which included two short video clips – one focused on the technology and the other on the personal experiences of one of the students. The latter represented a very personal story that recounted how technology had a transformative effect on the life of one individual.

4. In **December 2007** at the Irish National Digital Learning Repository symposium, I presented my views that the habitus of educational technologists is a key factor in driving innovation in education. However, the underlying beliefs, assumptions and views are often overshadowed by technology-related aspects rather than personal stories in these public publications. To highlight this dichotomy, I invited the audience to choose which video clip of the E4 project they wished to view (i) the technical description of the project or (ii) the interview with a student who outlines in a very personal manner how educational technology changed her life. The decision was overwhelming – the majority in attendance opted for the personal story.

5. In **February 2008** I commenced my 10th year at ITB – and my 25th year of employment in education which presented an apt opportunity to reflect on my own career with this thesis providing a learning space for me.

At this juncture there were three potential ideas emerging:

Idea 1: Investment in Educational Technology

At this stage it appeared that it would be important to set the scene and describe the landscape that currently exists in relation to the adoption of technology and to establish how key personnel have developed their expertise, knowledge and skills in the area.

This would require possibly a questionnaire with follow up interviews to further explore the level of investment in educational technology, including an assessment of training programmes provided for staff, establishment of dedicated Centres and the emergence of new staff positions. On reflection this theme was also a response to the sense that "hard data" was required perhaps to balance the "softer" data that would be forthcoming from interviews or focus groups. My underlying scientific training was clearly in evidence, but there were also other factors at play which influenced my early design considerations it was an acceptance that this was the way research in the field of educational technology should be.

This assumption was soon to be exposed as Bourdieu's concept of habitus shone a light into the crevices and corners of my own beliefs and resonated not on the level of thought but at the core of my being. I now understood what I had read that "*knowledge cannot be divorced from ontology (being) and personal experience*" (p.16). (Antonesa et al, 2007).

Idea 2: The Habitus of Innovators

This has always been at the core of this thesis proposal – exploring the characteristics of a person's habitus and how this influences their attitudes and approaches to educational technology. In the early stages I had envisaged two possible populations to investigate:

(i) Eight role models from across the sector, representing different disciplines or (ii) a selection of staff in formally established 'Teaching and Learning Centres'. Each I felt would present a unique case study – using interviews and possibly a focus group to capture the key ingredients of their habitus.

I was also interested in exploring the possibility of using technology to assist in this challenge. Could you develop a web portal that could capture a user's response to different media elements? These media elements would be selected to represent different views and perspectives on key issues relating to education and educational technology. It appeared at this stage that a constructivist model would be best suited, to capture the uniqueness of individual experiences, given that the study is attempting to uncover the multiple realities and understandings of each person.

Suitable methods could include interviews, focus groups and using visual/multimedia methods as an aid to data collection. In particular the potential use of interactive media as a possible method was very appealing. My belief was that the target audience (i.e. educational technologists) would respond favourably.

I had now achieved a "balanced" approach – the first idea of the study regarding the investment in educational technology would adopt a quantitative approach and provide a backdrop regarding the landscape in which our participants work.

The second idea would allow me to move out of my comfort zone by adopting qualitative methods. Both "unseen" masters were satisfied – the field of educational technology with the dominance of positivist methodologies and the post-positivist approaches introduced during of my own EdD studies. But the "niggle" had returned a sense that this compromise was not where I wanted to be and this was not the story I wanted to tell. The next shift for me was significant – and resulted in a re-evaluation of my approach and the unearthing of a third idea. The disruptive input was in the form of a workshop on arts based research presented by Dr. Caryl Sibbett from Queens University Belfast.

I now recognised that this study should be an invitation to reflect, a forum to hear the voice of educational technologists and my intention was to investigate the use of visual imagery as a method.

I was struck by the comment of Bochner and Ellis (2003):

> *As spectators, most of us are trained to look at art and ask, what do I see? But as a form of language, art can become reflexive, turn on itself, invite us to question our own premises, to ask, how do I see? What can I know? How do I know what I know? Then art becomes a process and form of inquiry. (p. 508)*

Idea 3: Educational Technology – An Agent of Transformation or Reproduction

The most obvious theme was the last to emerge – in many respects as an educational technologist it represented "the elephant in the room". The irony for me was that this recognition occurred against a backdrop of celebrations, as 2008 saw the publication of the 30th Anniversary edition of the Personal Computer World magazine celebrating 30 years of innovation and in 2007 the Irish Computer Society celebrated the 50th anniversary of introduction of the first computer introduced to Ireland which was purchased by Irish Sugar Company in 1957 (see Figure 3-2). At first glance this appeared to be a cause for celebration. Such change, such innovation, such creativity but how much of this potential is evident in education today? This scenario represented the real challenge for educational technologists – why has there been so little real change in education?

Looking at this issue from a wider perspective it is really only one small ingredient in the potent mix that allows the education system to reproduce what went before as noted by Jenkins (2002, p. 105) who commenting on Bourdieu states:

"*Pedagogic action reflects the interests of dominant groups or classes, tending to reproduce the uneven distribution of cultural capital among the groups or classes which inhabit the social space in question, hence reproducing social structure*"

This was the question that I had to pose to the community of educational technologists but I needed to frame the question such as to capture its significance and place the education technology debate at the core of key issues within higher education.

The context was provided by a recognition that the debate is in essence a battle between technology as a tool for reproduction or alternatively as an instrument for transformation.

The importance of this is captured by Jack Mezirow (2006):

> *Transformative learning is defined as the process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumptions and expectation – to make them more inclusive, discriminating, open, reflective and emotionally able to change. Such frames are better because they are more likely to generate beliefs and opinions that will prove more true or justified to guide action. (p. 26)*

I had now set the scene even painted in some of the backgrounds but the challenge remaining was how to build a stage and invite the participants to co-produce and co-direct a version of their collective stories as educational technologists

Figure 3-2: Thirty Years of Innovation

PCW 30 Years of Innovation ***Issue 1 April 1978***

A Methodology Emerges - (http://www.mosceal.com)

The main conceptual challenge posed by this study was how to examine the habitus of innovative academics. In particular to examine the values and beliefs of those who use technology as a means to enhance or transform their approaches to teaching and learning. How do you capture and document the characteristics of a person's habitus? I was also wrestling with the identification of an appropriate methodology and related research methods which would allow me to investigate this topic. I was also very aware that these conceptual challenges also related largely to my own personal growth in exploring (and indeed adopting) a research paradigm with which I am not familiar. The "struggle" between my own pre-dispositions towards post-positivist traditions and the needs of my thesis proposal was relentless debate in these early stages.

As I delved into the area of innovation and habitus there was a significant list of research questions that presented themselves:

Methods questions:

1. What are acceptable research methods to capture a person's habitus?

Individual questions:

2. Are there similar characteristics identifiable in the habitus of innovators?
3. Is the habitus of academics who do not embrace technology different?
4. Can you transform a person's habitus? What is the nature of transformation that occurs?

Structural questions:

5. What vocabulary is used to describe the benefits of educational technology? Is transformation and/or reproduction part of this discourse?
6. How do we measure innovation in an academic organization?
7. What has been the investment in educational technology?
8. Why has technology had a limited impact on widening access?
9. Has educational technology been colonized? Is its role reproductive rather than transformative? What is the nature of this reproduction?

However, another event provided the necessary catalyst to enable a final decision regarding the overall approach, chosen methodology and the underlying theoretical framework for this research study.

The event was the 2008 Irish EdTech conference held at Dundalk Institute of Technology. On this occasion I was invited as a keynote speaker and decided that the topic for my presentation would be *"The habitus of educational technologists: What does the research tells us?"* a unique opportunity to gain access to an audience of educational technologists, I now had to make some important decisions.

The decision on which research method to adopt was guided by the experiences published of several studies that employed Bourdieu's concept of habitus in their research, as discussed in Chapter 2 (see Table 3-1 below for a summary). The approach of the researcher in attempting to reveal the habitus of an individual(s) is according to Maton (2008):

> *....to analyse practices so that the underlying structuring principles of the habitus are revealed. However, empirically, one does not "see" a habitus but rather the effects of a habitus in the practices and beliefs to which it gives rise. The structure of the habitus must be captured by excavating beneath practices to capture its relational structure as one among a range of possible structures. (p. 62)*

Table 3-1: Studies relating to habitus

Author	**Topic**
Hulme (2001)	A longitudinal study of behaviour in relation to mobile device usage.
Dumais (2002)	This paper analysed the cultural participation of eighth-grade boys and girls and presented a model that included a measure of habitus.
Barber (2002)	This paper suggests that habitus can inform our understandings of the processes through which teachers know how they should care.
Atkin (2000)	Habitus is used as a vehicle to compare and contrast the views of educational policy makers and consumers in a rural context.
Reay (1998)	Habitus and cultural capital are used as starting points to begin to analyse sociologically the complex social and psychological processes underpinning students' decision-making practices in relation to higher education choice.

This was a key factor in the decision to use visuals aids to "excavate beneath practices" to capture the beliefs and values. This approach according to Mason (2005, p331) is an example of the ways in which images are used in applied research.

He further contends that:

> *This is where images may be used to prompt research participants to talk about something that may be uncomfortable, something personal such as their family history, or something such as their direct experience of a phenomenon illustrated by the image. (p. 331)*

The decision to adopt this approach also coincided with encountering two other initiatives designed to allow people to "tell their story". The first was *StoryCorps* (www.storycorps.org) an independent nonprofit project whose mission "*is to honor and celebrate one another's lives through listening*" and *This I Believe* (http://thisibelieve.org/) an international project which invites people to write and share stories also described as "*a public dialogue about belief- one essay at a time*". The value and the power of narrative were evident in both these projects. I was also conscious of my own role in asking the participants to 'tell their story' and hence the decision to develop the Moodle site which captured my beliefs and values as a partial response to Merrill and West (2009, p. 8) assertion *'We cannot, in a sense, write stories of others, without reflecting our own histories, social and cultural locations as well as subjectivities and values'*.

This was key moment for me – the realization that while I was searching for the most appropriate methodology and seeking out an appropriate set of tools for capturing the data – I had overlooked a key component in this work – myself - my own beliefs, values and assumptions about the role of technology in education. The conference presentation provided the impetus I needed to put some shape and structure on this task. I needed to tell my story – I took up my pen and I wrote – my views on the current state of educational technology.

Throughout this narrative I weaved in the key points of reflection that had recently resonated with me. The end result was an A5 colour booklet and an accompanying web site – the website was set up on a Virtual Learning Environment called Moodle (see Appendix C for copy of booklet).

For the first time in over twenty five years in education I had given myself permission to give witness to my own "voice". I had spoken at conferences and other events – but this was the first occasion that a personal perspective was going to take "centre stage" – rather than a set of empirically proven results or detailed descriptions of innovative technologies. The next challenge was how to engage with the audience – I chose to use the reflection points contained in the booklet as the prompts for the audience. In total seven reflections were used as the basis for the discussions – each of the colour leaflets provided a place for individual responses. The framework of reflection points were chosen to represent key areas of debate and discussion currently in the educational technology and higher education arena.

At last a final approach had emerged for the EdTech conference (see Figures 3-3 &3-4) which consisted of a combination of (i) a multimedia presentation combining various media elements to illustrate key points (ii) eight "reflection points" supplemented by hardcopy visual support materials designed to capture the audience response and (iii) an invitation to all participants to contribute to a virtual learning environment site (the VLE used was Moodle – site reference is http://www.mosceal.com and finally (iv) a hardcopy booklet containing the presentation and reflection material. The strategy was to use the time available to its maximum advantage by providing a variety of resources to encourage active participation.

Figure 3-3: Website: www.mosceal.com

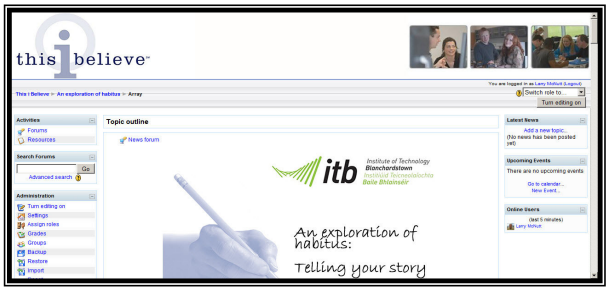
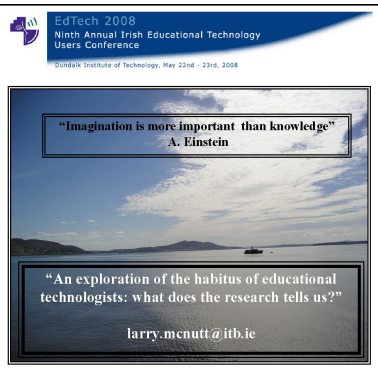
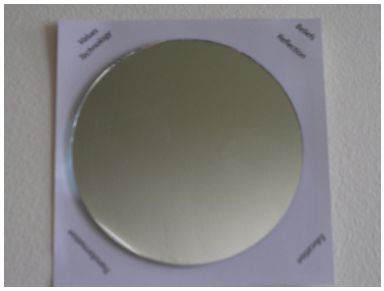
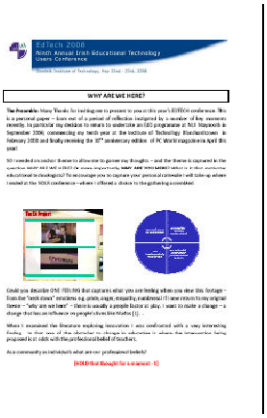


Figure 3-4 CD Cover	Figure 3-5 Mirror	Figure 3-6 Booklet Front Cover
		

But more importantly I now had a clear rationale for why I was asking these questions:

Rationale

I believe that there is a deficit of knowledge regarding the underlying assumptions and beliefs of key innovators in education. The growing threat that educational technology will be colonized by a managerial agenda with a narrow unit cost model for adoption would allow a real opportunity to effect change to dissipate. I believe that the conclusions from this study would be of interest to those involved not only in educational technology directly, but all involved in staff training and development. I am concerned about the larger-scale societal implications where the lack of innovation in education may be supplemented by commercial concerns in the provision of education and training to the general population.

What had also emerged was a consolidation on the main research questions, which focus on the motivations, values, beliefs and assumptions of educational technologists with regard to educational technology and higher education.

The eight questions were:

1. What motivates an educational technologist?
2. How do they view the current profile of higher education?
3. What are their views on the purpose of higher education?
4. How would they describe their own role within higher education?
5. What were their main influences in life?
6. Is educational technology a tool for reproduction or transformation?
7. What are their assumptions about educational technology?
8. Are they willing to engage in critical self-reflection?

The reflection points would provide the visual prompts to initiate the discussion – and would allow for a rapid capture of the audiences responses. Figure 3-7 below captures the lifecycle of the reflection points moving from specific points of opinion regarding assumptions about educational technology to personal motivations and views and also commentary on the salient characteristics of higher education in general.

These reflections represented three separate streams of opinion and views:

- **Opinion on educational technology** sought by the reflection topic which has captured quotations or comment from other researchers. (Shown by).

- **Personal Response –** required the participant to reflect on their own personal experiences and respond accordingly. (Shown by)

- **General Observation** on the education sector requested based on the participants reactions to various notable quotations and two contrasting scenarios presented.
  (Shown by)

The original "niggling" question of habitus and educational technologists had finally resurfaced through the many combinations and permutations of possible questions and probable approaches, does our habitus influence "why we do what we do the way we do it"?

Figure 3-7: Reflection Point: Lifecycle

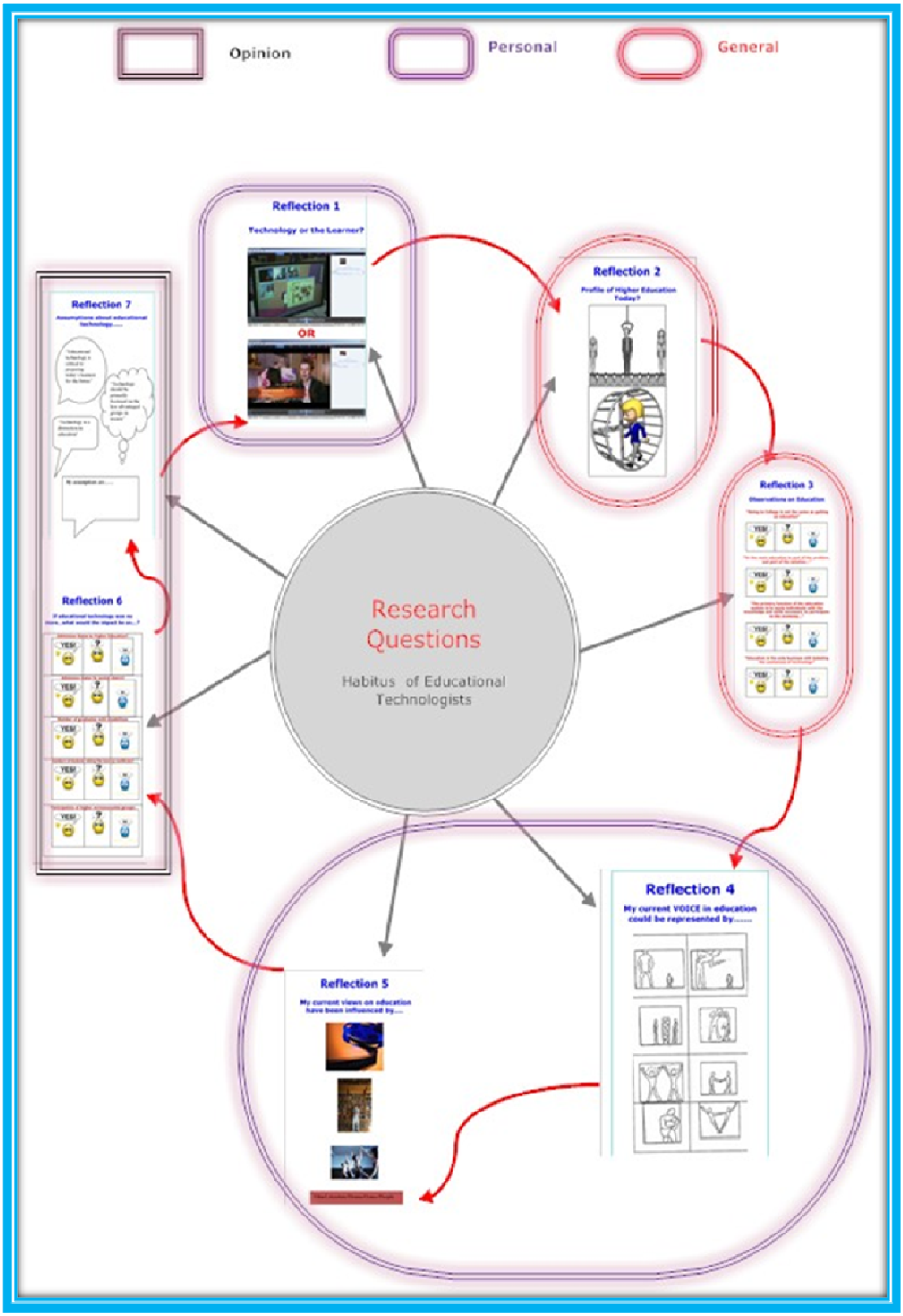
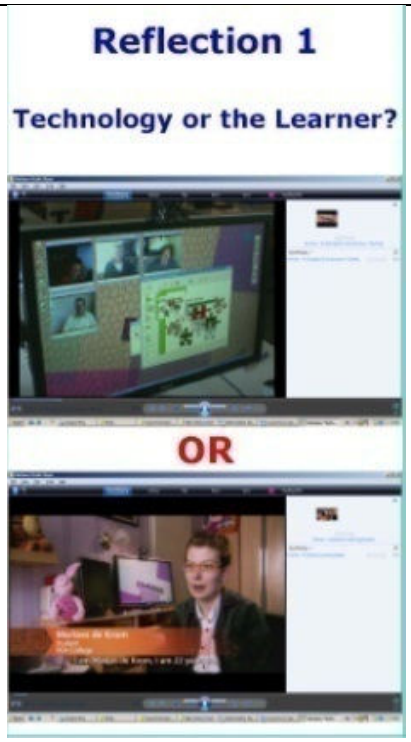
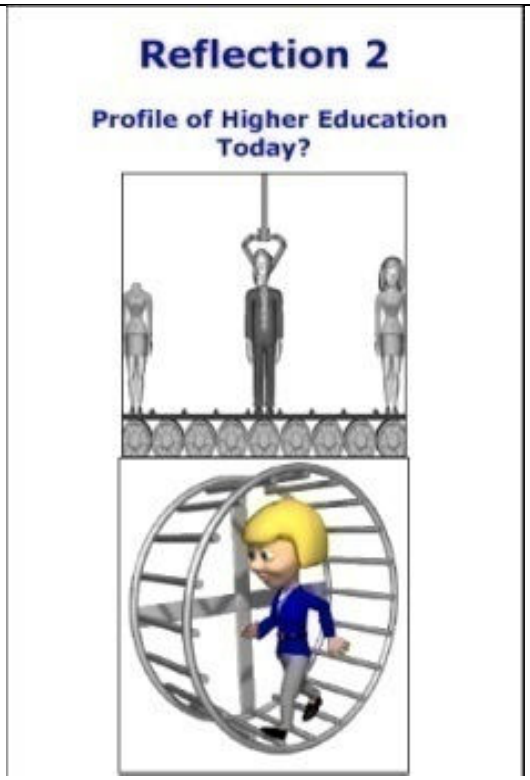


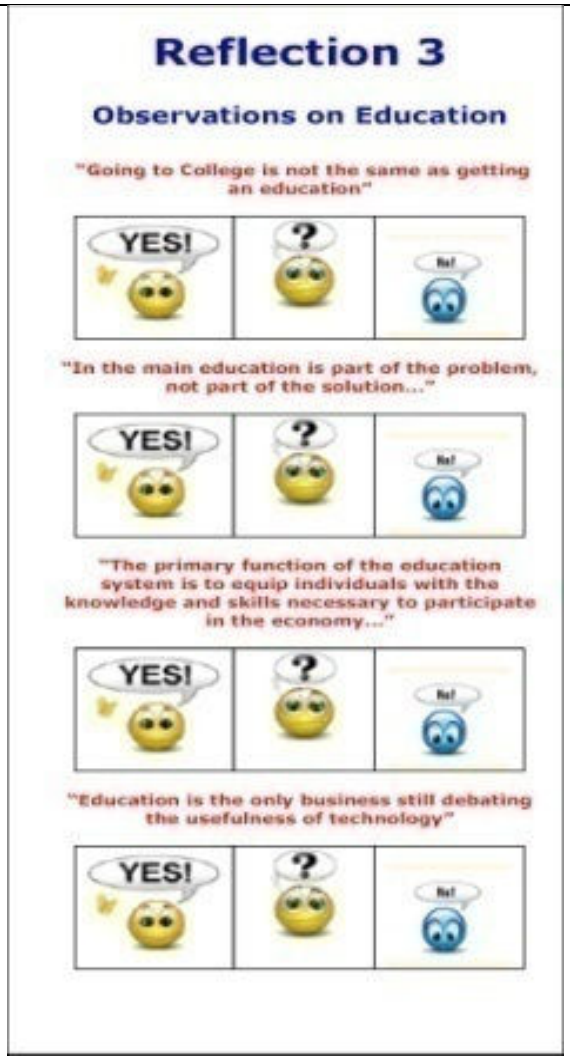
Table 3-2: Summary of questions and specific rationale

Reflection	Comment
	 A **personal opinion**, view or belief. The first reflection point was designed to instigate discussion on what are the key motivational factors in the adoption of educational technology. The choice presented was deliberately stark – is it the technology or the learner? It also depicted two video segments that are available for viewing clearly discussing the success of an educational technology intervention from the perspective of a learner and a detailed description of the underlying technical architecture.



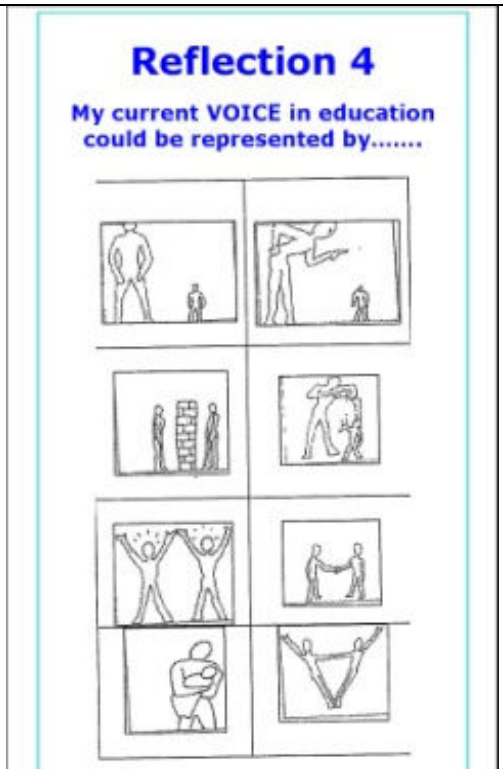
General observation on the education sector

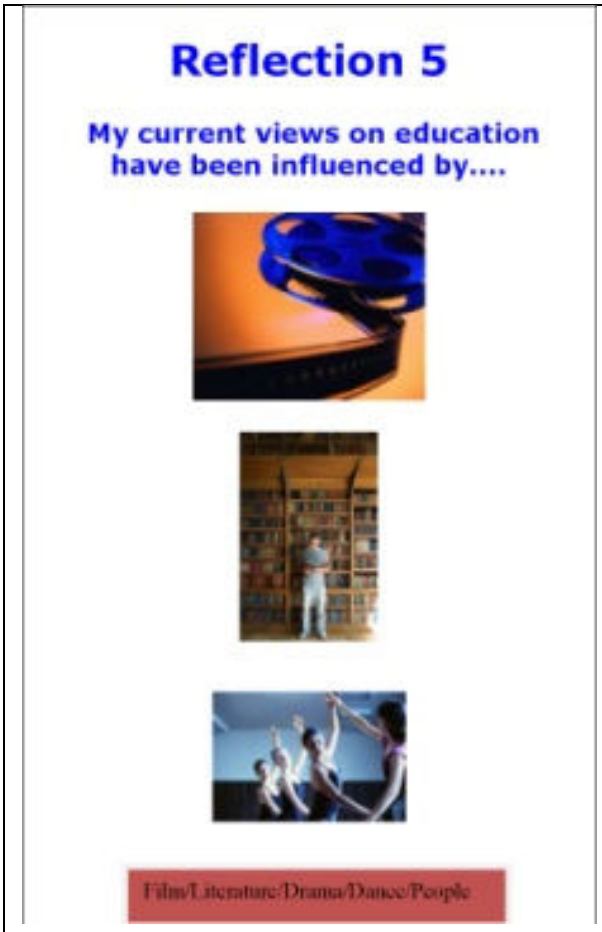
Educational technologists operate within a rapidly changing higher education sector. The purpose of this reflection point was to ground the discussion in this wider context – and to seek the participants observations on how the education arena has changed from their experience. The animated sequences depicted were chosen because of their provocative depictions of higher education. Although I choose not to label them but to simply seek a response from the participants.

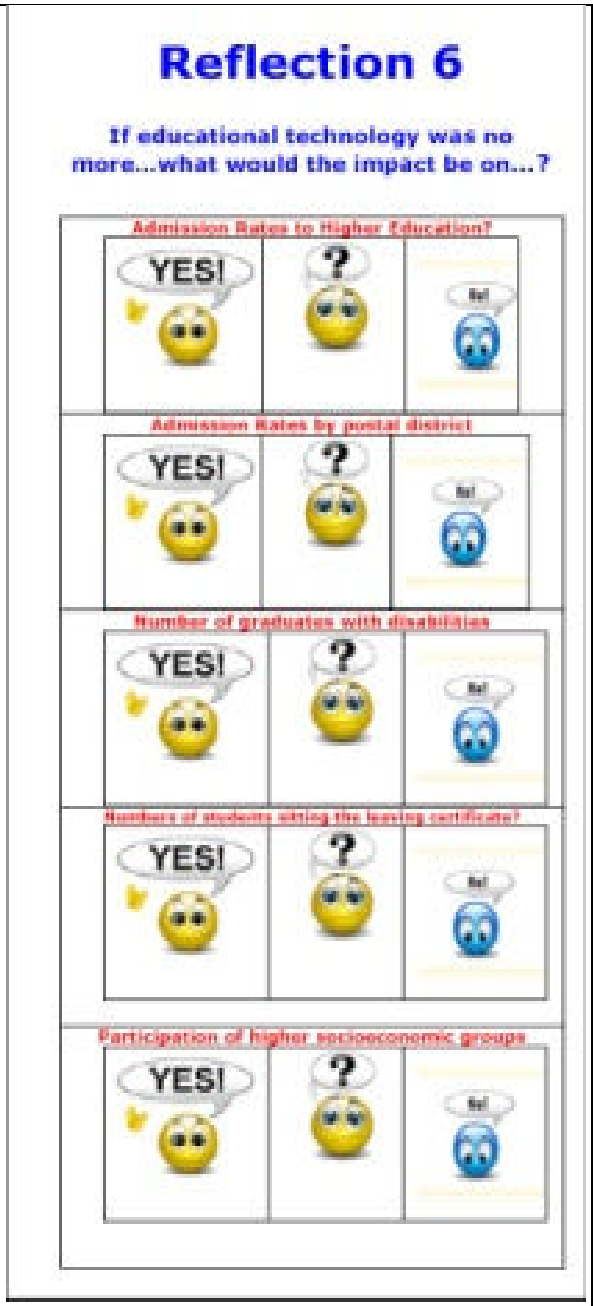


General observation on the education sector

This reflection was designed to build on the previous discussion. The quotations chosen were designed to be somewhat provocative but the hope was that some of the latent values underpinning earlier general commentary would be forthcomming. Each of the quotations resonated with me for different reasons. The **first quotation** is from **John Dewey** in the 1950's which suggested that the chalenges in Higher Education are not a modern phenomenum. The **second comment** is taken from **Anne Goodman's** book "*Now What? Developing Our Future:Understanding Our Place in the Unfolding Universe*" was the most startling revealation for me and jolted my resolve to reflect on my underlying assumptions and beliefs in relation to the education sector. The **third quotation** is taken from a book by **Carol Newman** on "*The Economy of Ireland*". The starkness of the statement presented in such an ipso-facto manner had to be discussed. Finally the **fourth quotation** from **Rod Paige**, Former US Secretary of Education in the US was chosen to tease out the sensitivity to the alignment of education with business and also to question the assertion that the debate is actually happening.

	A **personal opinion**, view or belief. Assuming that the previous two points would generate significant discussion and debate among the participants. This reflection brought a personal dimension to the broader picture. Where is my voice in the education sector? Although I had some preset interpretations of each of these pictograms I choose again not to be prescriptive. I did not suggest who was represented by each of the characters or define the concept of whose voice where. I was keen to allow the images carry the conversation to wherever the participants steered it.

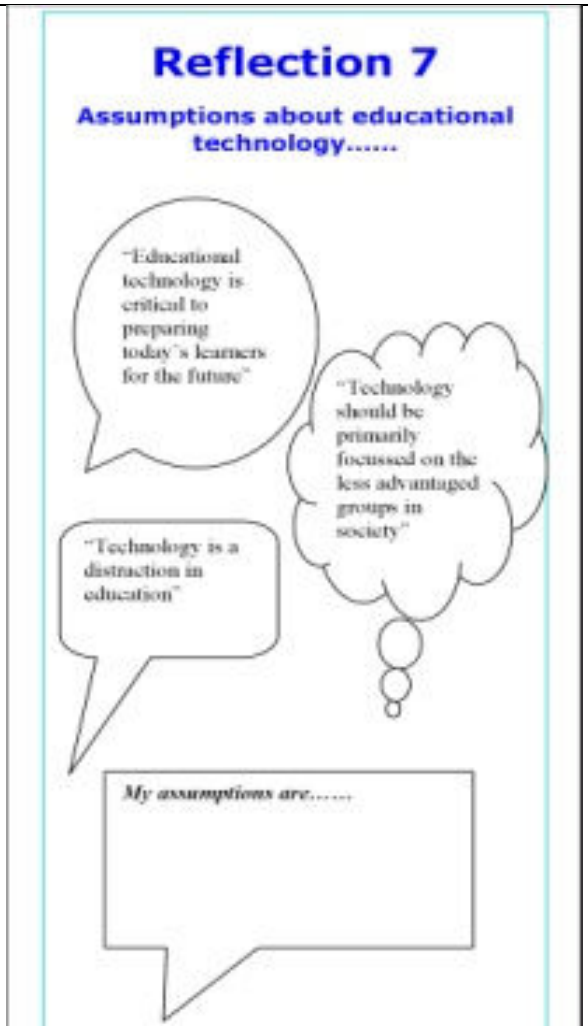
	A **personal opinion**, view or belief. A further point of personal reflection asked the group to consider their own main influences. Would they be willing to share key artifacts, people or events in their lives that would have had an impact in the views and beliefs already articulated? Or indeed any personal revelations on their life experiences that have brought them to this juncture.



Opinion sought on **educational technology**

This topic was designed to explore the current and potential impact of educational technology. Particularly in the context of the wider issues that would have been explored in relation to higher education. An important theme underlying this work is a recognition that the education system is currently acting to reproduce rather than transform society. This reflection point placed some of the stark statistics regarding participation in higher education in a scenario where educational technology was no longer supported. Who would suffer from such a decision?

The choices were based on statistics presented in the booklet and also available on the www.mosceal.com website which were taken from recent Government reports on the profile of higher education students.



Opinion sought on **educational technology**

Similarly the final reflection point allows for any assumptions about educational technology to be shared with the group. This was motivated by a recognition that within the literature there is a range of conflicting opinion regarding educational technology. I was hoping to encourage the participants to reflect on what their own assumptions might be and what has led to their unquestioned acceptance of these.

EdTech 2008: Back to the drawing board and the post-conference review

The objective of attempting to capture the responses from the audience during the presentation was unsuccessful. In hindsight I now recognize that the main reasons were (i) a large audience – over 100 (ii) a lack of time – a one hour slot was insufficient to adequately cover the eight reflection points (iii) I had underestimated the depth of substance involved in each of the reflection points, primarily because I was immersed in this mode of reflection for several months I had assumed others would be in a position to respond instantly. However, it did generate significant discussion and debate which subsequently led to a reasonable level of activity on the Moodle site. This proved beneficial later as I embarked on setting up the focus groups – the volunteers had an opportunity to review the material and reflection points beforehand.

Although it was interesting to observe that most of the online activity was passive, that is the material was viewed or read, with a small level of online contributions. Educational technologists appeared to be reluctant to present their personal views, values and beliefs online at this stage, although they were willing to eager and engage in discussion about these issues. The final act of the presentation was to present each member of the audience with a new "optical artifact" – which had the potential to transform education. The mirror presented in a CD case was used to emphasize the point of the research study that a reflexive educational technology practice was critical to maximizing its potential within the field of higher education. (See Appendix D)

So, it was 'back to the drawing board' to reconsider my approach. However, the feedback from the session was such that there were several invitations from interested parties and institutions to continue this discussion and debate. The warmth and openness of these responses provided the necessary impetus and energy to engage in the next phase of the project – the chosen method was emerging – a selection of focus groups in a selection of representative organizations to continue this discussion and debate.

This identification of a method was important – there was a sense of a viable approach emerging to give voice to the underlying research questions. I was interested in the underlying conceptual frameworks in terms of educational technologists' perceptions and views regarding the use of educational technology. Why are they motivated to do what they do? Is their primary motivation based on an interest in technology or are they driven by a deep desire to bring change to education or specific groups that are currently under represented. Off course this question required an element of self-reflection and exposition of their underlying values and beliefs about the sector they represent. The questions presented both personal observations from the participants and specific views on aspects of educational technology. I was struggling at this stage with a sense that I needed to pin a "theory" on this approach before organising the focus groups and engaging in any form of data analysis. But I was forced to reflect further on this by Antonesa et al (2007) who in describing the key tools for post-positivist research identify the following: *"(i) The concept of discourse (ii) the concern with power (iii) the value of narrative and (iv) the need to be reflexive*" (p. 22).

The description of the latter two tools captured what I wanted to achieve that is to encourage educational technologists to tell their story. I also realised that in my "search" for theory, I was ignoring the fact that the theory remains embedded in the narrative (Antonesa et al, p. 25) and that "*theory provides a lens through which you view your particular topic*" (p.40). I had now decided that the most appropriate method would be to use focus groups. The approach would involve:

1. Identifying from the participants at EdTech a sample of six organisations active in the educational technology field.

2. To structure each focus group session on the seven reflections used at the EdTech conference

3. To present each participant with a folder containing (i) leaflet explaining the study (ii) short questionnaire requesting details of innovations they had been involved in (iii) permission authorisation (iv) booklet with content of model site and details of my own beliefs and values and (v) a mirror presented as an optical device. (see Appendix B)

4. To record each session using two digital voice recorders.

5. To transcribe each session and send a copy of the transcript to each participant for a final review.

Participant Selection

The location of the focus groups were based on a reasonable geographic spread with staff from both Institutes of Technology and Universities represented. The participation was voluntary and having identified a contact point in each location I circulated details seeking individuals to join the sessions. In some instances promises of participation didn't materialize but I decided to proceed with the group that presented on the day. In some organizations the role of educational technologist is a formal appointment whilst in other cases it is filled by an academic who may have received support or time in lieu for their efforts. As can be seen from the number of participants, some of the group sizes fell below the accepted norms for a focus group.

However the session was conducted based on best practice and adhered to the principles outlined below. Interestingly the format of each discussion based on the reflections ensured that there was an optimal level of engagement.

Table 3-3: Profile of Participants

Number	Type of Institution	Location	Number of participants	Duration
1	IOT	Rural	7	1:22
2	IOT	Urban	5	1:51
3	University	Rural	3	1:26
4	IOT	Urban	4	1:33
5	University	Rural	2	1:05
6	University	Urban	2	1:06
			23	

The focus group sessions were conducted based on guidelines from a number of sources (Braithwaite and Iedema, 2004, Kitzinger, 1995). The general principles governing the focus group included:

Insight, not rules

1. Participants were free to say what they felt on the reflection points raised or other issues as the discussion unfolded. Although some of the discussion topics were presented as a choice of options (for example Reflection 4) participants were encouraged to discuss the wider issue. In this case how they felt their voice was represented and used the pictograms as visual cues to spark the conversation.

Social, not individual

2. The resulting information captured reflected a group perspective rather than characterizing an individual's specific values and beliefs. Although the comments made were personal the focus group provided the opportunity to glean commonalities and contradictions within the group.

Homogeneous, not diverse

3. The group members were drawn from a pool of staff who were either appointed in their role as educational technologists or an academic staff member who was engaged in similar activities. In each of the groups their commonality was based on their role in the context of promoting and support activities in the educational technology domain.

Flexible, not standardised

4. The focus group format allowed for greater flexibility in how and what was discussed. It also ensured that all commentary was captured relating to all issues brought forward by the group.

Warm, not hot

5. The topic for discussion was neither confrontational nor intimate – and as such although feelings were expressed they were not of an extreme nature. However, there were strong opinions expressed but the overall feel was of a "warm" discussion rather than "hot".

Words, not numbers

6. The final report captured the words spoken by the participants – I chose not to undertake any quantitative statistical analysis of the commentary – but to let the voices of the participants reflect their opinions and beliefs.

Each session followed a standard structure was held in a confidential environment and at a date and time agreed by the participants. An example of a session is outlined below:

1. Setting the ground rules.

Each participant received a pack which outlined the format of the session, the background to the research study and a consent form. The recording equipment was tested and placed in an inconspicuous position on the table. I encouraged the participants to speak freely and indicated that my role would be to keep the momentum of the discussion moving. They were asked to complete a short questionnaire regarding their background in educational technology and to read and sign the consent form if they so wished.

I also reiterated that confidentiality was assured and a final copy of the transcript would be made available to each of them final review and edit.

2. Introduction: the "microphone is live"

I opened the session by noting details of the location, date and time. I welcomed the group and thanked them for participating. I did not ask them to introduce themselves individually this information was captured in the questionnaire. The first reflection point was then introduced and they were invited to contribute their views on the topic.

3. The Group Dynamic: "Let the discussion commence…"

My role was to introduce each reflection point and seek their view and comments. I clarified any questions they may have had in relation to the topic and encouraged all participants to contribute.

I did interject if I felt that a comment made was interesting or worthy of some further reflection. I also sought contributions from some participants if they had not spoken – to clarify if they wished to comment. Most reflection point discussions arrived at a completion stage with relative ease usually signaled by silence when prompted for any further comments or on some occasions a final remark provide a relevant "hook" into the next reflection point.

4. Wrapping up – Reflection point 8

Although there are seven reflection points for discussion the final wrap up reflection, number eight was designed to close the meeting (see figure 3-8). I thanked the group for participating and giving so generously of their time and experience. I also remarked on the quote from Jack Mezirow that "*The process of transforming our frames of reference begins with critical self-reflection*" is in essence what we had engaged in during the session. I also encouraged them to sign on to the moodle site www.mosceal.com and submit their story. The microphones were switched off and in many instances the conversations continued.

The Ethical Challenges

I was also struck by the ethical issues in relation to potential participants in the proposed study, especially considering the personal and reflective nature of the focus group sessions.

The key areas for consideration included:

Minimizing risk

As the EdTech community in Ireland is relatively small and close knit I didn't want to expose any of the participants to possible identification. Also as the data unfolded I needed to ensure that they did not regret any comments or statements made. I decide that copies of full transcripts would be sent to each participant for their final review.

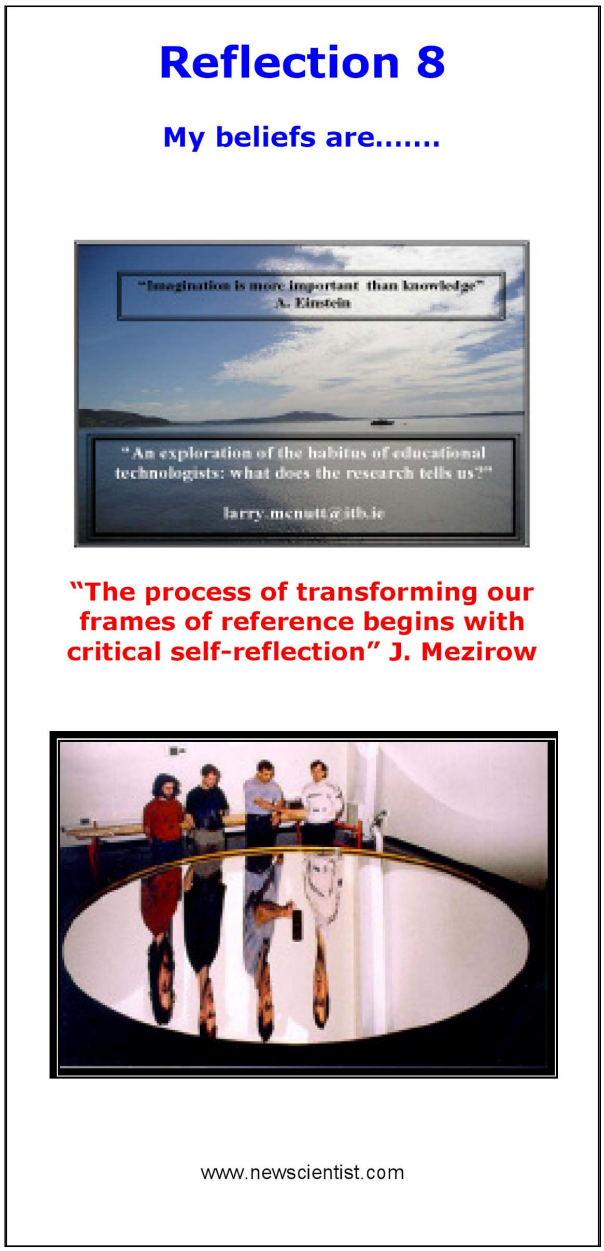
Informed consent

The right to full information was addressed by ensuring that the background to the study was made available in print format and online. Also each participant was asked to sign an agreement regarding their participation and I also outlined clearly the approach and the requirements regarding data storage. Participation was also voluntary.

Anonymity and Confidentiality

All data is coded with adjustments made where I felt that it could lead to identification. All participants were also asked to complete a consent form.

Figure 3-8: Reflection 8



A final critique: why focus groups?

It was now becoming apparent that the need for dialogue within the field of educational technology on the broader issues impacting on higher education was an important driver behind this study. The challenge was to establish an appropriate forum which would allow the underlying values and beliefs of the key players to emerge within the context of a shared conversation. The decision to adopt focus groups rather than individual interviews was to encourage, facilitate and advertise this opportunity amongst the educational technologists within each higher education institute. The interventions described in Table 3-2 above were designed to prompt the discussion with the hope that the ensuing debate would also reveal through individual nuances and commentary aspects of their personal values, assumptions and beliefs. This would also allow each participant to witness the passion and belief espoused by their peers on topics and issues that may not have been actively considered within the dominant discussions within their organisation. I was aware that the evolution and recognition of educational technology as a field within each host institution varied. In addition the lack of response to contribute personal narratives through the www.mosceal.com site after the conference could reflect on the emerging status of the field and as such a coherent sense of identity. The invitation to participate as part of a group discussion I hoped would also contribute to local initiatives designed to consolidate the status of the individuals as practitioners within the field. Of course this approach also risked the possibility that participants would be reluctant to voice publically what were private opinions and judgements. As the next section illustrates this was not to be the case – which was both a relief and a confirmation that the twenty three educational technologists who participated wanted their voices to be heard, perhaps signs of an evolving critically reflective practice which Brookfield (1995) contends happens:

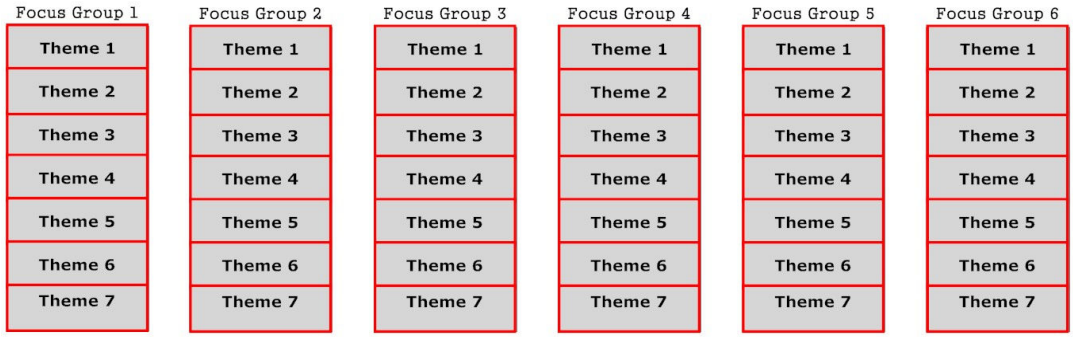
> ….when we identify and scrutinize the assumptions that undergird how we work. The most effective way to become aware of these assumptions is to view our practices from different perspectives. Seeing how we think and work through different lenses is the core process of reflective practice. (p.xiii)

Qualitative Data Analysis - The initial phase

The audio recordings were transcribed and submitted to each of the participants for their final comment. Very few edits were requested and the individuals were satisfied with these records of the discussions. One comment received which was amusing was that having read the transcript the individual didn't find the discussion very focused.

The transcripts were saved in six individual word documents – each representing the full discussion by each group of all the themes (see Diagram 3-1)

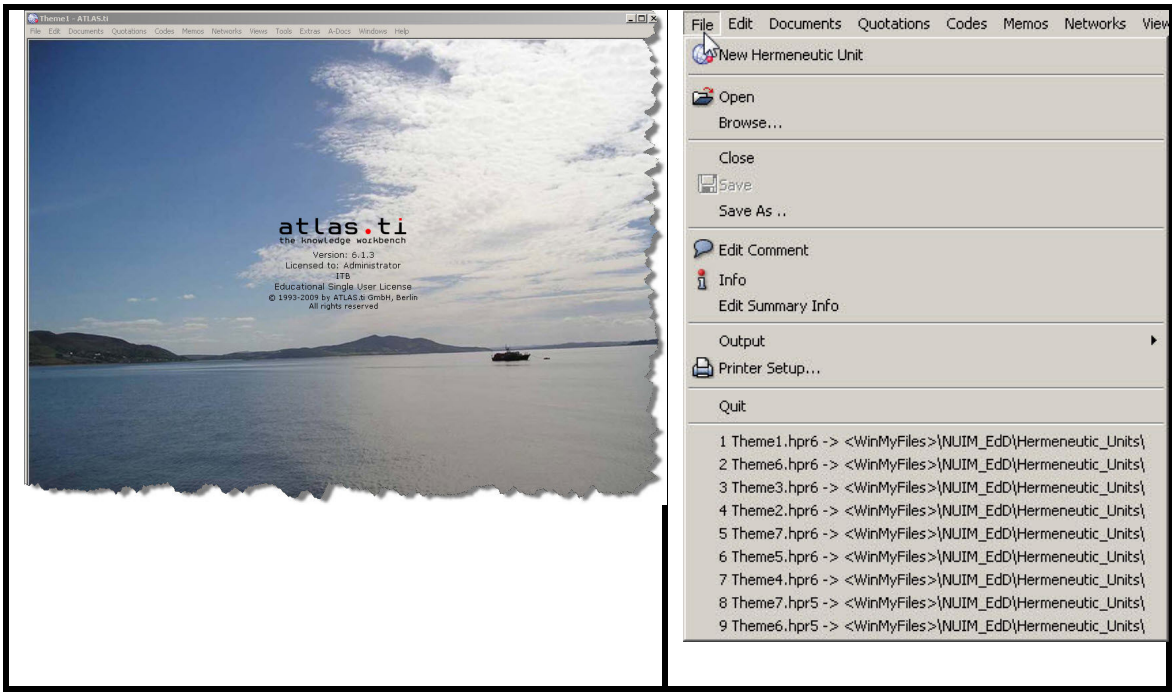
Diagram 3-1: Structure of Original Transcript Recordings



The next stage involved using *ATLAS.ti* a qualitative data analysis tool (see Figure 3-9) to assist in the coding and subsequent analysis of the data.

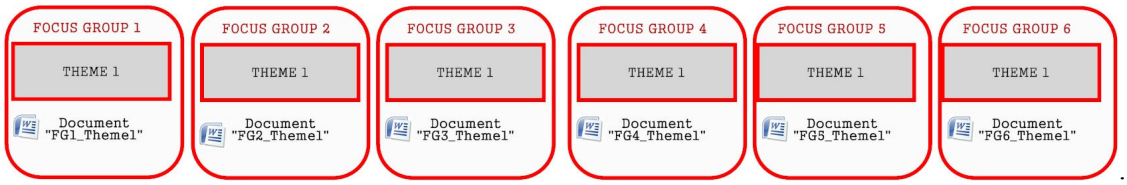
The first step involved creating a new Hermeneutic Unit – this is the actual project data and includes the documents, codes, quotations, memos and any other files associated with the work. The range of media that can be incorporated include images, video, audio, Google maps and various text file formats.

Figure 3-9: ATLAS.ti splash screen



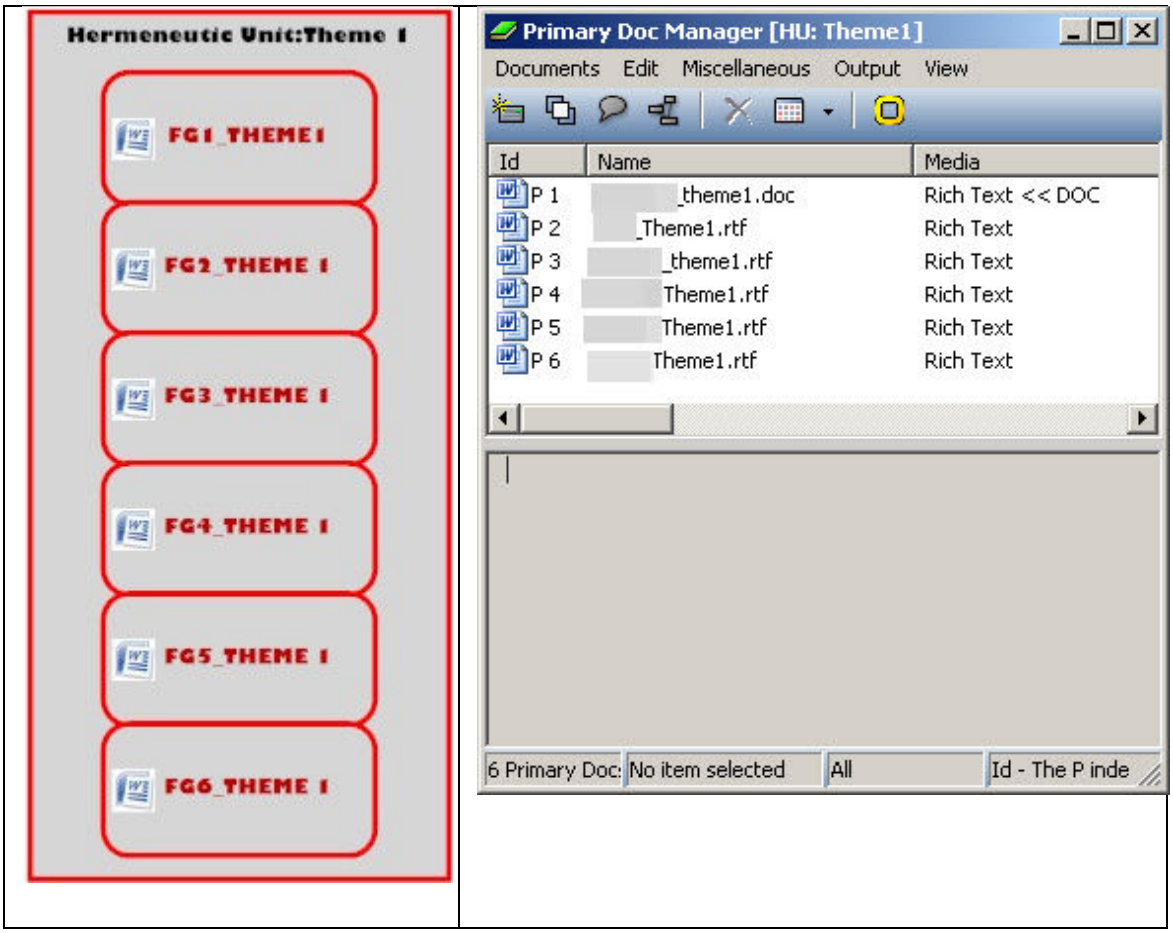
The initial approach to analysing the data "sliced" the six transcript files horizontally by reflection themes and stored each "slice" in a separate document – each of these documents was then assigned to a separate Hermeneutic unit. Diagram 3-2 below illustrates the process for Reflection Theme 1 – each transcript segment associated with this discussion theme was cut and pasted into a separate document – coded by <Focus Group ***name***><Theme ***Number***>.

Diagram 3-2: "Transcripts "sliced" by reflection themes



Each of these was then assigned to a hermeneutic unit within *ATLAS.ti* as shown in Diagram 3-3. The advantage of this approach is that the original documents are not affected by any change to the text now associated with the hermeneutic unit.

Diagram 3-3: Assigning documents to a hermeneutic unit



The Hermeneutic Unit (HU) editor is the main window which displays the contents of the documents and provides the tools required for coding and analysis (see Figure 3-10).

Gibbs and Taylor (2005, p.1) have described the coding process as "*combing the data for themes, ideas and categories and then marking similar passages of text with a code label*". Although I had assumed that the discussion would be guided by the main reflection point, for example the first reflection's theme was on what motivates an educational technologist, the conversation touched on many other relevant topics and concepts. The software provides three main coding techniques:

1. **Open coding:** allows you to create a new code and associate this with an existing quotation or selected text segment. In Figure 3-10 above the text segment is shown on the left hand side with the code "A point of reflection on motivation" associated with it. It is also possible that the same segment of text may have more than one code associated with it.

2. **Code-by-list:** this option allows you to assign an existing code to a segment of text or quotation.

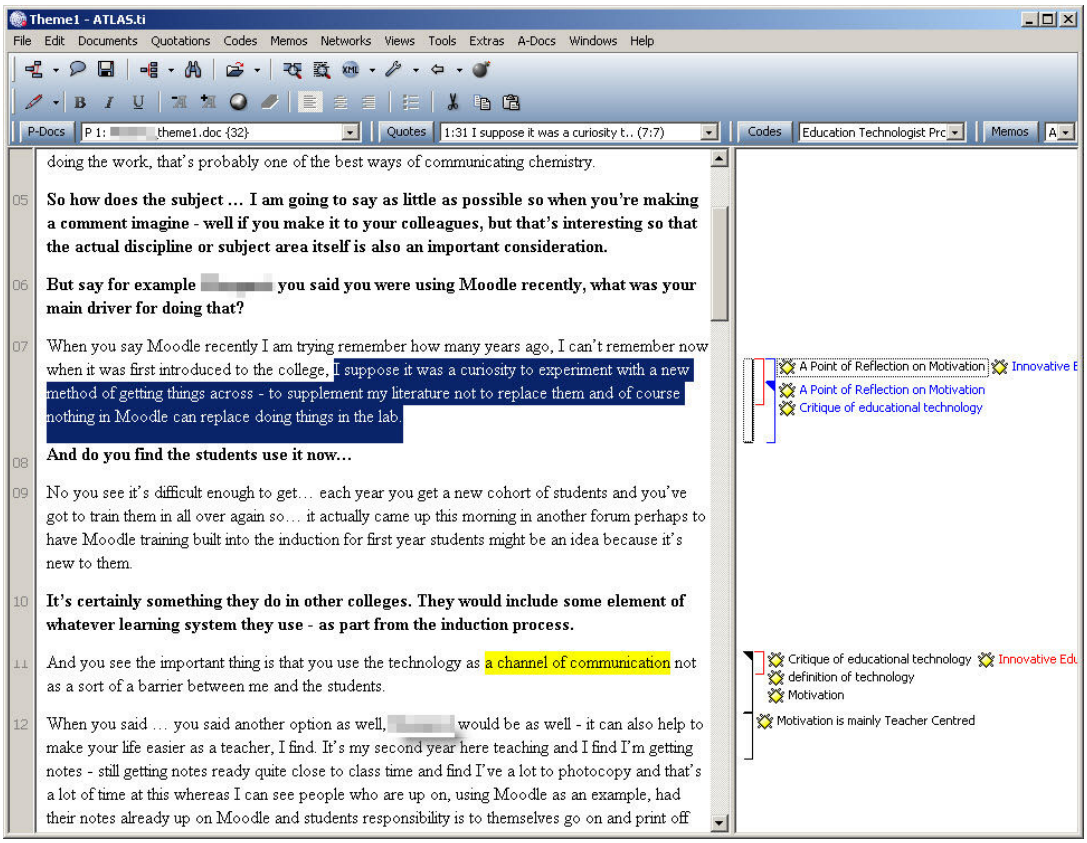
3. **In-vivo coding**: is useful if the selected text is itself a good name for a code.

The end result of this process is a set of documents overlaid with a coding scheme and associated highlighted segment of texts i.e. quotations. All of the codes identified during this process emerged from the data and reflected the essences of the discussion at that point.

Gibbs and Taylor (2005) refer to these as grounded codes which "*emerge from the data because you put aside your prejudices, presuppositions and previous knowledge of the subject area and concentrate instead on finding new themes in your data*" (p. 1). Dey (2007) uses the term open coding as "*the process of breaking down, examining, comparing, conceptualizing and categorising data*" (p.84)

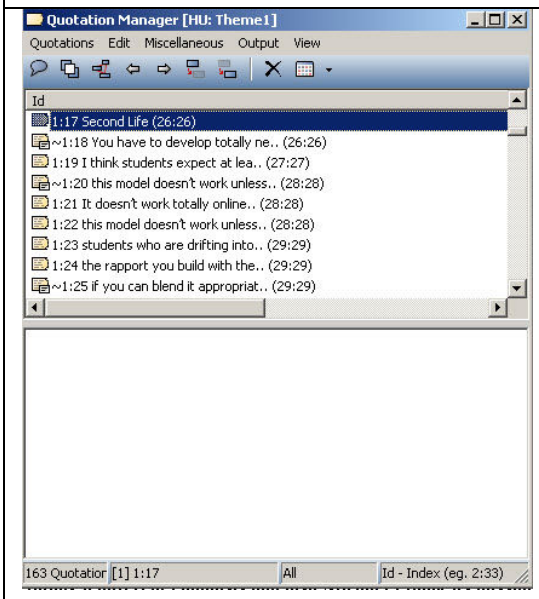
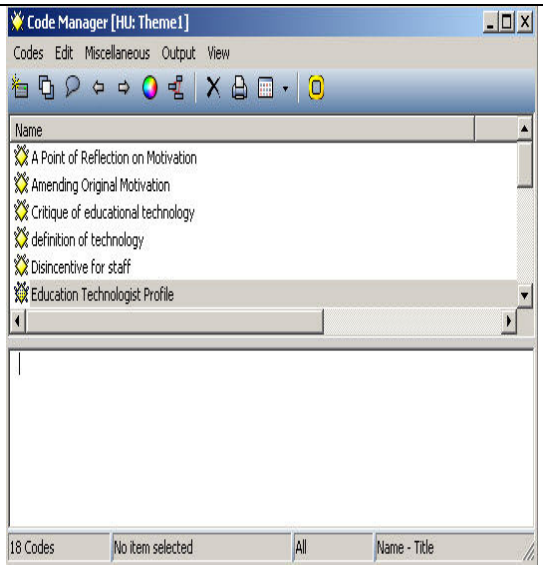
It was certainly an exciting point in this study – the data was "speaking" to me and revealing concepts and themes that I had not expected. Motivation for example was yielding up a rich set of insights into the complex and frustrating choices that educational technologists have to make. As Dey (2007) remarks "*The data itself will dictate what categories are there to be "discovered*" (p. 87). Whilst this might suggest a limited or predetermined "output" from the data – at variance with an interpretative perspective – it also suggests that arriving at the data analysis with re-defined expectations will soon founder as the data reveals its insights.

Figure 3-10: Coding a document within the HU editor



One major advantage of the software was that it to stored each coded segment (quotation) separately from the primary documents and maintained a library of codes and their linkages to the quotations (see figure 3-11 & 3-12). The result of this exercise was the creation of a large number of codes for each of the seven hermeneutic units. It was also becoming apparent that I was using an inductive coding process as described by Thomas (2003), the procedures include:

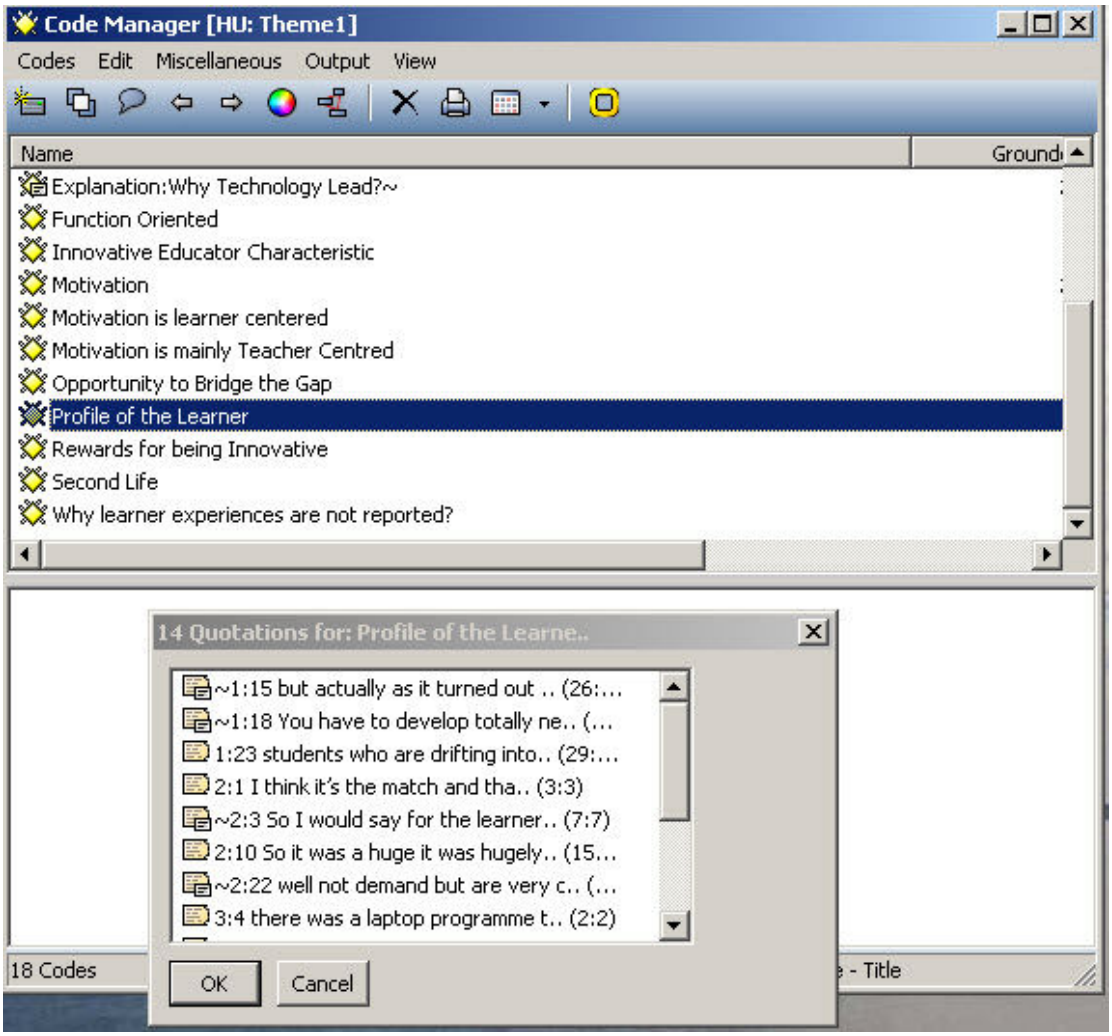
1. Preparation of raw data files (i.e. "data cleaning")
2. Close reading of the text
3. Creation of categories or themes
4. Overlapping coding and uncoded text
5. Continuing revision and refinement of category system

Figure 3-11: Quotation Manager	Figure 3-12:Code Manager
	

Ryan & Bernard (2009) suggests mostly "*themes are induced from empirical data – from texts, images and sounds. Even with a fixed set of open-ended questions, one cannot anticipate all the themes that arise before analyzing the data*" (p. 88).

These were two important points of information for me at this stage to allow the themes to emerge and to recognize that not all the data would be coded and some of the segments of text had more than one code. On reflection I now realize that the search for themes which commenced with the coding derived from a number of "scrutiny techniques" (Bernard, 2009, p.89). One technique that proved very useful was "repetitions", one example shown in Figure 3-13 illustrates how the profile of the learner in higher education was a constant topic during the focus group sessions. Ryan & Bernard (2009) referring to D'Andrade (1991) remarks that "*Anyone who has listened to long stretches of talk, knows how frequently people circle through the same network of ideas*" (p. 89).

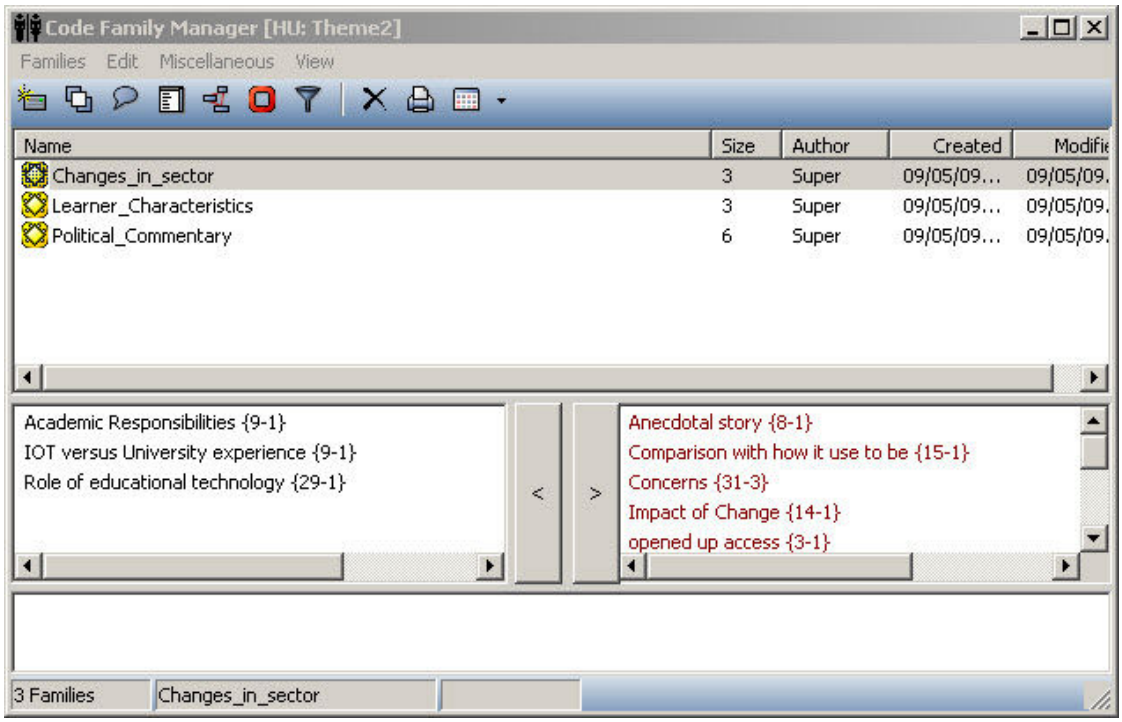
Figure 3-13: An example of repetition as a scrutiny technique



This is certainly a characteristic of the data for this study as the same themes continued to re-emerge during different periods of the discussions. Often this was outside my own expectations of the topics I had expected the reflection points to trigger. However I was governed by the overall framework I had established from the outset which was described earlier.

I was seeking opinions, comments, observations, experiences, anecdotes, examples of good practice, concerns, fears, hope, ambitions, personal sharing and political commentary. This is not an exclusive list and is not in any particular order of priority but when the coding was completed the result was a set of code families that reduced the number of individual codes. ***Atlas.ti*** allows the creation of networks of codes which assist in the further analysis of the data and the subsequent creation of a model (see figure 3-14).

Figure 3-14: Creation of code families



Atlas.ti also provides a graphical tool which enables the creation of a network structure of various node types which can be codes, quotations, memos or primary texts organized with named links. These links can help in building a conceptual or logical relationship between the nodes in the network (see Figure 3-15).

I had now moved from textual level activities to conceptual level work. This phase allowed me to visually connect selected segments of text, quotations and memos into diagrams. The relationships that can be mapped between codes and quotations are shown in Figure 3-16.

Figure 3-15: Code-Code Relations and Quote-Quote Relations

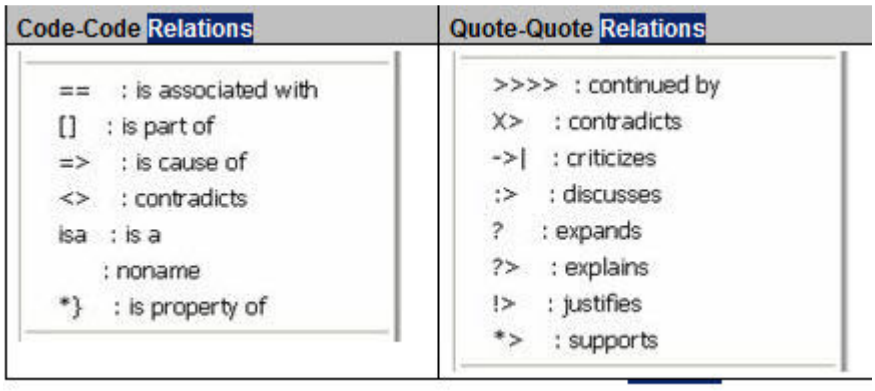
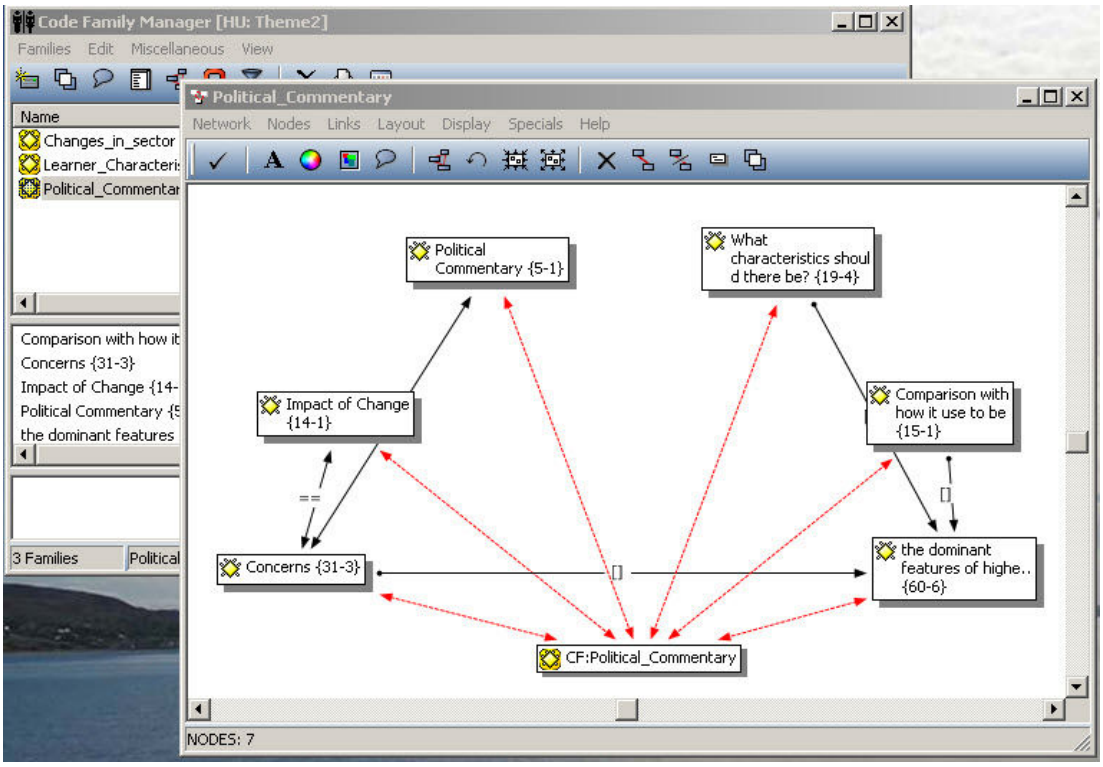


Figure 3-16: Code Family Network Diagram



Each reflection theme was been read and re-read, coded and re-coded resulting in the creation of code families and a series of network diagrams generated to illustrate the relationships between the codes. This approach allowed the various subthemes to be identified within each main reflection theme.

It was now becoming apparent that the data as presented would require some new approaches to support some new and exciting developments. Other themes did not restrict their appearance to my artificially created reflection points the ebb and flow of the discussion ensured that certain topics and ideas continued to "bob along" on the surface of the groups discussions.

This predicament is described by Ryan & Bernard (2009) referring to the work of Charmaz (1990) as a trade-off and researchers need to be careful not to inhibit the forming of new ideas:

> *This is a trade-off, of course, between bringing a lot of prior theorizing to the theme-identification effort and going at it fresh. Prior theorizing, as Charmaz (2009) said, can inhibit the forming of fresh ideas, and the making of surprising connections*. (p.94)

Even at this stage I recognized that the voice of educational technologists had valuable contributions and opinions with regard to the challenges facing higher education. However, I also had the challenge of delicately seeking out any redundancies and overlaps and reducing the overall number of categories presented but not at the expense of diluting the voices. The next chapter will present a summary of each reflection showing the main themes and sub themes that emerged, and conclude with a description on how to proceed to the next phase of data analysis.

Chapter 4: Data Analysis – Theme Identification

Introduction

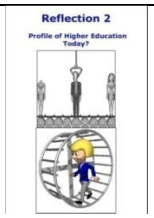
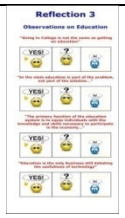
This was now an exciting part of the study which felt somewhat akin to swimming in a "great barrier reef" of data. The data were the voices of the participants and I could "hear" them all as I marvelled at the variety and richness of what was presented. But I knew the "sightseeing" was over, I needed to roll up my sleeves and start to sample and select, analysis and synthesis – but always conscious of a fragile "ecosystem" that need to be handled with care and attention. This chapter will walk through the theme identification process in two stages. The first stage represents an initial analysis of the data. Which I had assumed would yield a rich variety of thematic results, telling the stories of the participants without any further need for my intervention. However, there was a twist, as the range of relationships and interconnections that emerged represented a range of alternative themes, I needed or I felt the data needed a second stage analysis, a final review and reassessment to ensure that no voice was left "unheard".

Stage 1: The Initial Analysis

As described in chapter three, the "containers" of the data were based on the original reflection themes (see Table 4-1) each part of the focus group discussion relating to that theme is stored in this "container". So for example if you could open the container for Theme 1 you would be able to "hear" a segment of each focus groups discussion relating to the topic of theme 1 which was "motivation". The focus groups are numbered 1 to 6 which represents the chronological order in which they occurred. Table 4-1 below is a summary of the seven themes each of which was "designed" to capture and contain "certain" view, beliefs or opinions on education and educational technology.

To illustrate the approach I will describe the process in detail for Theme one but will only describe the output for Themes two to seven.

Table 4-1: Summary of Seven Reflection Themes

Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7
						
Motivation	**Profile of Higher Education**	**Observations on education**	**Characteristics of my voice**	**My influences**	**Impact – if remove educational technology**	**My assumptions**
Personal view/belief	General observation	General observation	Personal view/belief	Personal view/belief	My opinion	My opinion

Analysis of Theme 1: Technology or the Learner

It is quite a challenge to describe how this process works. The diagrams and tables I hope will assist in providing some insight into how I approached this task, but I realise that they lack any emotional context which was always a part of any decisions that were made. Decisions that continually asked questions of what I was reading and listening to, which quotations struck an immediate chord, which didn't, an isolated comment made during one focus group session that I heard again spoken by someone else at a later date. All of these possibilities contributed to the selection of quotations that were extracted from the totality of the conversations. Each quotation was coded by a label that I felt was appropriate to the point being made, or a belief being expressed or simply an opinion.

The main codes that emerged are outlined in Table 4-2 below which also includes a summary of the quotation count. The codes that were used are shown on the left hand side of the table, the focus group numbers are shown on the first row numbered from 1 to 6. For example the Focus Group one discussion had thirteen occurrences of the code "*A Point of Reflection*" whilst Focus Group Six had one.

Although I had some codes in mind whilst undertaking this exercise – particularly those that would capture the dichotomy of opinion regarding key motivational factors (i.e. to benefit the learner or primarily technology led). I was surprised at the range of issues raised and opinion presented. The codes selected represent the various themes, topics, ideas, concepts, phrases and keywords that were found in the data.

The totality of the coding is presented in Table 4-2, I choose not to prioritize the codes based on the quantity of occurrences (however these are presented for information) and the co-occurrence of codes was also evident. As this process was evolving I could now certainly understand the remark by Ryan and Bernard (2003) that "*Theme identification is one of the most fundamental tasks in qualitative research. It is also one of the most mysterious*" (p.1).

There were some descriptive codes for example the code "*Explanation: Why Technology Led*" which captured the participants rationale for allowing technology to be a key driver in their practice whereas "*Second Life*" was an in-vivo code used in the actual discussion. I also now realized that I had added an additional layer to the original transcript – a layer that acted as a filter to illuminate some of the key views and beliefs. I certainly felt a sense of responsibility with regard to the data, which I had not associated with similar tasks when analyzing quantitative data. The "data" were real thoughts, feelings, beliefs and opinions – I certainly did not want to "contaminate" or "dilute" these and approached this task with a degree of sensitivity. As I read and re-read the transcripts I could "hear" the voices – the light hearted comments, the serious statements, the agreements and disagreements, the jovial remarks and at times the silence. I now had to move away from my intimate connection with this set of transcripts and revisit my initial coding with a more distant "ear".

As this stage progressed it was also evident that many of the codes were connected, similar points were being made but perhaps expressed somewhat differently, – I now re-examined the data looking for categories or relationship between the codes.

The software package *Atlas ti* allows for the creation of "code families" to support this task. The software also provides a facility for drawing network diagrams for example in Figure 4-1 below the codes "*Definition of Technology*" and "*Second Life*" are shown as "nodes" belonging to a code family named "Educational Technology: Views and Comments". I found it helpful to visualise the connections and imagine they represented telephone wires – with the constant buzz of debate and discussion.

Many of the topics raised were personal and may not have been voiced in any forum before, a distinct privilege for me, but a realisation also that the space to encourage these personal interactions and engagements is being squeezed out and undervalued within the current discourse on educational technology.

Table 4-2: Summary of Quotation Count

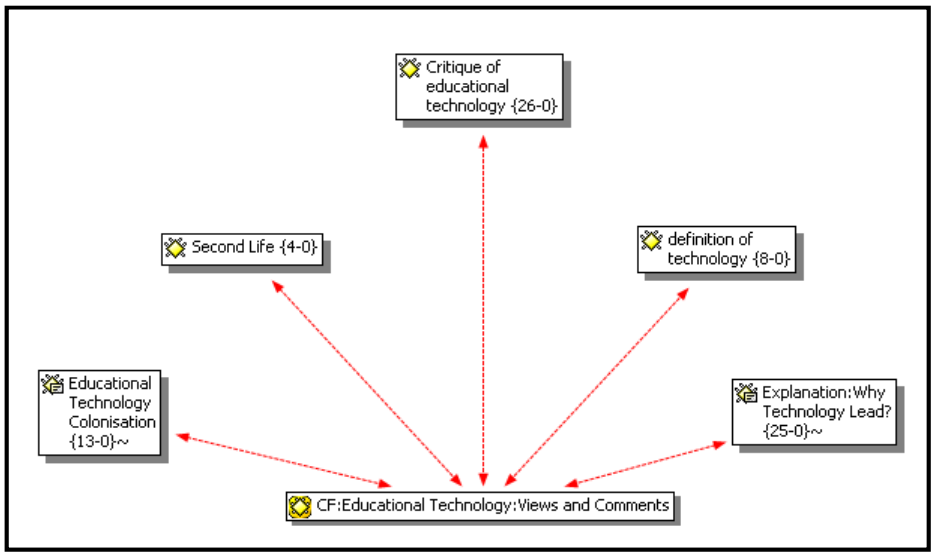
Codes	1	2	3	4	5	6	Totals
A Point of Reflection	13	2	4	5	3	1	**28**
Amending Original Motivation	3	0	2	2	0	1	**8**
Critique of educational technology	6	3	7	6	4	0	**26**
Definition of technology	5	1	1	1	0	0	**8**
Disincentive for staff	0	0	3	5	0	0	**8**
Education Technologist Profile	1	1	7	15	7	2	**33**
Educational Technology colonisation	1	0	5	4	3	0	**13**
Explanation: Why Technology led?	5	7	8	0	4	1	**25**
Function Oriented	1	0	0	2	4	0	**7**
Innovative Educator Characteristics	1	0	0	0	0	0	**1**
Motivation	4	3	3	3	4	3	**20**
Motivation is learner centred	0	7	3	2	0	0	**12**
Motivation is mainly teacher centred	3	3	0	3	3	1	**13**
Opportunity to Bridge the gap	1	1	0	0	0	0	**2**
Profile of the Learner	3	4	3	0	3	1	**14**
Rewards for being Innovative	1	3	3	3	2	0	**12**
Second Life	2	0	1	1	0	0	**4**
Why learner experiences are not reported	0	3	3	0	0	0	**6**
Totals	50	38	53	52	37	10	**240**

This analysis identified three code families reflecting the dominant issues and views that emerged during the focus group discussion which are briefly listed below, before being analysed in detail in chapters 5 and 6. This current chapter intends to give a holistic sense of the scale of the emergent findings in visual and text formats, before exploring their educational significance in later chapters.

1. **Educational Technology: Views and Comments**

   This includes codes such as "Explanation: Why Technology Led"; "Educational Technology: Colonisation"; "Definition of Technology" (Refer to Figure 4-1 below)

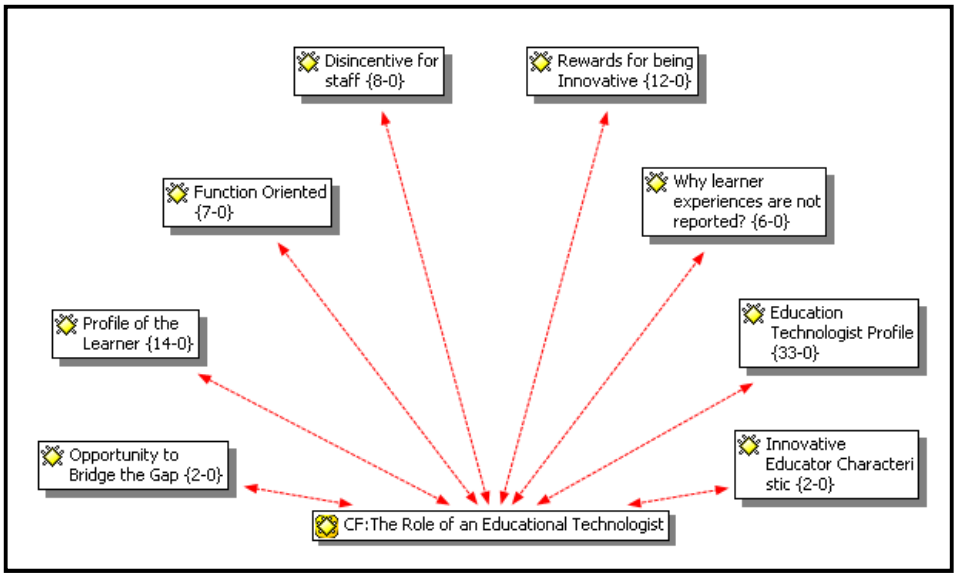
Figure 4-1: Theme 1: Educational Technology: Views and Comments



2. **The role of an educational technologist**

   This includes codes such as "Function oriented"; "Profile of the learner"; "Rewards for being innovative" (Refer to Figure 4-2 below)

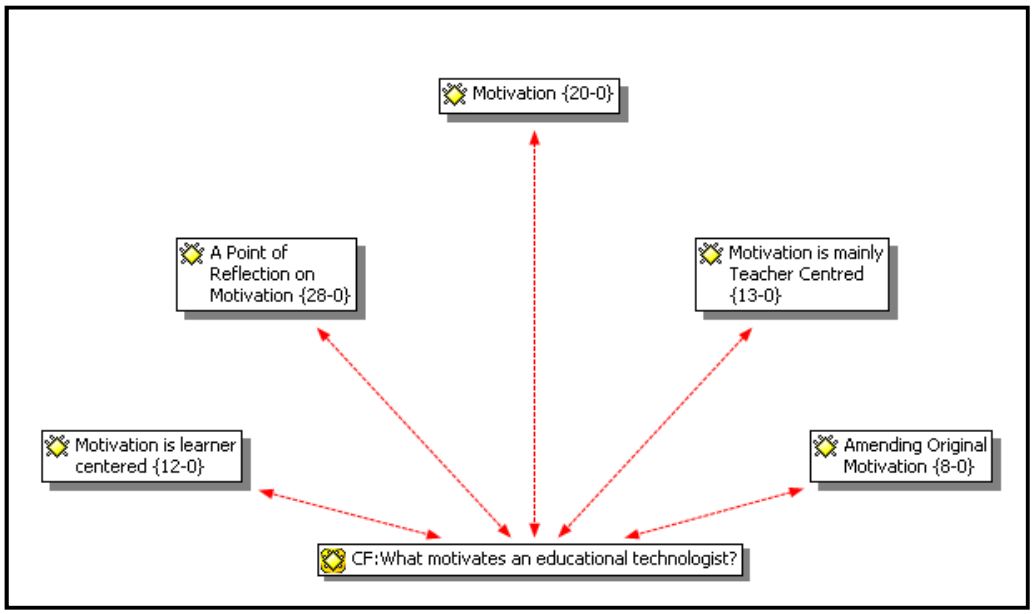
Figure 4-2: Theme 1: The Role of an Educational Technologist



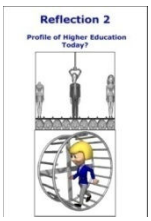
3. What motivates an educational technologist?

This includes codes such as "Motivation is learner centred"; "Motivation is mainly teacher centred" (Refer to Figure 4-3 below)

Figure 4-3: Theme 1: What Motivates an Educational Technologist?



Analysis of Theme 2: The Profile of Higher Education Today



The second topic for discussion offered two possible scenarios to represent the current higher education profile (i) a mass assembly line – emphasizing scale and the concept of education as a product and (ii) an exercise wheel – emphasizing rote learning, continuous assessment and the cyclical/repetitive of the education experience. Table 4-3 below presents the summary of quotation counts.

The three code families reflect the dominant issues and themes that emerged during this part of the focus group discussion:

1. **Changes in the Higher Education Sector**
   This includes the codes: "Role of educational technologist"; "Academic responsibilities" (Refer to Appendix B: Figure 4-4)

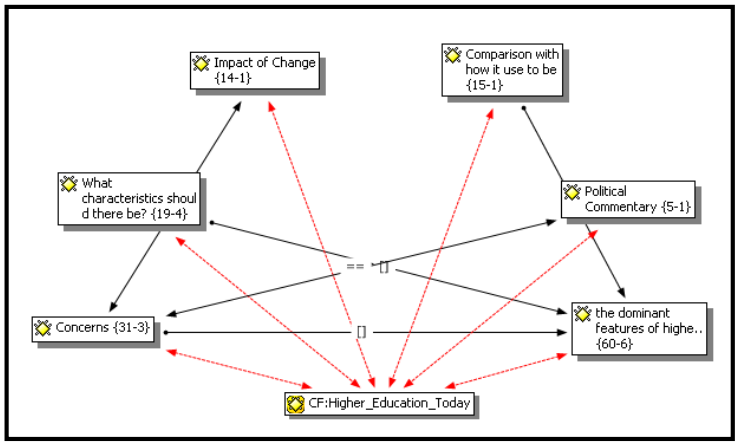
2. **Learner Characteristics**
   This includes the codes: "Variety of students"; "Opened up access" (refer to Appendix B: Figure 4-5)

3. **The dominant features of higher education**
   This includes the codes: "Concerns"; "Impact of change"; "Comparison with how it use to be" (refer to Figure 4-6 below)

Table 4-3: Summary of Quotation Count

Codes	1	2	3	4	5	6	Totals
Academic Responsibilities	0	4	0	0	1	4	**9**
Anecdotal story	0	0	0	2	3	3	**8**
Comparison with how it use to be	0	6	6	1	1	1	**15**
Concerns	6	9	2	12	2	0	**31**
Impact of Change	4	2	3	4	0	1	**14**
IOT versus University experience	0	1	1	7	9	9	**9**
Opened up access	2	0	0	1	0	0	**3**
Political Commentary	0	0	0	4	1	0	**5**
Role of educational technology	1	0	7	8	4	9	**29**
Student Characteristics	0	0	0	0	2	3	**5**
The dominant features of higher education	4	14	12	22	7	1	**60**
Variety of students	6	9	5	1	0	2	**23**
What characteristics should there be?	4	7	3	1	4	0	**19**
Totals	27	52	39	63	25	24	**230**

Figure 4-6: Theme 2-Higher Education Today



Analysis of Theme 3: Observations on Education

The third topic for discussion presented four comments from notable commentators on the current state of the education system. Each quotation was designed to reflect four key issues and to seek the participants own level of agreement or disagreement with the positions presented. As in each of the previous topics these were not designed to limit the discussion but solely to prompt a reaction and hopefully encourage an engaging debate amongst the participants. Which as can be seen in Table 4-4 was very much the case – with a diverse range of views and opinions being offered.

Table 4-4: Summary of Quotation Count

Codes	1	2	3	4	5	6	Totals
Advantages of Technology	0	2	1	0	0	0	**3**
Annoyed at the word "business"	4	0	0	2	1	0	**7**
Characteristics of education	13	12	10	17	3	4	**59**
Comments on question 2	1	6	2	11	5	3	**28**
Comments on Dewey	5	4	3	4	5	5	**26**
Comments on question 3	5	6	3	5	1	3	**23**
Comments on question 4	4	7	6	8	13	3	**41**
Comparison with my experience	2	2	1	5	1	4	**15**
Criticism of academic management	1	0	1	4	0	0	**6**
Criticism of business model	2	1	3	6	2	0	**14**
Criticism of educational technology	1	2	1	0	8	1	**13**
Definition of education	0	4	3	0	5	0	**12**
Definition of learning	0	2	0	1	0	0	**3**
Description of college experience	2	2	2	3	2	3	**14**
Difference between education and training	1	1	0	0	2	0	**4**
Difference between IOT and University	0	3	0	0	0	0	**3**
EdTech easier with WEB 2.0	2	1	0	0	0	0	**3**
Funding in Northern Ireland	0	0	0	5	0	0	**5**
Is education part of the problem or not?	1	7	0	7	6	1	**22**
Lack of academic voice	1	0	0	3	0	0	**4**
Lack of investment in IT	5	2	1	10	1	0	**19**
Link between education and the economy	4	2	5	8	4	2	**25**
Negative portrayal in the media	2	0	0	1	0	0	**3**
One year conversion course	0	0	0	2	0	0	**2**
Parental aspirations	1	0	0	0	0	0	**1**
Personal reflection	7	15	3	5	11	7	**48**
Role of educational technologists	0	0	0	0	3	0	**3**
Role of the educator	3	5	0	7	0	0	**15**
Student profile	8	8	3	8	8	4	**39**
The Chinese	0	0	0	1	0	0	**1**
Why attend college?	3	2	2	4	0	1	**12**
Totals	78	96	50	127	81	41	**473**

As the table illustrates the dominant areas for discussion were around the four key questions – a further analysis of these codes illustrated various associations and inter-relationships, Figures 4-7 to 4-10 in Appendix B captures these interrelationships. The network diagrams clearly show that much of the discussion centred on personal reflections on the issues presented by the selected quotations.

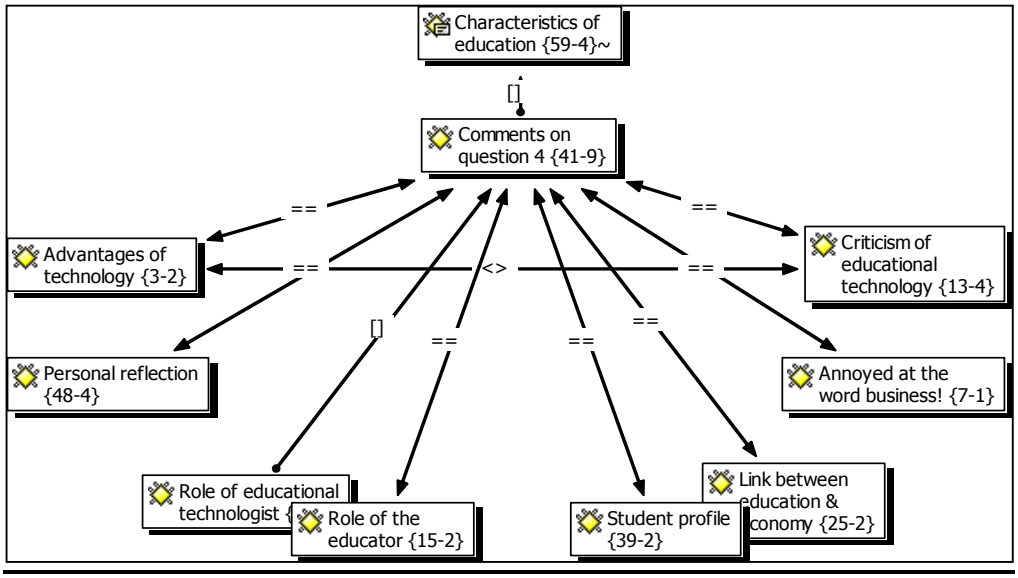
Three main types of interrelationships that have been used:

==	represents an association (Relates concepts without subsumption)
<>	contradicts
[]	The part-of relation links objects, not concepts of different abstractional level (as does ISA)
ISA	The ISA relation links specific concepts to general concepts.

However, for the purposes of this analysis I have decided to focus in the direct commentary relating to the four questions. Which I feel more accurately reflect the underlying personal beliefs and values of the participants. The code families identified were:

1. **Comments on Question 1**: "*Going to College is not the same as getting an education*"
   This includes the codes: "Role of the educator"; "Difference between education and training"; "Definition of education" (Refer to Appendix B: Figure 4-7)
2. **Comments on Question 2**: *"In the main education is part of the problem, not part of the solution…"*
   This includes the codes: "Lack of academic voice"; "Negative portrayal in the media"; "Personal reflection" (Refer to Appendix B: Figure 4-8)
3. **Comments on Question 3**: "*The primary function of the education system is to equip individuals with the knowledge and skills necessary to participate in the economy…."*
   This includes the codes: "Link between education and the economy"; "Criticism of education management"; "Why attend College" (Refer to Appendix B: Figure 4-9)
4. **Comments on Question 4**: "*Education is the only business still debating the usefulness of technology..."*
   This includes the codes: "Role of the educator"; "Role of the educational technologist"; "Student profile" (Refer to Figure 4-10 below)

Figure 4-10: "Education is the only business still debating the usefulness of technology.."



Analysis of Theme 4: My current voice in education could be represented by…..

The fourth topic for discussion consisted of eight pictograms each representing various possible relationships (see Figure 4-16). Although I had some descriptive labels associated with each image I did not share these with the participants, as the pictures are very open to interpretation.

The main purpose was to provide a visual prompt to discuss the concept of "voice" in higher education and more specifically the "voice" of educational technologists. As with many visual cues there are layers of possible interpretation including (i) Is it a personal voice or professional, a group or individual? (ii) Who do the figures represent e.g. students, staff, management, other authorities. I choose not to provide any directions other that asking the group to identify any of the pictographs that reflected any position they had in relation to the their voice in higher education today.

In the subsequent analysis, I coded the data from actual words or phrases used by the participants. I discovered that the subsequent discussions prompted by the pictures yielded a suitable array of appropriate codes. However, I have to admit that the images were not as obvious as I had expected – I now realise that the images were more readily attributable to the description of a role or position within the organisation, and not obviously viewed as a personal representation. I had hoped that some participants would have sketched some representative images of their own voice – but this didn't occur.

Table 4-6 below presents the summary of quotation counts.

Five code families emerged from the coded data (refer to Figures 4-11 to 4-15 in Appendix B). Each code family reflected a key cluster of comments around a central issue:

1. **Characteristics of voice**
   This includes the codes: "Isolated"; "Muzzled"; "Frustrated" (Refer to Appendix B: Figure 4-11)

2. **Educational Technologists Role**
   This includes the codes: "Hierarchy"; "Restructuring"; "We're on technical contracts" (Refer to Appendix B: Figure 4-12)

3. **Role of the Academic**
   This includes the codes: "Academic freedom"; "Role of academic different"; "Students and teaching main focus" (Refer to Appendix B: Figure 4-13)

4. **The Importance of Voice**
   This includes the codes: "We should have a voice"; "Criticism of management"; "A lot of people aren't interested" (Refer to Appendix B: Figure 4-14)

5. **Where voice is heard**
   This includes the codes: "Voice heard in classroom"; "Voice heard in publications"; "You have different levels of voice" (Refer to Figure 4-15 below).

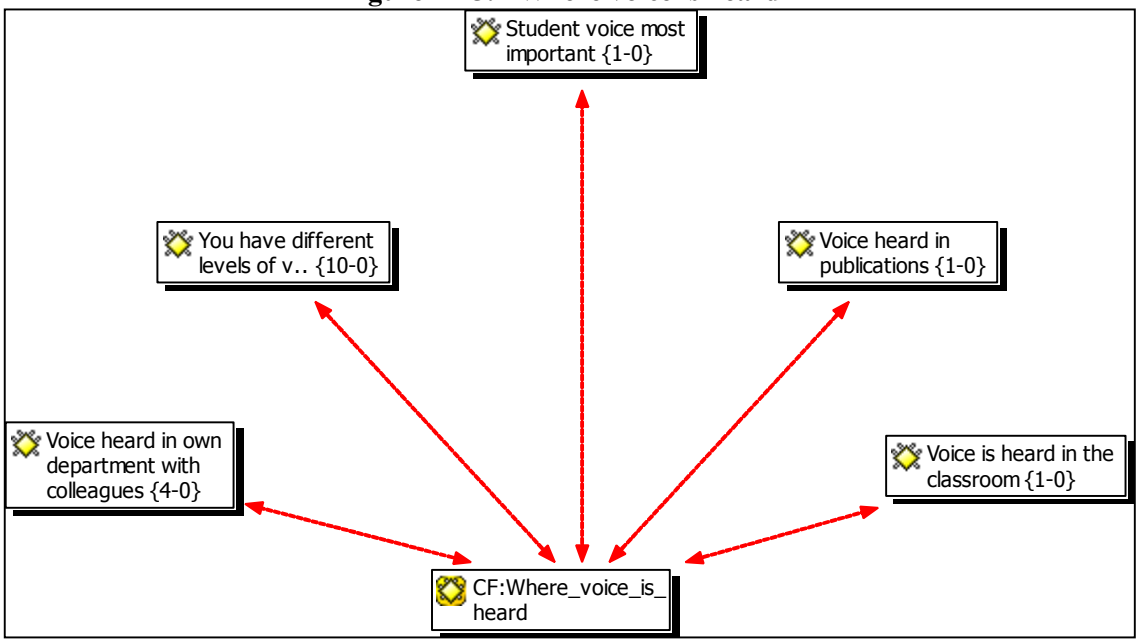
Table 4-6: Summary of Quotation Count

Codes	1	2	3	4	5	6	Totals
A lot of people aren't interested in your voice	1	1	0	0	0	0	**2**
Academic Freedom	2	0	1	0	0	0	**3**
Academics too segregated	3	0	0	0	0	0	**3**
Approach to PR	1	0	1	0	0	0	**2**
Criticism of management	1	0	1	0	1	2	**5**
Don't care if my voice is heard	3	0	0	0	0	0	**3**
Ed Tech role different to academic	0	0	4	7	4	5	**20**
Europe Blackboard conference in UK	0	0	1	1	0	0	**2**
Frustration	0	0	0	0	5	4	**9**
Hierarchy	0	0	0	0	0	5	**5**
Holding Hands Picture	0	1	0	0	0	0	**1**
How did the introduction of ed tech happen?	14	0	2	0	1	1	**18**
How is wider public opinion formed?	0	0	1	0	0	0	**1**
isolated	2	0	1	0	0	1	**4**
muzzled	1	0	1	0	1	0	**3**
Need opportunities for academic to discuss practice	6	0	0	0	0	0	**6**
No identity with any of the pictures	1	0	0	0	0	0	**1**
No interference	2	0	0	0	0	0	**2**
No voice	0	0	0	0	0	2	**2**
Picture baby nurture	0	0	0	1	0	0	**1**
Picture brick wall	0	0	0	2	0	0	**2**
Picture Holding hands in V shape	0	0	0	0	0	2	**2**
Picture shaking hands	0	0	0	1	0	1	**2**
Puppet Picture	0	1	1	0	0	0	**2**
Restructuring	0	0	0	0	4	2	**6**
Role of the academic	6	3	2	0	0	0	**11**
RSC - characteristics	0	0	0	5	0	0	**5**
Student voice most important	0	0	1	0	0	0	**1**
Students & teaching main focus	2	2	0	0	0	0	**4**
Voice heard in own department with colleagues	2	0	0	0	1	1	**4**
Voice heard in publications	0	1	0	0	0	0	**1**
Voice is heard in the classroom	1	0	0	0	0	0	**1**
We should have a voice on a broader scale	0	3	0	0	1	1	**5**
We're in a kind of privileged and unusual position	0	0	0	3	0	0	**3**
We're on technical contracts	0	0	0	3	0	0	3
What does the question mean?	2	2	0	0	0	1	**5**
You have different levels of voice	0	4	4	0	0	2	**10**
Totals	50	18	21	23	18	30	**160**

There is a greater diversity of individual comments during these discussions with less evidence of a group discussion. However, the theme topic was concerned with the individual "voice" and I was keen to elicit the participant's personal impressions and opinions.

Theme 4 is the second of three reflections that specifically focus on each of individual participant's views and opinions and as Table 4-6 illustrates the distribution of the discussion quotations tended to be more solitary rather than discursive.

Figure 4-15: "Where voice is heard"

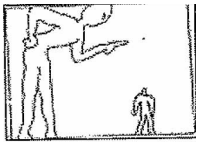
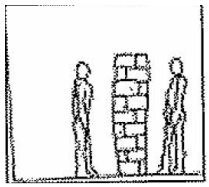
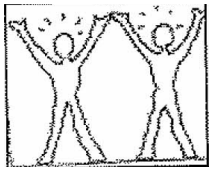
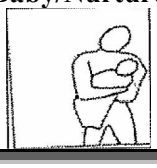
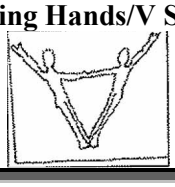


Analysis of Theme 5: My current views on education have been influenced by…..

The fifth topic for discussion also sought to elicit some accounts of the key influences that contributed to their current views and beliefs about education. The graphic suggested perhaps a movie or documentary, a book or performance or an individual. This was the third reflection that related specifically to their own sense of self – reflection one addressed their underlying motivations whilst reflection four captured their views in the importance of their voice within the sector.

The more personal reflections generated a different dynamic within the groups – recognition perhaps that the comments from their peers were not always an invitation to discuss or rebut. For some of the participants the realisation that they have had few opportunities to engage with their peers to share their own experiences was noted.

Figure 4-16: Pictograms

"Small cog" 	This represented to me the "small cog" in a big wheel notion. A player in the field of education but a subsidiary role nonetheless. Some autonomy and possibly reflected "glory" when hailed from above. A mute voice due to lack of encouragement.
"Dominated/Directed" 	Similar to the previous graphic but with the added vista of being dominated even admonished and certainly expected to tow the line. A mute voice – due to a domineering regime.
"Brick Wall" 	Years of issues and unresolved conflict have allowed a wall of separation to develop. Each aware of the others existence but have long past any attempts to bridge the divide and resolve differences. Or simply the physical layout of the buildings has created no-entry zones. A voice within a zoned area or constituency.
"Puppet" 	A common concept of a "puppet on a string" – every move manipulated and dependent on a master. Various levels at work here – where all levels with the organisation can be viewed as manipulated. A voice that is manipulated by other forces.
"Celebrate/Success" 	Equality and celebration – spontaneous and a sense of joy. A voice that lacks inhibitions and has no fear.
"Shaking Hands" 	Acknowledgement and recognition – mutual understanding and respect all captured here for me. A voice of reason and respect.
"Baby/Nurture" 	Is this the essence of education – a nurturing environment – are you the giver or receiver – or do we need a bit of both. A voice that nurtures and supports.
"Holding Hands/V Shape" 	A combination of equality and celebration – with a synergy and balance in the interaction.

The codes that emerged from the data are shown in Table 4-7 as can been seen the dominant code related to individual philosophies.

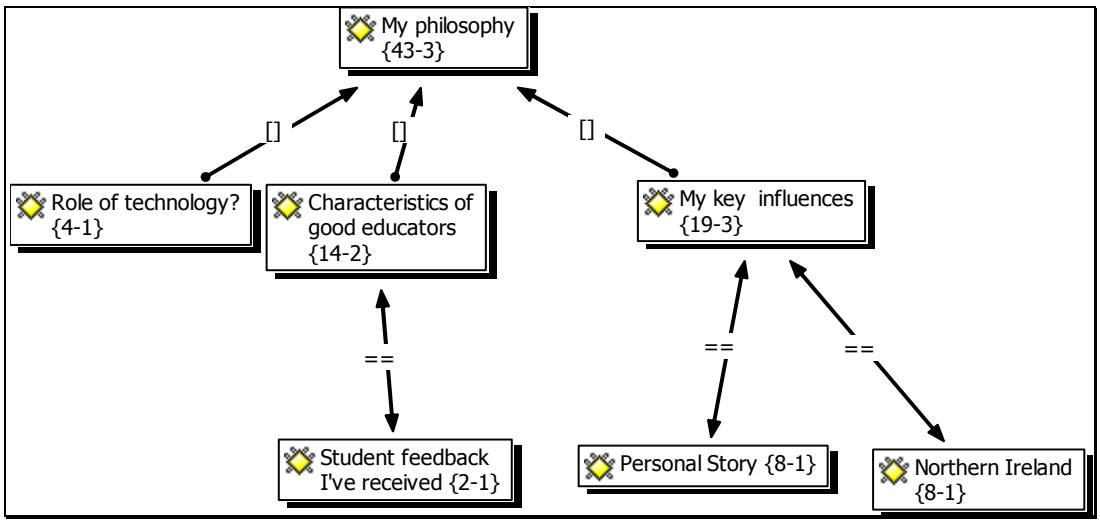
Two main types of interrelationships were used in the Network diagram (refer to Figure 4-17 below)

==	represents an association (Relates concepts without subsumption)
[]	The part-of relation links objects, not concepts of different abstractional level (as does ISA)

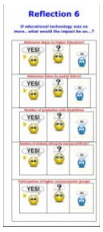
Table 4-7: Summary of Quotation Count

Codes	1	2	3	4	5	6	Totals
Characteristics of good educators	7	2	1	0	2	2	**14**
My key influences	3	3	2	5	3	3	**19**
My philosophy	12	6	15	4	3	3	**43**
Northern Ireland	0	0	0	8	0	0	**8**
Personal Story	0	0	0	2	5	1	**8**
Role of technology?	1	0	1	0	1	1	**4**
Student feedback I've received	2	0	0	0	0	0	**2**
Totals	25	11	19	19	14	10	**98**

Figure 4-17: "My Philosophy"



Analysis of Theme 6: If educational technology was no more….what would the impact be on….?



Theme number six asked each focus group to consider the scenario of a higher education sector without any educational technology infrastructure. This is the first of two themes designed to encourage the groups to offer their opinions regarding the field of educational technology. The context for the discussion was to consider how such a development would impact on five key characteristics of the sector:

1. Admission Rates to Higher Education
2. Admission Rates by Postal District
3. Number of graduates with disabilities
4. Number of students sitting the leaving certificate
5. Participation of higher socioeconomic groups

The booklet provided to each participant (refer to Appendix C) prior to the session contained an overview of current statistics in relation to these factors. The discussion generated a very valuable insight into practitioner's opinions regarding the current status and impact of educational technology. The codes as shown in Table 4-8 were derived from the data and are representative of terms and phrases used.

As the table illustrates the dominant areas for discussion were not centered specifically on the five distinct metrics as presented – a further analysis of these codes illustrated various associations and inter-relationships, Figures 4-18 below captures these interrelationships.

Table 4-8: Summary of Quotation Count

Codes	1	2	3	4	5	6	Totals
Disadvantage students with disability	2	4	1	4	2	2	**15**
Example of technology	2	6	7	4	1	2	**22**
Habitus does it exist?	4	0	0	0	0	0	**4**
Impact on education	2	8	2	4	1	4	**21**
Lower socio-economic groups	2	1	1	7	0	0	**11**
mature students	0	1	0	4	2	2	**9**
Not influenced by technology	2	4	3	2	0	0	**11**
Personal comment	1	8	4	4	3	7	**27**
Remote students	0	0	3	0	0	2	**5**
Teachers in Northern Ireland	0	0	0	2	0	0	**2**
Technology a distraction	0	0	0	1	0	0	**1**
Technology as a change agent	0	0	8	3	3	0	**14**
Technology will make NO difference	1	7	5	4	0	0	**17**
Totals	16	39	34	39	12	19	**159**

The three main types of interrelationships that have been used are:

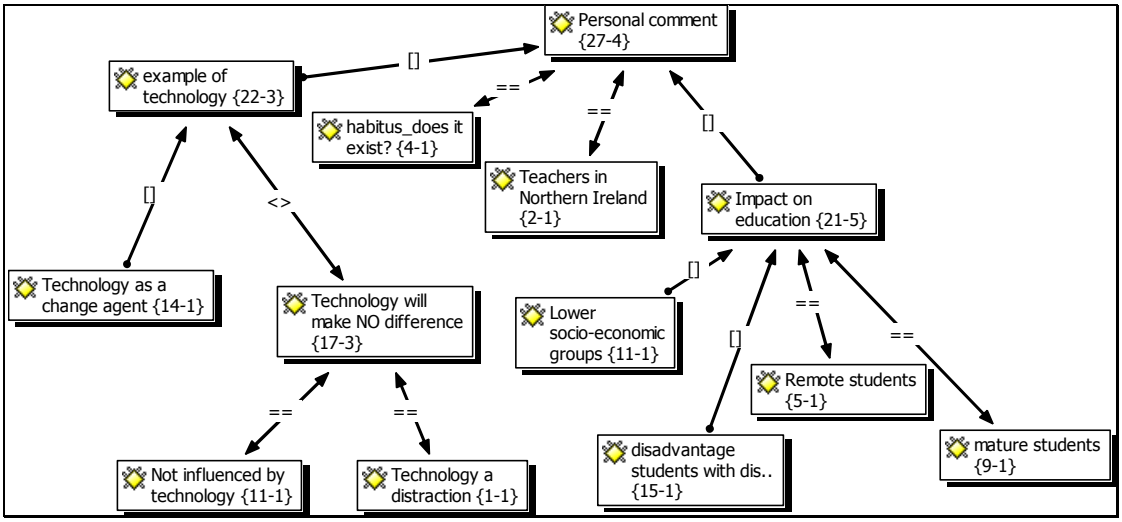
==	represents an association (Relates concepts without subsumption)
<>	contradicts
[]	The part-of relation links objects, not concepts of different abstractional level (as does ISA)

Although the participants are advocates of the use of educational technology and their current career positions are largely dependent on a continuation of developments within this field – the critique offered was holistic and pragmatic. The analysis revealed two distinct dimensions to this topic which are represented by two code families:

1. **Examples of technology**: which includes codes such as "technology as a change agent" and " technology will make no difference"
2. **Impact on education:** which includes codes such as "remote students" and "mature students"

I choose to leave the network diagram intact – as I felt the personal commentary was best represented as one network of related codes.

Figure 4-18: "If educational technology was no more…."



Analysis of Theme 7: Assumptions about Educational Technology

Topic number seven is the second opinion piece presented to the participants on this occasion they were to consider assumptions that are made or indeed those they have themselves in relation to the field of educational technology. The samples provided represented topics that arose as it transpired in several parts of the discussions to this point:

1. "Educational technology is critical to preparing today's learners for the future"
2. "Technology is a distraction in education"
3. "Technology should be primarily focused on the less advantaged groups in society"

Table 4-9 lists the codes that emerged from the data and also presents the summary of the quotation counts. On this occasion the dominate theme was centered on the assumptions associated with technology – which is represented by a single code family **"Assumptions we make…"**

Table 4-9: Summary of Quotation Count

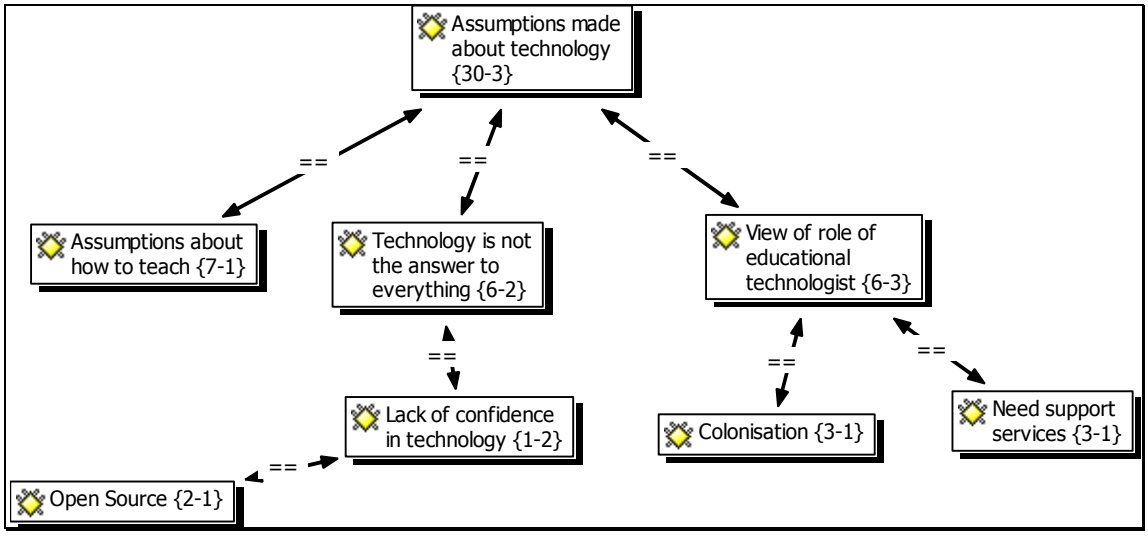
Codes	1	2	3	4	5	6	Totals
Assumptions about how to teach	0	0	2	4	0	1	**7**
Assumptions made about technology	1	4	8	5	8	4	**30**
Colonisation	0	0	2	1	0	0	**3**
Lack of confidence in technology	1	0	0	0	0	0	**1**
Need support services	1	0	0	1	1	0	**3**
Open Source	0	0	0	2	0	0	**2**
Technology is not the answer to everything	0	4	0	0	2	0	**6**
View of role of educational technologist	0	0	6	0	0	0	**6**
Totals	3	8	18	13	11	5	**58**

A further analysis of these codes is shown in Figure 4-19, and includes the associations between the codes illustrated using the "==" symbol.

==	represents an association (Relates concepts without subsumption)

As this was the final theme I had expected that the quality of the exchanges and contributions would wane. But this was not to be the case; the data, captured some very valuable assertions and opinions regarding many underlying assumptions that are the hallmark of the educational technology field. The focus groups demonstrated a willingness to evaluate these assumptions and reflect on the implications for future developments.

Figure 4-19: "Assumptions we make about educational technology"



Reflection on the initial analysis of the data

In some respects, this account of the first phase of analysing the data reads somewhat methodical and even straightforward. However, there were many turns and twists on the road – I was continually asking what is not being coded? I was concerned that an important view of one the participants was being omitted. But on each occasion I was guided by my original intent to explore the question of habitus, field and capital. Was the data I had coded revealing some insight into their habitus or did it provide further evidence of the characteristics of the field of educational technology or perhaps there is reference to the concept of capital in the context of educational technology. I was now more than ever aware of the richness and the volume of data that had been collected and that the narrative that was emerging was only one story of possibly many others. What a journey, I had used the tools to assist in navigating through a wealth of data. The result was a series of codes and code families where each code family's network diagram offered a guided tour of the underlying "sea "of quotations and commentary. However, even as I scanned the tables and network diagrams illustrated above I was aware that I would have to leave many teasing questions unexplored for now. These included issues relating to gender; higher education institute (e.g. institute of technology or university); the background of the participants; whether they were formally appointed as educational technologists or were seconded from an academic position. The next section will describe the final analysis phase which provided even more surprises.

Stage 2: The Final Analysis

As described earlier the initial analysis of the data had yielded nineteen code families as shown in Table 4-10 below. I had anticipated in the original design of the study that the reflections one to seven would encourage and foster particular topics to be discussed, and subsequently that the data would fall into three clusters or categories of quotations.

The three main categories anticipated were:

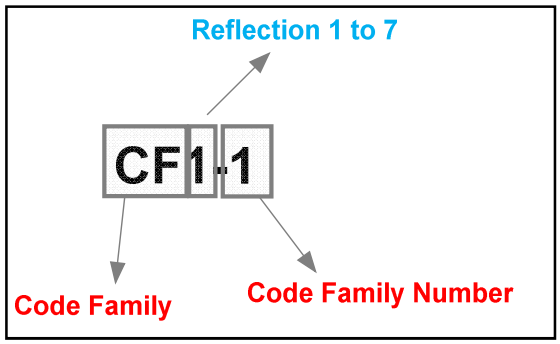
"*Views/Assumptions/Opinion on Educational Technology*" based on the discussions on Reflection 6 and Reflection 7. The code families generated are shown in Table 4-10 – the columns are colour coded

"*Personal views, motivations and beliefs*" based on the discussions on Reflections 1, 4 and Reflection 5. The code families generated are shown in Table 4-10 – the columns are colour coded

"*General views and opinions in Higher Education*" based on the discussions on Reflection 2 and Reflection 3. The code families generated are shown in Table 4-10 the columns are colour coded

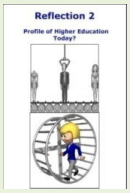
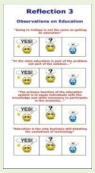
However as the analysis progressed it became apparent that the nature and flow of the discussion could not be contained within the boundaries of the original reflections. The original roadmap had proven useful in the design of the study but was now proving unsuitable and limited as an analysis tool. The main reason for this was as the data unfolded there were significant interconnections and interrelationships between code families across the various reflections. For example views on education technology were captured both in the discussions relating to Theme 1 (Motivation) and Theme 6 (Impact on sector if remove technology) as shown by the arrow in Table 4-10 below.

I realized that it was now necessary to review the data with a fresh perspective. To assist with this task I decided to introduce a numbering system for the Code Families – for example the code family "*Educational Technology: Views and Comments"* was part of the discussion for Reflection Theme 1 and was the first code family created – its code is Code Family 1-1 or CF1-1.



I also decided not to use the *Atlas ti* software for this task – I needed to cut and paste and sort through the data to review and re-assess the inter-relationships between the code families and in the process re-assemble the respective code families into the final set of themes.

Table 4-10: Summary of Code Families for Reflection Themes 1 to 7-Colour Coded

Reflection	1	2	3	4	5	6	7
							
	Educational Technology: Views and Comments [CF1-1]	Changes in the Higher Education Sector[CF2-1]	Comments on quotation 1 [CF3-1]	Characteristics of voice [CF4-1]	My philosophy [CF5-1]	Impact on education [CF6-1a]	My assumptions [CF7-1]
	The role of an educational technologist [CF1-2]	Learner Characteristics [CF2-2]	Comments on quotation 2 [CF3-2]	Educational technologist role [CF4-2]		Examples of Technology [CF6-1b]	
	What motivates and educational technologist? [CF1-3]	The dominant features of higher education [CF2-3]	Comments on quotation 3 [CF3-3]	Role of the academic CF[4-3]			
			Comments on quotation 4 [CF3-4]	The importance of voice [CF4-4]			
				Where voice is heard [CF4-5]			

This resulted in the Grid shown in Diagram 4-1 which captured the code families and their commonalities and allowed the four major themes to emerge from the data. These are:

Major Theme	Description
A	Views on educational technology
B	The role of the educational technologist
C	Personal motivation and beliefs
D	Views on the Higher Education sector today

One challenge I had was with regard to Reflection 7-1 – I had considered it quite broad and relevant to the Role of an Educational Technologist but as I compiled the data into a broader themes the quotations were more relevant to the discussion on the motivations and philosophy of educational technologists. When I completed this task I felt a sense of relief – the "niggle" had disappeared, the concern that I would do an injustice to the data because of my efforts at analysis and interpretation. I now realised that a methodology had developed which allowed a shift from the "a priori" themes represented by my seven reflection themes to the emergence of the four major themes from the data itself. The processing techniques adopted at this point have been described by Bernard and Ryan (2003) as "cutting and sorting".

"*After the initial pawing and marking of text, cutting and sorting involves identifying quotes or expressions that seem somehow important and the arranging the quotes/expressions into piles of things that go together*" (p. 94).

Similarly Thomas (2003) referring to the work of Creswell (2002) states that the intended outcome of the inductive approach to qualitative data analysis is:

"*to create three to eight summary categories, which in the coder's view captures the key aspects of the themes in the raw data and which are assessed to be the most important themes given the research objectives*" (p. 5).

I could say that I have assessed the raw data and believe that these are the most important themes given my research objectives.

But I had one final task that I needed to complete – could I represent this process visually – I realise that I have a need to "see" and visualize the processes and approaches that have developed during this work (see Diagram 4-2).

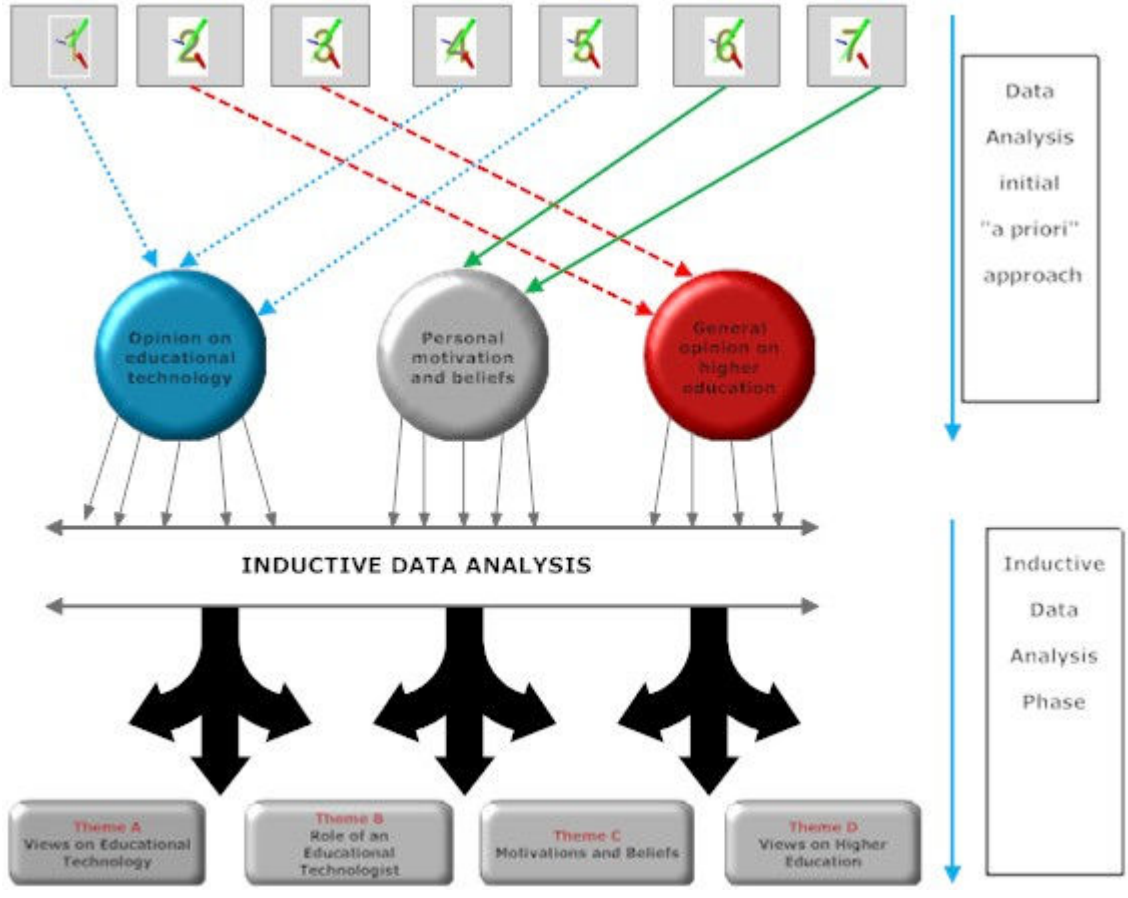
Diagram 4-1: Emergent Main Themes

Code Family	Description	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7
1-1 6-1b	**Educational Technology Views and Comments**	A					A	
6-1a	Impact on education – if technology was no more						A	
1-2 4-2	**The Role of Educational Technologist**	B			B			
4-1	Characteristics of Voice				B			
4-3	Role of the academic				B			
4-4	The importance of voice				B			
4-5	Where voice is heard?				B			
1-3	**Motivation of Educational Technologist**	C						
5-1	My Philosophy and Key Influences					C		
7-1	Assumptions we make							C
2-3 3-1 3-2 3-3 3-4	**Higher Education Today**		D	D				
2-2	Learner Characteristics		D					
2-1	Changes in Higher Education		D					

The process commenced with a set of "a priori" themes to which the focus group discussions were filtered through, yielding a set of code families representing a rich body of commentary captured in a bank of quotations. However the vibrancy and interconnectedness of the discussions could not be adequately contained within the original reflection themes – once these artificial boundaries were removed the data settled into the final four themes which are

- Theme A: Views on Educational Technology
- Theme B: The Role of the Educational Technologist
- Theme C: Motivations and Philosophy of Educational Technologists
- Theme D: Higher Education Today

Diagram 4-2: Inductive approach to data analysis



In the next chapter the voices of the participants will be "heard" not just within the confines of a narrow techno-centric agenda – but across these four broad themes that have emerged which touch on many of the major challenges facing Higher Education today.

Chapter Five: Findings 1: The Voice of Educational Technologists

Introduction

The purpose of this chapter is to present the voice of educational technologist in relation to the four main themes that have emerged from the data from the six focus group sessions. The voices will be represented by a selection of quotations taken from the transcribed data. The choice of quotations was based on their appropriateness to the main theme under discussion; how it represented a wider view or opinion within the group and in some cases its uniqueness. Where there are a number of quotations attributed to the same focus group they represent different individual contributions. However, as explained in chapter three the anonymity of the participants is an important feature of this study and I have attempted to minimise the possibility that an individual could be identified. The main objective of this chapter is to present a representative voice of the educational technologists who participated in the study.

Theme A: Views on Educational Technology

The focus group discussions yielded an insightful commentary on educational technology itself. I was conscious of not encouraging a technical discussion on the characteristics of various technology products currently in use; this tends to be the dominant information that drives the educational technology agenda. My hope was that the participants would present a broad assessment of the current technical infrastructure and offer their opinion and views on the status and importance of these facilities. As it transpired two perspectives were presented – the first presented a "system" level view which looked at the impact on a sector-wide scale and the second was based on experiences at a local level.

Views on Educational Technology: System Level

The opinions and views offered a very pragmatic view of the impact of current and emerging technologies at a system level. They provided interesting points regarding the current state of play and what are the real expectations about educational technology. For some **the impact has yet to be realised**:

"*I think the impact that it has there is not as much as the impact that it could have or maybe will have in the next coming years……*" (focus group 2)

"…*distance learning is the proper term for it I do think that's where, in time, that's where the true role of educational technology will take off.* " (focus group 5)

Others believe that at the moment, technology **is not a lynch pin** in the provision of education:

"It's just there and you use what's there. I mean if there was, you know, it'd be like if the library burned tomorrow people would still come to university, you know, it's just something that's there that's used, I don't think it all hinges on it." (focus group 3)

"*I think it will take a good bit longer before learning technology or ICT technology has a big enough impact in success in learning.*" (focus group 4)

In fact, it could be argued that our expectations at the moment are **too ambitious** and technology is not **a change agent**:

"*I guess the kind of question that it's asking, well two things, if you consider technology as a tool in the same way that someone goes out and digs a field, are they going to stop digging the field because they don't have a shovel? You know, that's one aspect of it, but two is the activity completely changed because they have a shovel?.....But I think you're putting too much, I don't know, I think the question puts too much faith in technology as change agen*t…" (focus group 3)

"*I think our expectation of what technology is going to do is actually kind of wrong we should cut back from that and look at where technology has a real role to play…."* (focus group 2)

However, the adoption of educational technology is not simply a technology issue but requires **the adoption of a framework of supports and initiatives** to see any real advantages:

> *"So that's why the technology was adopted in that context because the systems and the process and the political will and the educational system was structured to be used to sending this kind of material.*" (focus group 3)

> "*The big change was how do people do their work? How do teachers do their work? That's the big change, and that hasn't happened anywhere near to the extent. So, all the other things are there……The hard bit hasn't been addressed*." (focus group 4)

> "*I think we tend to hold on a lot to our old structures in higher education.*" (focus group 3)

These views would indicate that technology is not embedded at the core of the education system in Ireland; certainly the level of adoption is not making a significant impact on the provision of programmes of study. The next set of views expressed provided a local perspective on the challenges faced in the deployment and support of educational technology initiatives.

Views on Educational Technology: Local Level

A number of comments **contradict** the often accepted opinion that technology **"saves time"**

> *"I think it makes it more effective but it doesn't make your life easier."* (focus group 1)
>
> "*It certainly doesn't save time. I find I've spent an awful lot of time putting stuff up on Moodle*[9]*, monitoring student's logs and so on seeing how much activity levels they're engaging in it but it certainly doesn't save time."(focus group 1)*

For some it simply supports and **does not replace** other accepted approaches:

[9] An Open Source Virtual Learning Environment (VLE)

"*to supplement my literature not to replace them and of course nothing in Moodle can replace doing things in the lab*." (focus group 1)

But an important consideration must be **the learner and the relationship between the learner and academic**:

"For me it's the learner. Otherwise the technology does nothing. The learner has to be the starting point." (focus group 4)

A simple example to illustrate the benefits of an on online video segment

"if the student has - come across abstract topics there's a video of a lecturer that they can keep playing over and over the actual abstract topic." (focus group 2)

We can also see that **the attraction of a new technology** is also an important driver in relation to technology adoption. The observation on using Second Life[10] clearly captures the dilemma of addressing the needs of the learner whilst also acknowledging that investing time and energy in mastering the latest innovation is also a key factor:

"You have to develop totally new material; it's not like working in anything that we currently use. But it's certainly very interesting in terms of that the students love playing it or love using it, they really feel engaged but it goes back to is it the technology or is it the learning and I suppose a lot of people use Second Life in my opinion because it's the latest thing rather than because it has huge educational benefits." (focus group 1)

Another key ingredient is that **the social aspect** of the traditional classroom can augment the online resources; the blended learning approach offers this advantage:

"*this model doesn't work unless you have that social aspect of it - that face to face teaching, a blended approach effectively to it" (focus group 1)*

[10] Second Life is a virtual world accessible via a web browser

And many of **the existing resources are difficult to use** and can actually be a disincentive for some staff to engage with the technology. This is also a theme that will emerge later in the analysis:

> *"And I was looking at the stuff and it's supposed to be there to help students and staff but it's just so hard to use and it's just not logical and you just kind of wonder what the person who designed this was thinking when they put in these things"* (focus group 3)

Although it is also recognised that developments in technology have overcome some of the earlier issues regarding ease of use. Of interest is the comment that **when people are shown how to use the technology there is a greater chance of success.**

> "*.....I think now technology is kind of getting a little bit easier to use so I think people can, when they're shown how it can be used properly or effectively they are open to taking it on."* (focus group 3)

There is also recognition that **ongoing evaluation and critique** is an important aspect of the work of educational technologists. This is captured in the recognition that educational technology can have negative consequences:

> "*I think that the main motivation is for the learner but like any form of technology it has the ability to be misused.*" (focus group 2)

One specific example illustrated the potential downside:

> "*And I get alarm bells because I think about how much students are spending on printing because they're not doing any photocopying anymore or I get alarm bells because I wonder about whether students are popping in and out of departmental offices and if there's not is there a hidden loss there around their contact with the Department and if they're struggling is it taking longer to get picked up*." (focus group 5)

So the need to be constantly **reviewing experiences** (good and bad) is a key element in the role of technology adopters and advocates:

> "*So there's a bit of settling down, and people needing to think what are the pitfalls for us using this technology when we've got greater access to far more people.*" (focus group 4)

An explanation is offered for the apparent lack of critique – the **fear of being labelled a laggard**:

> "*And I think that people are sometimes afraid to do that because they come across as a laggard or, you know, a luddite and non-technical…..*" (focus group 3)

This point is also captured in the comment that the majority of academics are not ICT specialists:

> "*The other thing is that most of the clients we work with are like me….they are not ICT specialists."* (focus group 4)

But the real challenge is recognising that **the evaluation phase is as important as adopting** or developing an innovative technical resource:

> "*….. it's similar in other research areas as well where you're trying to solve a complex problem. You solve the problem but then you actually don't go the extra mile to really see its benefit…."* (focus group 2)

What seemed to be in evidence was a **reluctant recognition that decisions were "technology led".**

> *"It's easy to get carried away in that you see something new and you're like - 'ooh let's play, what does it do?' I think that's it, people just get carried away."* (focus group 3)
>
> *"but the job of work is around the technology in the first instance."* (focus group 5)

Albeit in many instances claiming that pedagogic or learner concerns were also a major consideration. Getting **the balance right** was often the challenge.

> *"….. very often it is interesting technology and tinkering with technology to see if it solves any problems so obviously to address your question is the motivation*

to play with technology or to enhance the student experience well I think you have to have a bit of both….." (focus group 1)

Other pressures are coming from **the student cohort who now expects academic staff to use technology.**

"……..it's because of external forces maybe pushing them towards doing that and it maybe, say, students saying - well you know this lecturer's got their notes on the blackboard, why haven't you got yours done?" (focus group 3)

"I think students expect at least some technology in the delivery of courses." (focus group 1)

One other very interesting observation that has emerged from the data is the perception of **acceptable publication topics in the field**. For many educational technologists it is easier to write about the underlying technology than the learner's experience.

"*it's so difficult if you're writing a publication it's a lot easier to talk about the technology isn't it than to talk about the learner.*" (focus group 2)

"*It's driven from the publication side, from the research side*" (focus group 3)

The politics of education and the decision making process within education in relation to educational technology also received regular commentary within the data.

In particular the descriptions of scenarios that could be regarded as examples of the educational technology agenda being **colonised under the guise of educational best practice** – but primarily supported on the basis of a narrow financial rationale. This "contamination by policy drivers" is captured below:

"*But it is contaminated by policy drivers. You know so therefore some of the experience of some of the teachers in some of the colleges, has been demands placed upon them by managers, who themselves don't engage with the technology but set targets and say you must do this."* (focus group 4)

Also concerns that a **"technology centred" agenda is primarily to change the delivery mode** of all courses

> *"So you nearly feel that we're going to adopt a very technology-centred delivery mechanism. ... "OK everyone is now embracing it and using it, lets now start delivering all our courses distance ed" so that there's... you're a little bit slow as a consequence of that at times to adopt it"* (focus group 1)

And ultimately "**reduce costs**".

> *"I think most of us struggle with that because the pressure is to reduce costs, reduce the amount of resources that are needed to do things within the institution..."* (focus group 5)

Even at this early stage in the analysis it is clear that well considered and valuable opinion is offered in relation to the current state of the field of educational technology. The benefits of technology are also clearly evident in the data – whilst the participants are well aware of pitfalls and shortcomings they also recognise the advantages that are inherently possible. The tension described by some of the participants and their awareness of alternative agendas dictating the priorities is a recurrent comment that will be explored in the findings.

The next section was designed to prompt the participants to consider an education sector without educational technology. Using a worse case scenario as a benchmark provided a useful vantage point from which to view current developments.

Interestingly it is undoubtedly a starker vista when applied to other domains e.g. the banking sector without technology or air travel without technology than it currently is for the education sector.

Impact on Education

The data indicates that for the participants the impact on education **would be significant**. Most participants were of this opinion:

> "*I think it would have been a detrimental affect on learning.*" (focus group 1)
>
> "*I think some people would be really affected by it and I think the people are really affected by it is where technology actually does solves a specific problem for them."* (focus group 2)

If fact for some the impact would be **very dramatic**:

> "*....., if Blackboard*[11] *was pulled ... there would have just been absolutely war because, like, we knew within five minutes if it dropped and there was just chaos, absolute chaos. And they were so dependent on it, all the students were..*" (focus group 6)

Others felt that there would be **other residual damage** particularly in the realm of innovation:

> "*The progress of innovation or the speed of innovation will certainly slow ..."* (focus group 2)

The discussion progressed from the general to the specific and there was varying degrees of opinion regarding **the impact on different groups**.

> "*But even for people who are from a background where education wasn't valued .....I'd say technology allows you to deliver the material, the content, in a variety of different ways which are perhaps we will say more entertaining than the traditional mode."* (focus group 1)
>
> *"...people who are working and learning, then I would think there should be a bit more of an impact there, and also, things like the likes of a more diverse demographic, like single parents, that kind of thing, then I think..."* (focus group 4)

[11] A commercial Virtual Learning Environment (VLE)

There was an interesting variation of opinion regarding technology and **the socio-economic divide**. Did it really make a difference or not?

> *"…the participation of higher socio-economic groups, that's down to funding and money. So, educational technology is only one factor, and it's probably not the biggest factor out of one or the other."* (focus group 4)

> "*The thing about technology, some people would say that, access to technology has simply been consolidated into those socio-economic divides…."* (focus group 4)

People **in remote areas** or who have work commitments and are enrolled on blended learning courses would also suffer as a consequence. It is noteworthy that each group had examples of part-time students using various blended learning solutions to access programmes of study:

> *"…people in remote areas or people who need to use blended learning.."* (focus group 3)

> "….. the *Continuing Professional Development courses the professionals need to have it all online ....."* (focus group 6)

> *"…they said it's great like I can go down and cook my dinner, bring it upstairs you know and here I am in a lecture eating my dinner keeping an eye on the kids….And that's a typical example of a student who has experienced a form of education that's very technology dependent….."* (focus group 2)

However, the participants had no hesitation in identifying **students with disabilities** as the most vulnerable to a withdrawal of technology:

> "*I think it would most disadvantage students with disabilities because they do rely a lot on modern technology*." (focus group 1)

> "*The number of graduates with disability that's a no brainer they would not be able to participate without it.*" (focus group 2)

"*The only one I would say is a slight exception is graduates with disabilities….*" (focus group 4)

"*From these here the only people who would be disadvantaged are the people with disabilities. I think that's one area where technology is seen as a friend and not an extra workload…….*" (focus group 5)

Summary-Theme A

The critique presented **on Theme A** is based on the personal experiences of the participants in relation to the pros and cons of educational technology. The analysis of educational technology and its perceived benefits commenced in Theme 1 carried through to Theme 6.

Interestingly technology is not seen as the "lynch pin" of the education system but its introduction needs to be within a systematic framework of supports and initiatives which incorporates a culture of ongoing evaluation. There is a sense that a framework that allows for evaluation and reflection is currently absent, a more reflexive practice is a thread that will re-appear later. A summary of the key comments are presented in Table 5-1 below.

Table 5-1: Summary Comments on Theme A: Views on Educational Technology

Balance and Compromise
The learner and the relationship between the learner and academic is key
The social aspect for students needs to be incorporated
When people are shown how to use the technology there is a greater chance of success.
The existing resources are difficult to use
Need to get the balance right
Acceptable publication topics in the field are technology focussed
The attraction of a new technology is needed
Tensions
Sometimes this doesn't happened because of the fear of being labelled a laggard
There is a reluctant recognition that decisions were "technology lead" – but sometimes this is required to spark the initiative.
The student cohort who now expects academic staff to use technology
There is a "tension" in the role of the educational technologist who need the academic staff to adopt the technology but not only for their gain
Critique
The impact of technology has yet to be realised
It is not a lynch pin in the education system
We are too ambitious; technology is not a change agent
Technology does not always "save time"
Colonised under the guise of educational best practice – fear of policy drivers
"Technology centred" agenda is primarily to change the delivery mode
Main rationale is only to reduce costs
Requirements
Need to ensure that there is the adoption of a framework of supports and initiatives
The design and implementation is a critical step
Always a need for ongoing evaluation and critique
And reviewing experiences
The evaluation phase is as important as adopting

Theme B: The Role and the Voice of Educational Technologists

The various discussion topics all related in some way to the actual role of the participants – their views and opinions have developed in response to the daily challenges they face. It also provided an opportunity to allow their voice to be heard and to articulate their position with regard to changes in higher education.

The Role of the Educational Technologist

The **tension in the role** is captured by the often conflicting motivations of the educational technologist and the academic who is willing to explore the potential of the technology. The initiative may offer more tangible and realised benefits to the academic rather that the learner. As described below to get over the chore of administrative tasks rather than as a clear benefit for the learner:

> "*That's a very prominent tension in this job is that we are going out from our team with a remit to support staff in enhancing student learning generally but we have a real double edged sword there because they may well be looking to us for convenient methods for getting over administrative and other problems they have."* (focus group 5)

Other tensions are to **balance the requirements of the Institutions with the demands on the academic staff**. As one participant observed:

> *"I wouldn't be in this post if there hadn't been an institutional decision to roll out Moodle."* (focus group 5)

But on a personal level it is recognised that some **academic staff are challenged** by the demands placed on them to use technology.

> "*I would have a lot of empathy for people who are kind of being, not oppressed by technology but having technology kind of forced upon them."* (focus group 3)

However, **the role is primarily to act as an advocate for using technology**. This is an important distinction – educational technologists see their role in the first instance as a technical position:

> *"But our challenge really is to get it out there."* (focus group 4)
>
> "*but the job of work is around the technology in the first instance.*" (focus group 5)

In fact a technical background as a pre-requisite for entry into this area is clearly acknowledged by the participants.

> *"the only reason I got into the job, this job, at the time I wasn't sure what was involved, but I had a background in technology, and knew the job involved something to do with technology, in learning teaching."* (focus group 4)

This **characteristic** is **common** to both **innovative academics and** formally appointed **educational technologists.**

> "*the people who are innovating are maybe slightly more geeky, maybe their focus is a little bit about that how they can, I suppose, display their prowess rather than having maybe more fundamental aims about how they might improve education ..."* (focus group 3)

There is also recognition that **a key aspect of the work is communicating technical knowledge** to a non-technical audience.

> *"your job is to kind of finish off the design of the technology and boil it down into a useable tool for non-technical people to use."* (focus group 3)

This also includes **ongoing support and training**.

> *"But the job was very much centred on that so my role was to implement the technology and train people in using it and support them."* (focus group 5)

> "*…what do you think the most important thing for technology adoption is? And everybody said staff training*…." (focus group 3)

But the manner of **persuasion is to show the educational value of the innovation rather than a purely technical demonstration.**

> "*We show them, we give them examples, we talk to them, we thrash it out with them, and you know so we're not just saying this is pod cast and here's how you do it. We actually explain you know where you could use it, and where it would be beneficial for you. So we're always giving them examples of it.* "(focus group 4)

And to **"realign" the technology with the learning objectives.**

> "*then sometimes you need to explain maybe if we did it this way it might be better. So yeah I think it's more to do with realigning that and trying to get the focus back on where the learning would take place..."* (focus group 6)

The data is also peppered with **interesting characteristics of successful educational technologists**. They are often described as "geeky" or "on the edge" but not in a disparaging manner.

> "*people do when they're innovating like being on that edge and like being in the minority.*" (focus group 3)

> "*a curiosity to experiment.*" (focus group 1)

The data gathered certainly suggests that the role of educational technologist occupies a pivotal position within higher education institutes at the intersection of administration, technical and academic departments. The **demand from students and the establishment of Centers for Teaching and Learning** have consolidated these positions:

> "*And I suppose it's taken off as well too since the formation of the Learning and Teaching unit…"* (focus group 1)

> "*Yes and it will be separate to quality, say, or staff development or institutional research so it'll have an identity or branding on it's own. I think crucially it will be headed by an academic.*" (focus group 5)
> "*…..we have a thing called Teaching and Learning [REMOVED] which I'm a member of so hopefully might have some modest influence…"* (focus group 6)

> "*Some of it has been student driven and that's what I'd say yes, we done a little bit of kind of analysis and that has been going on…."* (focus group 1)

But they did recognise that **attempts to impose educational technology was regarded as counter productive**:

> "*And then they said - what do you think would be the biggest impact in improving technology adoption? And everybody said a top down strategy. Basically being told by above that they had to use it*. (focus group 3)

> "*Moodle is voluntary and that is probably a big part of... Yeah, because once you start making something compulsory you will have resistance."* (focus group 1)

The data also revealed other commentary, which I feel reflects the various backgrounds of educational technologists. For academics their desire to pursue a research interest in teaching and learning is often the catalyst for engaging with educational technology. This desire is often prompted by the **lack of opportunity to discuss their practice**:

> "*So I wonder are there enough opportunities for academics to actually talk about things like their practice and other issues that are of interest.*" (focus group 2)

The question was prompted by a comment that **the busy schedule** of academics does not allow for this to happen:

> "*We're certainly much busier, there are so many meetings and sometimes you feel meetings are there just for the sake of having the meetings.*" (focus group 1)

Although interestingly, technology and an **interest in its application within education has provided an impetus for these discussions** to occur:

> "*I think that's beginning, starting now, where people are identifying themselves within the organisation as you know people who work with technology…..*" (focus group 1)

And these discussions addressed another concern expressed as the **lack of cross-discipline opportunities** amongst academic staff:

> "*That you stay with the same group of people you could spend your life coming in and out and sitting with the same people at coffee time and not having those broader discussions with people from business or science or…"* (focus group 1)

The Voice of the Educational Technologist

The challenge posed by reflection four to select a pictogram that would identify your "voice" has led to some thought provoking observations on the changing role of academics and the emerging role of educational technologists. I had concerns that the initial reaction from the groups would be to assert that none of the pictographs represented their voice. However, they were informed that the selection was purely representative and they could describe their voice in whatever means or medium that was comfortable for them.

As it transpired only one participant declared **an inability to identify with the pictograms:**

> *"I'm not sure whether I could identify with any of those pictures there."* (focus group 1)

This was also some indications **of isolation and being "muzzled"**:

> "*isolated*" (focus group 1)
>
> "*You can operate within an organisation like this very much on your own.*" (focus group 1)
>
> *"I think we're too low down and we're too small, we're just really, really small fish in a very big pond….*" (focus group 3)
>
> "*But as far as communicating our views to management I think I have indicated before it seems to be a one way channel of communication, they're not listening to us but we have to listen to them ……so that is that muzzled.*" (focus group 1)

The inevitable consequence of the sense of isolation is frustration – **frustrated at not being listened to or not being able to bring their ideas to fruition**:

> "*There are things we report upwards, they go through the formal channels, they're reported to the funders, they're reported to the groups internally. But the full meaning of what we're saying, I think, is very hard to get across."* (focus group 5)
>
> *"there was things that we were doing that could be mapped across the whole institution which would be of benefit to so many and it's worth having a listen. But then you know there are so many other voices, so many other agendas in the institution….."* (focus group 6)

The sense of manipulation and insignificance was a predominate theme throughout the various discussions. An interesting example was given of how a celebrity was able to organise an interview with the minister for education:

> "*I think I would probably, this again is a personal reflection but probably the puppet on the string. Like, I thought it was interesting when Des Bishop did a show recently and he got an audience with the Minister for Education, you know, like who gets an audience with the Minister for Education? ....But you're probably asking people too low down in the organisation here, I don't know.* (focus group 3)

Strategic decisions are dictated by external factors

> "*I think voice on a work stage you know being able to make bigger decisions and on that stage I think that the icon on kind of the bigger person and holding the puppet up I think education is kind of a little bit like that in a large context you know. I don't know some bigger person than us that has the money that makes the decisions*." (focus group 2)

There were also suggestions on how the sense of isolation could be improved – this included **re-structuring the educational technology role with clearer communications and reporting lines:**

> "*if there was a hierarchy in terms of our role, you know, to be able to talk to the people who can make the decisions quickly, I wouldn't mind that as long as there was some chain of line that I could feed up to quite quickly so it's not too far removed.*" (focus group 6)

It would appear that the perception of educational technologists is that their voice is lost within the many competing demands in a higher education institute, with the noted exception of regular interactions and positive synergies with colleagues and peers.

For some of the participants **the notion that they should have a "voice" was met with surprise** that the idea of their voice seeking an audience was important.

> "*So whether my voice is heard or not I don't really mind.*" (focus group 1)

One very interesting remark was that **commentary from academics in the Institute Of Technology sector was not sought**:

> *"I don't think anybody really wants to listen what a group of people have to say in an institute of technology*"(focus group 2)

However**, it is regarded that they have other fora to give voice to their views** and opinions, although these views may be limited to their area of expertise or research interests:

> "*I think that academics in higher education, well in the university sector for sure have huge autonomy, I think, in terms of their voice might not be listened to but they have a lot of latitude, I think."* (focus group 3)

> "*are we in the business of changing people's belief systems because if we're doing that then we should have a voice on a bit of a more broader scale on an society scale"* (focus group 2)

The recognition that there are **different levels of voice** is a constant remark that permeated the discussion.

> "*You have different levels of voice I mean your voice can represent expert opinion in your particularly research area but your voice mightn't be, it mightn't be well received in other areas.*" (focus group 2)

> "*I think you need the voices at all levels. I mean you've got the students, you've got the teachers, you've got the people who are there to try and help the teachers, you know. "*

But the most important **voice is that of the student**:

> "*I think the most important voice would be the student voice, you know. I think that theirs, but I guess they have some representation at academic counsel and things like that*." (focus group 3)

Summary-Theme B

A very marked reluctance to offer a voice on areas outside their acknowledged domain would seem to be the dominate message from this data. I was also struck by the lowly view that many participants have of their role and a consistent message that they do not have any medium or forum to be heard. Whereas the academics are viewed as possessing academic freedom and can command an audience within their research or chosen field of expertise. The notion of a greater debate on wider issues is certainly not a feature of these participants' stories. There are of course comfort zones – where they feel somewhat vindicated – their peers, the classroom and events like the EdTech conference, which is providing a much needed avenue for the release of wide ranging and valuable opinions and views based on lifetimes of experience. A summary of the key comments are presented in Table 5-2 below.

Table 5-2: Summary Comments on Theme B: The Role and Voice of Educational Technologists

Origins and Demands
the demand from students and the establishment of a central teaching and learning unit
Strategic decisions are dictated by external factors
academic staff are challenged
tension in the role
balance the requirements of the Institutions with the demands on the academic staff
More than just a technical role
the role is primarily to act as an advocate for using technology
This characteristic is common to both innovative academics and formally appointed educational technologists.
a key aspect of the work is communicating technical knowledge
ongoing support and training
persuasion is to show the educational value of the innovation rather than a purely technical demonstration.
"realign" the technology with the learning objectives.
attempts to impose educational technology were regarded as counter productive
interesting characteristics of successful educational technologists
with staff training identified as a key factor
My voice
an inability to identify with the pictograms
of isolation and being "muzzled
frustrated at not being listened to or not being able to bring their ideas to fruition
The sense of manipulation and insignificance
re-structuring the educational technology role with clearer communications and reporting lines
the notion that they should have a "voice" was met with surprise
commentary from academics in the IOT sector was not sought
Views on academics
lack of opportunity for academics to discuss their practice
interest in its application within education has provided an impetus for these discussions
academics however, it is regarded that they have other fora to give voice to their views
the lack of cross-discipline opportunities

Theme C: Motivation and Educational Technologists

Motivation was a recurrent theme underlying much of the discussion; in particular the initial comments on motivation were often revised as the discussion progressed. These were at times prompted by comments or opinions presented by others or simply capturing a moment of reflection by the participant. However it would seem from the data that the participants' **own personal motivation was very much learner centred**.

> "*I suppose it was a curiosity to experiment with a new method of getting things across."* (focus group 1)

> *"I think it's the match and that you use technology based on what you think the learner gets out of it or gets most out of it."* (focus group 2)

> *"it would be the learner I would be most focused on."* (focus group 3)

> *"For me it's the learner. Otherwise the technology does nothing. The learner has to be the starting point."* (focus group 4)

> *"Ultimately, I hope, for the benefit of the learner."* (focus group 5)

> "*For me it was the technology and education and how the two could be mixed.*" (focus group 6)

There is also evidence of the tension between addressing the needs of the learner primarily and also acknowledging that experimenting with new technology has its own intrinsic attraction. One other unique dynamic that the role of an educational technologist gives rise to, is the challenge of how best to motivate others. Interestingly the data would indicate that to encourage others to adopt technology **a more "teacher centred" approach is optimal**. Concentrating on what the technology can do **to make the life of an academic "easier".**

> *"....learning can be there as your - I suppose your main reason but also I think technology should make your life easier as a teacher."* (focus group 1)

"sometimes it's for convenience rather than a direct link with enhancing the student's learning so they will say things to me like - it's great we don't have to any photocopying anymore." (focus group 5)

The overall contention is that **academics must see the benefits for themselves** before adopting the technology within their own domain.

"....so they have to see the advantage of the technology, otherwise they're not interested and you can't blame them, you know. There has to be, an e-learning advantage, otherwise they won't use them, why should they?" (focus group 4)

However, as the discussion progressed it became apparent that variations on the underlying motivations emerged. Positions articulated earlier in the discussion were re-considered; at times it appeared that there **was a conflict between personal motivations and the requirements of the actual function** of an educational technologist.

"*And I think it's sometimes having that kind of critique on - well why are you bothering to do this at all in the first place?*" (focus group 3)

"I soon realised that it was a lot more complicated than that and I'd just run into these changed management issues all the time so it's actually quite hard to hang on to that ideal." (focus group 5)

"Maybe that's a contradiction, maybe it was for the learner." (focus group 6)

This dilemma as captured in the data illustrates the ongoing tensions between the personal motivations of educational technologists viz a viz the academic staff they need to support and also the dictates of their function. The role sits at the juncture of a busy intersection with many opinions, views and stances creating a dynamic mix of debate and at times disquiet. The next section will explore this issue further by examining the key influences identified by the participants in relation to their current views on education.

"My Philosophy"

Perhaps as expected **previous teachers and their school environment** were identified as having a significant influence on many of the participants.

> "*I suppose yes, the teachers that I would have….he structured things very well and his material was delivered on kind of a layered basis …*" (focus group 1)

> "*Well I think for me I suppose if you're looking at what influenced the way I teach today I was fortunate to have a very good teacher.…"* (focus group 2)

> *"….thinking back it was my own teachers in school and college and their personal characteristics they would have been engaging and interesting.. …"* (focus group 6)

> "*Well I mean there's a lot here, and going back to the rural thing, you see if you're in a village or a small town, and you're the teacher, I mean the very terminology, 'the Master', you know you were a respected member of society who knew, and everybody knows you*." (focus group 4)

As well as **the family of origin** providing the initial impetus and the recognition that education was important:

> "*I think my folks were the same, you know probably a bit more explicitly, you know they always banged on about education.*" (focus group 4)

Although several of the **transformative educational experiences occurred later in life** as adult learners:

> *"….but it was one of the most kind of I don't know whether you would use transformative experiences I've had in terms of education because again it made me realise it's up to me actually to engage with this and figure out what I have to learn and all of that and I think it was an excellent experience for me*." (focus group 1)

> "*I've come to the conclusion that I really love learning and I'm really lucky to have had an opportunity to learn as a mature student*."(focus group 3)

For others the **lessons learned from other people** have remained with them and the influence can be seen in their own teaching style:

> **"***So, he clearly said earlier ……. it's not about me giving them answers to the questions, it was to get them to ask the questions, and that struck with me, and it's always been the way I've approached learning with my own students…."* (focus group 4)

> "*Yes……just his general approach and I suppose the drive, the motivation that he had to talk to the entire class.*" (focus group 1)

Other people from other disciplines have also made a lasting impression:

> "*I suppose for me I had an opportunity to work with a lot of really, really kind of graphic designers, like really kind of, they were unreal creative's…..*" (focus group 5)

A number of the participants also gave examples of some **authors and books** that made a lasting impression on them and to some extent they have extracted their own guidelines from these works:

> ""*I have this book from physics…called the beauty of physics and the symmetry of physics and there was a quote in it… that has really influence me…[it] was all about the beauty and symmetry of simplistic things and how that lends ourselves to be engaged with things…a lot of things that I try to do in education I always try to make them simplistic and engaging in terms of its simplicity and its beauty and make them engaging"* (focus group 6)

> "*So I think that book's very significant and I think it's still very significant in terms of just getting people to realise there are loads of media you can use…."* (focus group 5)

Of interest to me was that only one participant identified a **recognised educational theorist** as a main influence:

> "*my current views on education would primarily be influenced by the socio and cultural perspective and people like Vygotsky and activity theory in particular ……."* (focus group 3)

The participant's backgrounds and key influences forged a view with regard to the importance **of taking advantage of what education has to offer** not only in their own lives but also as part of a message they wanted to impart to their students:

> "*…. if I'm in a sticky situation I kind of say to myself - well, you know, just back yourself, you know, you've proven that you can do it to yourself in the past and I think that's what learning and education can do for you, you know, it's wonderful.*" (focus group 3)

The conversation also triggered some memories of why they opted to choose education as a career path. In some respects **the positive experiences in their own educational journey** may have sown the seeds of interest which remained dormant until a particular turning point was reached.

> "*I think the common kind of trend seems to be you're there one day sitting in your office .....you're saying to yourself 'well I'm kind of bored with this now I think I'm gonna go back and do what I initially wanted to do and just teach' and that was kind of very much the same for me."* (focus group 2)

Whereas for **others the advantages that a career in Higher Education** offered compared to the private sector was greater flexibility and diversity:

> "*Yeah because I always see it as a land of opportunities of what you can ….."* (focus group 6)

> "*I always liked the variety in academia*" (focus group 2)

The influences identified clearly had a profound effect on all the participants, and continue to inform how they approach their role in higher education. **Opportunities to meet with influential people were often the turning points or key moments in their lives**, whether they were educators, family members, work colleagues or authors, seeking out conversations could have a profound impact:

> "*He was quite an influence, I met him by chance and he was helpful to me and advised me and, you know, he had no formal role whatsoever which perhaps was good in itself."* (focus group 6)

"*But I kind of feel people are a huge part of it, it doesn't matter as much what you read as some of the things people say to you……"* (focus group 5)

As individuals who have progressed through formal education, their ability to reflect and assess the positive and negatives of that experience and alter their practice accordingly is subtly weaved throughout the discussions. In the next section the reflection asked the participants to consider assumptions they have made in relation to technology or education. For many these may well be conscious and available but for others this posed a challenge.

"My Assumptions"

The initial assumptions addressed concerned technology itself there **was a need to re-assert that technology is not a vital cog in the education wheel**:

"*Despite all the hype … I think if you switched it off tomorrow as educators we'd be ok ….. I don't believe at the moment it is so vital we could not exist without it."* (focus group 2)

"*I agree with that it's a very useful tool to prepare your learners for the future but it's not answer to everything ……"* (focus group 2)

But the main consensus was that for all the flaws that may exist and have been discussed – a key assumption was **that educational technology has the potential to change, indeed radically change higher education**:

"*It does have the potential… [to] radically change the way we deliver and manage education …..*" (focus group 2)

"*The assumption is - my assumption is that, the educational technology has a potential to be beneficial ….*"(focus group 4)

"*Yeah my assumption is that it's got potential, I suppose I'm still at the point where I'd say it's got potential, and we haven't seen its full potential.……..*" (focus group 5)

A number of other assumptions were quite specific but just as revealing, that **students always prefer using technology**:

> "*I always presume that they prefer it, they prefer the technology…"* (focus group 6)

Or that **the students are motivated themselves**:

> "*The ultimate assumption is that students actually do want to learn*" (focus group 6)

And **you can't always rely on it**:

> "*You can't rely on it all the time*." (focus group 1)

Another important assumption identified that has the potential to dissuade potential users is **the belief that you have to be very high tech and innovative**:

> "*….. I think there's an assumption out there that, a) that it's hard to use educational technology and, b) that you have to do something innovative and out of the box for it to be useful….* (focus group 1)

One participant gave a good example of were a **low tech approach yielded significant benefits**:

> "*…..the technology that was the most use I thought was group email and it wasn't even a discussion forum on Blackboard. ….."* (focus group 1)

Assumptions regarding teaching and learning also featured in the discussions:

> "*I guess there's an assumption …..that you know something more about how to teach people than other people do and that can be very offensive to people*" (focus group 3)

This issue illustrated **the different backgrounds and roles that the participants occupy** within the sector. Some are academics who have moved into support roles whilst others were appointed as educational technologists.

"....we don't lecture so we're meeting academics every day and really what you really want to do is ask them what they think they should do and try and reflect it back at them....." (focus group 3)

"*why is it that we believe that when we're in front of students, education is brilliant, but when we're the student ourselves, we think it's terrible?"* (focus group 4)

This topic also generated commentary on a range of allied issues that demonstrated not only the range of beliefs and values of the group members but also the depth of knowledge and experience. **The concept of the "artificiality" of going to college** is an interesting angle on the ongoing struggle to understand attrition and student drop out rates.

"*If I'm a person, and in the rest of my engagement in society, when I book a flight, a hotel, so on, the first thing I do is sit down to a keyboard, why do I come into a place, and the first thing they do is put a piece of paper in front of me, and say read that and then start writing things?*"(focus group 4)

The capability of **technology to be harnessed as a radical tool in addressing inequalities** in society brought the discussion full circle to Theme 1 – which questioned the motivations of participants:

"*On the other hand it's good to be aware that there are very powerful forces at play in society that are looking, probably, to hold their power position and I suppose it's just really trying to use technology in a way that is critical of that and I suppose acknowledges it and tries to maybe overcome it somehow, you know?.*" (focus group 3)

This participant was also aware that the role could be viewed by some as that of **a colonising agent**:

"....are we a colonising power and setting our agenda, you know, going out into institutions and talking to lecturers ...." (focus group 3)

Which **could be a factor in explaining some of the resistance** that is encountered from the academic community?

> *"....we had a guy over doing a presentation last year, you know he used the field of dreams, you know build it and they will come. And that's what the senior managers in colleges think, they can't understand why they aren't using these extensively." (focus group 4)*

Summary-Theme C

The assumptions described above were largely in relation to their role – not specifically personal or even general. This dilemma of personal versus professional was evident in many aspects of the discussions. The participants may well be advocates of a learner centred approach but recognise that pragmatically to progress the agenda of educational technology, benefits to the teacher need to be fore grounded. There is also evidence that a constant critique of technology even at times a healthy scepticism regarding the advantages of technology for learners and the education system itself is required. In the next section the views of the participants in relation to the higher education sector will be examined. A summary of the key comments are presented in Table 5-3 below.

Table 5-3: Summary Comments on Theme C: Motivations and Beliefs

Personal beliefs
own personal motivation was very much learner centred
transformative educational experiences occurred later in life
of taking advantage of what education has to offer
the positive experiences in their own educational journey
Professional Views
a more "teacher centered" approach is optimal
the life of an academic can be made "easier
academics must see the benefits for themselves
the main focus of academics would appear to be in identifying what would be of direct benefit to themselves
Personal Influences
previous teachers and their school environment
the family of origin
lessons learned from other people
other people from other disciplines
recognised educational theorist
Opportunities to meet with influential people were often the turning points or key moments in their lives
Assumptions
students always prefer using technology
the students are motivated themselves
you can't always rely on it
the belief that you have to be very high tech and innovative
low tech approach yielded significant benefits
assumptions regarding teaching and learning
was a need to re-assert that technology is not a vital cog in the education wheel
that educational technology has the potential to change indeed radically change higher education

Theme D: Views on the Higher Education System Today

The Changing Profile of the Student Body

The reported **increase in student numbers and the associated diversity** is recognised as one of the main changes within the sector.

> *"…certainly I think its opened up access to a much greater variety of students ….across most socio-economic groups and you have the students with special needs and we have the newcomers and European, international students."* (focus group 1)

> "*I would think it's serving the needs of a much broader sector of society.*" (focus group 1)

And that this changing profile has been responded to – **by adopting various interventions that are more student centered.**

> *"there's much greater awareness now from primary school upwards of the fact that people learn differently and that there are learning difficulties there and it's not a measure of ability."* (focus group 2)

However, this was by no means a unanimous view

> "*But definitely in terms of …improving accessibility, you know, for different socio-economic groups …I don't think that there has been a major change in that respect*…." (focus group 3)

> "*I would say based on when I went to college, I think it's much the same I don't think a student, the person who comes in the door to get undergrad or postgrad, I don't think they are at the centre of how we teach at all*….." (focus group 5)

The other aspect of interest is how the participants reported **changes in the student cohorts' attitudes towards their studies** e.g. the earner/learner syndrome.

".....there's a higher percentage of people working full time jobs and part time....which maybe traditionally wouldn't have been the case." (focus group 3)

This has led to **a change in their underlying motivations and priorities**.

"...the motivation of the students have changed dramatically then that they become less work focused, that they expect to be given a lot more leeway because there are distractions in their life i.e. social life, family life, work life"(focus group 2)

In particular in comparison to their own experiences **the current student cohort has it "easier".**

"*.... you didn't want to fail college and not get a job because you know what would I do so there was a huge personal responsibility and maybe pressure as well then so it is a very different script for eighteen year olds I think they travel the world for a year and so on.*" (focus group 2)

It is also acknowledged **that change is slow particularly in the field of educational technology**, but also an acceptance that we need to "chisel away" an inevitably the benefits will be reaped:

"I just feel you can only chisel away at it and if you're in this area there's a sense in which you can't expect change to happen quickly." (focus group 5)

"But it's not being exploited at all, to the extent it could." (focus group 4)

However, there are also some suggestions that in order to cope with the changing student profile and increasing numbers **there will be a more urgent need to embrace educational technology**. The pressure for change will come from a number of sources including the students who will expect technology to be a part of their student experience as the "digital native" and the staff who are struggling with meeting the needs of larger student numbers:

"*….there's so much technology out there students have mobile phones, they have mp3 players and that's what's pushing a lot of the drive ….*"*(focus group 3)*

"I mean a lot of people go to university as well would be studying and working at the same time. So, technology obviously has a big potential for them." (focus group 4)

Of interest is the acknowledgment that this changing profile is seen as a responsibility that must be addressed by developments within higher education. A responsibility that educational technologists believe did not exist previously:

"*I think we have responsibility to cater for that diversity that people wouldn't have had twenty years ago*" (focus group 2)

The Link between Higher Education and Economic Development

The data revealed **a consistent undercurrent of political commentary** interspersed throughout the discussion on this topic. These included a recognition that the key rationale for higher education was to underpin and promote economic development:

"*…but now the clear rationale is economic development ……" (focus group 4)*

The **government view was echoed by "top" management** in higher education:

"*but I think at the top level I think the emphasis on research and research grants rather than teaching or improving the learner experience*" (focus group 5)

This was impacting on the disciplines and domains embraced by undergraduate programmes and at postgraduate level **an economically driven research agenda was identified as the main thrust of higher education** – or certainly the dimension that receives most exposure in the wider media:

"*any time I hear a university mentioned in the press these days it's for funding reasons or for research allocation or budgetary never for teaching standards or student successes."* (focus group 2)

"Definitely, engines for research centres, I think at the moment the thing is how many bums can you get on the seats and how fast can you get them out?" (focus group 5)

This **emphasis is viewed as dangerous** however:

"it does seem to be how much funding and how much money can you bring to this institution which I think is a very dangerous slope to be on." (focus group 2)

This overemphasis on the economy and the associated pursuit of a **research agenda is seen to be at the expense of initiatives that focused on a civic responsibility.**

"*And the things which maybe were there and supported the citizen as a citizen, are being driven out by withdrawal of funding.*" (focus group 4)

And has altered the priorities for promotion within the academic community at the expense of scholarship in the teaching and learning arena

"*….someone once said to me that if you're an academic and you want to progress you don't put your energy into making sure that your lectures are the most .. you put your energy into your research ..."* (focus group 5)

What was missing was "balance".

"*I'm not denying the significance of employability but there has to be…Balance, yeah."(focus group 1)*

The emergence of a **national quality assurance framework has contributed to this changing emphasis**:

"....over the last couple of years in terms of learning outcomes and the framework and all of that you know they are quite focused, not just on content but actually on what the student is into doing." (focus group 1)

Throughout the discussion on this topic I was struck by the personal nature of many of the comments. It often seemed to be based on a recognition that change is bearing down on us or indeed was here – the student profile has changed; the funding model is altered; accountability is now a feature of what we do.

The response was to engage with the changing environment and adapt and alter approaches and even views that may have served us well before. Rather than any sense of we must resist and ensure that the "old" approaches are maintained.

> "*the learning activities and the way things are assessed needs to be changed*" (focus group 1)

> *"so we'd better change our own mind .....*" (focus group 1)

This discussion continued during the participant's reaction to reflection number three which posed a serious of provocative statements in relation to the state of Higher Education Today

"Going to College is not the same as getting an Education"

Dewey's statement was somewhat provocative but it does pose an interesting question for discussion. What is the essence of a College experience today for undergraduate students? And what do we mean by education in the first place? The background for this part of the focus group discussion is set against the concerns raised earlier for example the changed motivations of students and the predominance of the research agenda.

What was suggested initially is that going to college **was part of your education** and the social aspects of College life and the transition contributed to your own personal development.

> "*It's part of an education.*" (focus group 1)

> "I *think getting an education is part of going to college.*" (focus group 2)

Or for some the statement was an accurate representation of the experience for students:

> *"yeah people go to college and they don't get an education."* (focus group 3)

"I think that statement will always be true." (focus group 5)

But for others it was too cynical but did contain a grain of truth.

"*I think that's unduly cynical but I suppose there's an element of truth in it…"* (focus group 6)

The benefits of going to College were certainly articulated by the focus group members in some instances **they reflected a journey of personal development** as a strand feeding into your life experience:

"*….I think education's your life, I think college is one strand feeding into your lifeline."* (focus group 3)

"its part of your personal development…" (focus group 1)

"*I think the key is that with college you get a broad overview of whatever you do, what you don't get is a training and I think that's the advantage of college."* (focus group 5)

The tension between a narrow focus on getting a qualification and the broader aim of embracing the College experience was also evident in the comments. The expectations of family were important:

"*we were all agreed I was there to get a degree because it would enhance my employment prospects, nobody say 'Ah Jesus, look he's developing and broadening his mind…*' "(focus group 2)

"*Life is about I'm only going to tolerate going to this college because at the end of the day I'm going to get a qualification, and I'm only interested in the units that are prescribed for that qualification and I'm only interested in the assessments that underpin that unit*" (focus group 4)

There is also a sense that some of the developments within the third level sector **are enhancing** the education dimension. The greater emphasis on encouraging the students to learn to learn is welcomed:

> "*I think some of the things that beginning to emerge at third level about kind of giving the students the capacity to identify your own education shortcomings and stuff like that and try to I suppose educate the students to educate themselves*" (focus group 2)

This continued attention to enhancing the experience for all students is an important objective for the sector.

> "*So I don't think it'll ever be the same as getting an education. But I don't think that should stop us from making a much better shot of what we give students.* "(focus group 5)

"In the main education is part of the problem, not part of the solution because its effect is social-order maintenance"

Anne Goodman's comments from her thought provoking book "*Now What? Developing Our Future: Understanding Our Place in the Unfolding Universe*" resonated with me. For some reason the suggestion that education was part of the problem initially seemed outrageous but on further consideration it cast many of my own thoughts into a new light. I was curious to explore what impact this statement would have on the participants, if any? As educational technologists should a concept such as "social order maintenance" be debated within the field? It soon became apparent that it should and it was and that there was a spectrum of opinion regarding Goodman's claim.

As can be seen below – a comment that seemed to disagree initially but then provided a very insightful and personal example of a "**damaging" teacher**.

"I wouldn't agree with that at all…. I can remember one school teacher in school who inspired me and I also had the counter point a teacher who, right even now I can feel he actually was damaging…" (focus group 1)

The work of Kathleen Lynch in UCD was also referred to as illustrating the **"care less" aspects of Higher Education**.

"…instead of evolving in a more caring way because of all these tensions we've evolved in a more care less way even though individually we all care." (focus group 2)

This led to some further probing and reflection:

"*we're at a stage now like where you have to ask yourself are we purely just trying to drum information in to people's head or are we trying to educate them a bit about making right decisions…"* (focus group 2)

"I mean even arguably getting a good education for yourself doesn't really benefit the wider society" (focus group 6)

But on a broader perspective there is a sense that the **educators are not fully responsible**, but that the system must take its share of the blame.

"….so people aren't making them accountable anymore, they're making the college accountable..." (focus group 4)

And at times Government policy is not a positive influence on the system:

"*The nature of the education the strategies and policies, have a very major opportunity to change how things are. At the minute, the policies at the minute are causing problems*. "(focus group 4)

But for some the mismatch between programmes of study and opportunities is a factor:

"*So I think that's a problem that education is part of the bigger problem that we're not sending out the right skills to supply the workforce*." (focus group 5)

Overall, the advice was not to "**throw the baby out with the bath water**", to salvage the positive aspects of the system:

"It may be the wrong shape at the moment to be part of the solution, but I wouldn't be throwing it out just yet. " (focus group 4)

"I suppose education is part of problems and solutions" (focus group 5)

And **strive for change** – although recognising that within the education system that can take time:

"We are not flexible enough" (focus group 2)

"*So I think education needs reforms from time to time, maybe ongoing reform like any other institution but it's just as good as resisting that as lots of other institutions are."* (focus group 5)

The focus group at this point moved on to the next quotation which linked well with the discussion – as many of the opinions and comments questioned the current rationale of the higher education system. When I read this statement initially I was struck by the unequivocal stance – no scope for any "superfluous" activities in education other than those that can serve the economy. I was now interested in discovering if the underlying assumptions and values packed into this assertion were shared by any of the participants.

"The primary function of the education system is to equip individuals with the knowledge and skills necessary to participate in the economy…"

The group immediately raised the common debate on the **difference** between education and training:

> "*I think they are confusing education with training here*" (focus group 1)

This was further explored in the context of Ireland's "Celtic Tiger" – the positives and the negatives – but with a query as to the role of an educator:

> "*And I think we've learnt a lot in this country in the last few years in terms of it has been economy driven……So I think that's part of our role as well and students don't just see their life here as coming in and getting a piece of paper and just engaging with the books and whatever that it should be something that is broader."* (focus group 1)

However, the **strong connection between the economy** and the higher education system was accepted as a key factor and feature of society today at both a national and a global level.

> "*You're not going to have a vibrant economy if you don't have a vibrant education system."* (focus group 1)

> *"...so it's whatever the world economy needs, is what's been thrown out there, regardless of developing the person..."* (focus group 4)

Particularly, from the student's perspectives who were hoping **to improve their career prospects** by virtue of their qualifications.

> "*….but the vast majority of them they're here to try and make themselves better in regards to getting a good job*" (focus group 2)

"*there's no point coming out of university and not being able to get a job*" (focus group 3)

Although, it is suggested that **both objectives** i.e. of serving the needs of the economy and including "softer skills" in course programmes could be achieved.

"*I mean I would like to see our students learning or I suppose getting that preparation for society as a by-product like being able to work in groups or being respectful to colleagues…..*" (focus group 2)

And the importance of these **"softer skills**" such as team work should not be underestimated.

"*I do think there's a responsibility there because if you think about it if you go out to work you have to work in a team and then if there is no group work in your course you've never learned how to work as a team, you don't understand the dynamics of teamwork"* (focus group 5)

Another segment of data illustrating a very pragmatic discussion which demonstrated a combination of realism in their acceptance of the dominance of the economic model but with an underlying aspiration that the civic aspects of education need to be be retained. The final statement offered as part of this reflection brings the discussion back to the role of technology in education. Although at first glance this statement could be viewed as advocating for a greater investment in educational technology – it also labels education as a business. I was interested in assessing the response if any to this assertion.

"Education is the only business still debating the usefulness of technology"

The use of the word "business" set of alarm bells immediately – with a very adamant rejection of the view that education is a business. However, interestingly this sense of annoyance was not shared as wholeheartedly by the other participants.

"*Before you leave it can we look at the last one, that one really provokes me because it says education is the only business still debating the usefulness of technology, I take exception with the word business, ...*" (focus group 1)

There appeared to be an **acceptance that business** terms, methods and practices were part and parcel of the range of activities in the higher education sector.

"*Well business yeah but we are a business and that's the thing with education it's more business. I'd say it was probably said by a business person."* (focus group 2)

"*I think it is a business*." (focus group 3)

"*But education is full of business terms, strategies, targets, goals, that's all business."* (focus group 4)

One participant offered an interesting rationale for this "acceptance":

"*But the reason that doesn't jar with me is, even the voluntary sector, the people who raise money to help cancer patients and the aged and so on, have to work in a business like way.*" (focus group 4)

Others disagreed with the statement's assertion that it applied to the education sector only:

"*I would have thought all businesses are debating the usefulness of technology.*" (focus group 3)

"I don't think it's just education, it mightn't be debating, but they might have decided, no we're not doing this…" (focus group 4)

"*I don't think it's the only business still debating it but I would see in the Irish case yeah that there is hesitancy about the whole thing*" (focus group 5)

It was also suggested that the statement was **not an accurate reflection** of the use of technology in the wider higher education system:

> *"I mean the administration in education uses technology same as the administration of other activities and student registration and collecting student fees and all that stuff is done by convention, if you can use that word IT so it's really more bringing it into teaching and* .... (focus group 6)

The need to **debate** was seen as part and parcel of the academic way

> *"But isn't it the university's role to debate everything, in terms of it has to question whether it's good*." (focus group 6)

> "*I think there's some truth in that statement….educators like debating; education has been very, very slow to actually take up technology, really slow. People, like we meet them all the time, people who are teachers, who use far more technology in their outside life than they do in their teaching*." (focus group 4)

The **slow adoption** of technology was acknowledged as a feature of the education system.

> "*….before I came here and one of the biggest shocks when I came in was the lack of use of technology in education*." (focus group 1)

A **resistance** that often manifests itself in the guise of assessing best pedagogical practice:

> "*...lecturers teach every day naturally in a classroom but when it comes to technology seemed to put this wall up and ask what is the best pedagogical way to do it.."* (focus group 2)

Or a fear factor based on a lack of understanding or a realisation that the core role of an academic could change radically:

"*I think there's a fear factor as well on the part of teaching staff and academics...*" (focus group 5)

But there was also **empathy** for the position of academics who view technology and its adoption as adding to their already heavy workloads:

"the academics who teach, like, they're experts in their area and we're now, they feel I think, we're asking them to get another information in teaching and learning" (focus group 5)

"*What's going on it's hard to come in to someone and say listen I need to get that extra ten percent you're talking about to put all that stuff up on moodle…..*" (focus group 2)

The final position for some of the participants is that the **functionality** offered by the current educational technology tools has brought this debate to a close.

"*…..I look at the effort involved in kind of creating learning objects or a podcasts or whatever, yeah sure there was a lot of effort in the front but when you think of the amount of time that it saves you later on you're going to teach to course again the effort as well is worth it*" (focus group 2)

"*So, it's now a lot more accessible and it's now a lot more … it's now at a stage in its evolution where it's really useful to us. So, I think that the debate let's say now is over at this stage, in that sense."* (focus group 1)

Summary-Theme D

This volatility in opinion and the regular fluctuation between comments some based on personal experience and others reflecting opinion based on a macro view of higher education provides a very rich and valuable commentary on the sector. The data clearly illustrates that educational technologists have a broad and varied range of views and opinions on the current profile of the higher education sector. The main topics that dominated the discussion were the changing profile of students and their associated behaviours; the dominant economic drivers in relation to course development and provision; the priority of the research agenda and the impact of quality assurance. However, also in evidence was an underlying sense that there is little real change particularly in relation to who attends third level and the experience they receive. Allied to this is a belief that technology has yet to play its full part and the hope is that in order to address the fundamental challenges of larger student numbers and a greater diversity of backgrounds technology the proper resource and frameworks will be established.

Educational technologists may be viewed as "technies" operating in an educational domain but the data captured and presented here offers a very different perspective. The commentary and opinion reflects that of a well informed and deeply committed group of individuals.

The propensity with the discussion to offer personal stories and experiences illustrated an important combination of the professional and the personal. The group also demonstrated a comprehensive knowledge of the challenges facing Higher Education today and their intent to work to address theses. There was no sense of "throwing in the towel" even though there is a strong undercurrent of criticism of current government policy. Their acceptance that this is the system we are faced with and must endeavour to deploy the resources at our disposal to maximum benefit. A summary of these comments is presented in Table 5-4 below.

Table 5-4: Summary Comments on Theme D: Higher Education Today

The Politics of Educational Technology
a consistent undercurrent of political commentary
government view was echoed by "top" management
an economically driven research agenda was identified as the main thrust of higher education
emphasis is viewed as dangerous
research agenda is seen to be at the expense of initiatives that focused on a civic responsibility
What was missing was "balance"
national quality assurance framework has contributed to this changing emphasis
Changing profile of students
increase in student numbers and the associated diversity
by adopting various interventions that are more student centered
changes in the student cohorts' attitudes towards their studies
a change in their underlying motivations and priorities
the current student cohort has it "easier"
a reintroduction of fees could alter the agenda
A paradox
that change is slow particularly in the field of educational technology
there will be a more urgent need to embrace educational technology

In the next chapter I will compare and contrast these finding with the research literature. In some respects the findings from this study will confront the current dominant discourse in the field of educational technology. This will allow an alternate discourse to emerge that now encompasses more than just a techno-centric perspective on the views and beliefs of educational technologists.

Chapter Six: Findings 2-An Altered Discourse on Educational Technology

Introduction

The objective of this chapter is to take the voice of the educational technologists as presented in Chapter Five to a public audience – to ask the question "how well do their views, beliefs and opinions resonate with the existing body of research literature?" The approach I have adopted is to take the key points raised in relation to each of the four main themes and to examine them within the existing framework of published commentary on educational technology – the dominant discourse. As can be seen from Table 6-1 below each theme will be discussed based on the main findings outlined in chapter five which are as follows:

Theme A describes the views on educational technology under four headings "balance, compromise", tension", "critique" and "requirements"

Theme B describes the role of the educational technologist under four headings "origins and demands", "more than just a technical role", "my voice" and "views on academics"

Theme C describes the motivations and beliefs of educational technologist under the headings "personal beliefs", "professional views", "personal influences" and "assumptions"

And finally **Theme D** describes the views on the higher education system under the headings "politics", "changing profile of students" and "a paradox"

Table 6-1: A summary of the key findings

	Themes	1	2	3	4
A	**Views on educational technology**	Balance Compromise	Tension	Critique	Requirements
B	**The role of the educational technologist**	Origins and demands	More than just a technical role	My voice	Views on academics
C	**Motivations and beliefs of educational technologists**	Personal beliefs	Professional views	Personal influences	Assumptions
D	**Views on higher education**	Politics	Changing profile of students	A paradox	

The next section will present a review of the findings in relation to each theme.

THEME A: Views on Educational Technology

Balance, compromise and tension

Viewing educational technology through a technology lens puts an emphasis on the tangible, measurable quantifiable aspects of these developments. However, the data has demonstrated that switching the lens to focus on the practitioner's values and beliefs illuminates the "off stage" often unacknowledged compromises and tensions required to balance the oft competing agendas at the heart of the education sector. The data described in chapter five presents this view of the practitioners on how they have coped with and managed the varying demands and expectations of the key agents identified (i) the learner (ii) the academic (iii) technology itself and (iv) the system.

A capstone belief described in the data is a recognition that the learner and the relationship between the learner and the educator is key – this would suggest that to be effective as an educational technologist identifying technology interventions that support this relationship is a critical success factor.

This requires **an ability to balance** demands to support the individual i.e. learner or academic with the priority of ensuring the relationship is fostered and encouraged to grow. Perhaps inadvertently the advent of Web 2.0 technologies with the greater emphasis on tools to support social networking – allows the educational technologist to demonstrate how the tools can support the relationship building. This has been noted in a recent report on the impact of Web 2.0 innovation on education and training in Europe

> *..Web 2.0 applications are enablers of collaborative learning processes, where peers and more knowledgeable actors function as scaffolding for the development of new abilities, and competences by the learner. (Mutka,Bacigalupo, Kluzer, Pascu, Punie and Redecker, 2009, p.7)*

[A1] Balance and Compromise
The learner and the relationship between the learner and academic is key
The social aspect for students needs to be incorporated
When people are shown how to use the technology there is a greater chance of success.
The existing resources are difficult to use
Need to get the balance right
Acceptable publication topics in the field are technology focussed
The attraction of a new technology is needed

The data also reveals that the current adoption of blended learning approaches is also an approach that ensures the students can avail of the advantages of the technology without eliminating the opportunities for social interaction.

For the participants balancing the risk that technology could reinforce the isolation of students with the need to incorporate the social aspects of an educational experience is a priority. There is also a need to adopt practices that will allow academic staff to recognise the benefits to their practice in a realistic and meaningful way. This has been recognised by Patterson and Norwood (2004) who have noted that:

> *When teachers have the opportunity to reflect about their pedagogy they become more aware of their instructional practices and any challenges they experience. Teachers may become motivated to make changes in their constructions either to accommodate to or to assimilate the experience. (p.10)*

However for Norton, Richardson, Hartley, Newstead and Mayes (2005) they believe that:

> *There is little or no evidence that training has any effect on teaching behaviour. However, they are consistent with the position of many recent researchers that genuine development will come about only by addressing teachers' underlying conceptions of teaching and learning. (p.560)*

These "underlying conceptions" are also presented as an explanation for the resistance of teachers to the influence of technology on their practice (Angers and Machtmes, 2005)

> *Teachers resistance to change is primarily due to concerns regarding the influence of instructional technology integration on their preparation, beliefs and values. Teachers who want to change are proactive, want to grow and are reflective (p.775).*

This perhaps explains that one of the **greatest tensions** for the participants is how best to promote the benefits of educational technology for the academic whilst also maximizing the benefits for the learner.

An additional tension evident in the views of the participants is a reluctant admission that decisions and initiatives are often technology lead or chasing the "shiny new gadget" rather than a clear demonstration of any pedagogic value.

Seidensticker (2006) compares this to a doctor misdiagnosing a disease who "*.....will provide the wrong treatment, our response to technology will be ineffective, if we incorrectly perceive how it impacts society. Swept along by overexcitement with the new, we don't accurately see its promises or its weaknesses*" (p.x)

However, this excitement is also viewed as a necessary catalyst to spark an interest in a new initiative but there is also an acknowledgement that not being seen at the cutting edge runs the risk of being labelled a laggard. Yi, Jackson, Park and Probst (2005) also noted the importance of an individual's propensity to experiment with IT.

Whist Roca and Gagne (2007) consider perceived playfulness as an important motivational factor, defined by Davis as "*the extent to which the activity of using a computer is enjoyable in its own right aside from the instrumental value of the technology*" (p.1587).

[A2]Tensions

Sometimes this doesn't happened because of the fear of being labelled a laggard

There is a reluctant recognition that decisions were "technology lead" – but sometimes this is required to spark the initiative.

The student cohort who now expects academic staff to use technology

There is a "tension" in the role of the educational technologist who need the academic staff to adopt the technology but not only for their gain

Critique and requirements

The participant's assessment of the current role and impact of technology presents a slice of realism which is sometimes lost in published accounts which focus on functionality and potential. This is acknowledged by Price and Oliver (2007, p17) and Mishra & Koehler (2006, p.1018) and Saettler (2004) that the paucity of real achievements rarely matches the hype surrounding the introduction of new technologies.

[A3]Critique

The impact of technology has yet to be realised

It is not a lynch pin in the education system

We are too ambitious; technology is not a change agent

Technology does not always "save time"

Colonised under the guise of educational best practice – fear of policy drivers

"Technology centred" agenda is primarily to change the delivery mode

Main rationale is only to reduce costs

The recognition that in many instances a teacher centred approach results in the adoption of technology but with little impact on the underlying pedagogical models is recognised in the literature. The OBHE [12]Report (2005) noted that "*Resistance to e-learning by faculty members can also be explained by a lack of time or motivation to carry out what is basically an additional task, since e-learning mostly supplements rather than replaces classroom-based teaching…..".*

Zentel et al (2004) remarks that many universities and colleges have begun to integrate multi-media elements into their regular courses and enable students to study without the restrictions of personal attendance and of time. They further remark that this relates to increased flexibility with or without changing the underlying pedagogical model.

Similar to remarks by Cuban, Kirkpatrick and Peck (2001) who have also recorded that when teachers adopt technological innovations, these changes maintain rather than alter existing classroom practices (p.815).

For the participants it is a real concern that the priority for current policy drivers is the reduction in the cost of delivering courses without effecting any real change. The possibility of the educational technology agenda being colonised is a criticism that can be voiced privately but there is no space in a public forum to debate these issues. This is a view that is supported by Gorard and Selwyn (2005) who go further in their criticism and contend that:

[12] The Observatory on Borderless Higher Education (http://www.obhe.ac.uk/home)

> *Barriers to learning whether they are categorised as cultural, structural and personal or situational, institutional and dispositional, are now seen as resolvable through the use of ICTs such as computers and the internet – themselves seen as providing learners with a hitherto unavailable flexibility and convenience when it comes to engaging with educational opportunities. (p.71)*

This fear of policy direction and intend has been commented recently by Conole (2009)

> *One of the most fundamental is, given the interconnection of policy directions and subsequent impact on practice, what factors need to be taken into account to make appropriately informed policy decision making? This question surely is central if we are to see a better, more strategic and targeted use of technologies in the future.*

For the participants there is also a concomitant requirement to establish a formal framework of supports and initiatives including a proposed four stage lifecycle consisting of design, development, evaluation and critique to be applied to all technology initiatives. The importance of which is also recommended by Conole (2009):

> *One of the key lessons which can be drawn from reviewing the relationship between policy, funding and practice is the importance of setting in place formative evaluation mechanisms alongside initiatives so that individuals and the sector as a whole can critically reflect on the initiatives' impact and distil out recommendations for future directions.*

[A4]Requirements
Need to ensure that there is the adoption of a framework of supports and initiatives
The design and implementation is a critical step
Always a need for ongoing evaluation and critique
And reviewing experiences
The evaluation phase is as important as adopting

The data presents a scenario of a complex range of technologies that are having a modest impact on various higher education institutes.

The main challenge requires significant expertise in managing these resources and supports but central to any successful intervention is an ability to navigate a path through the sensitivities, demands and requirements of academics, management and staff.

This requires that when technical decisions are taken they are cognisant of the various values and beliefs that underpin the role of the various protagonists in the field of higher education. What this also describes but is not stated explicitly is the need to re-evaluate the role of an educational technologist.

A suggestion that echoes with Saettler's statement that this would require a leadership role for educational technologists "….. *the qualified educational technologist would provide leadership and direction for the entire instructional system. Such a change would require considerable federal and state support, but if the lessons of history continue to be ignored, the educational system is destined to follow the same implementation paths of past technological innovations*" (2004, p.470).

And is also acknowledged by Conole (2009) who states that "*One of the most evident indicators of the impact of technology is the way in which professional roles are changing*."

This data suggests that educational technologists whilst immersed in a fundamentally technical role bring to their position sensitivity and understanding of the political, personal and moral challenges that higher education is facing. The current field of educational technology has not provided or encouraged this dimension to flourish, a dilemma captured by Campbell (2005) in her study of the role of instructional designers where she contends that we need a more reflexive dialogue within the practice to address these moral issues:

> *What could we achieve if we were thoughtful, deliberate an unapologetic in aligning design projects with the ethical knowledge of designers. If we developed a community in which the moral dimensions of practice were explicitly developed through reflexive dialogue?* (p.242)

In the next section we will explore these issues further as we examine the data relating to the current role of an educational technologist.

THEME B: The Role of the Educational Technologist

The origins and the demands

The data suggests that two key factors for the establishment of this role in Higher Education Institutes have been the increasing size and diversity of the student body and the decision to establish centres for teaching and learning. These factors are also identified by Gosling (2008) who argues that the creation of Education Development Units within the UK, has been influenced by the massification of higher education, the reductions in funding per student, the diversification of the student profile, the growth of educational technologies and the funding made available for educational development projects (p.9).

In some respects the Irish experience has lagged behind its UK and US counterparts and in effect has "skipped" a generation in relation to the development of educational technology. It is only recently that sources of formal funding have enabled the clear identification of a need for and the subsequent establishment of this role. National initiatives in Irish Higher Education such as the National Digital Learning Repository and SIF (Strategic Innovation Fund) projects have provided the necessary resources and support structures to establish these centres.

A consequence of the earlier development of the role in the UK has been the emergence of a group identity. Conole, White and Oliver (2007) refer to the emergence now of a second generation of educational technologists who similarly ascribe their origins to various national initiatives and policy drivers:

> *However, their identification as a distinct group became clear about a decade ago. This was in part due to the substantive impact of the internet on learning but was fuelled by a number of national initiatives and policy drivers (Conole, 2002, p.79)*

[B1]Origins and Demands

the demand from students and the establishment of a central teaching and learning unit

Strategic decisions are dictated by external factors

academic staff are challenged

tension in the role

balance the requirements of the Institutions with the demands on the academic staff

The tension in this role and the ongoing need to balance the demands and expectations of various stakeholders within higher education is evident again. This is a common theme identified in similar studies by Oliver (2002) which *"....was the tension between the marginal nature of the posts and their importance in terms of institutional change" (p.248),* and the hybrid nature of the role (Gornall, 1999):

"And what of the "new professionals" themselves? Do they recognise their liminality, the hybrid nature of the role (Brackley, 1996). Do they feel both valued and invisible, the paradox of the "threshold" position?"

Gosling (2008) also alludes to this struggle and tension:

> *External pressures, and institutional imperatives deriving from them, are sometimes in tension with Educational Development Unit's (EDU) own conception of its role. There is sometimes tension between the managerial functions required of EDU staff and their own allegiances to academic values*. (p.3)

However, even within their own threshold positions the participants still can identify the challenges facing academic staff. A position which Conole (2009) fully endorses:

"*We need to start from where teachers currently are their motivations and fears, their skills levels. Upper most in our minds must be the question "What's in it for them?"*

Also uppermost in the minds of the educational technologists are the demands and expectation of the Higher Education Institutes. A sector that is characterised by a predominately bureaucratic culture with a focus on performativity based on narrow measures of accountability. It is not surprising that the data should reflect the participant's view that the role of an educational technologist is certainly not limited to a narrow technical brief but involves a range of other skills and abilities that often go unnoticed in the general interactions and engagements in a higher education campus.

More that just a technical role

As indicated earlier, the importance of a close working relationship with academics is reflected in the recognition and appreciation of the demands on staff to address the challenges posed by increasing numbers and greater diversity. There is also a realisation that Institutional demands and requirements may not always take cognisance of this fact, often as a result of the increasing prevalence of the new managerial agenda which craves performativity as the only measure of success.

A measure that has ensured that the "*teachers role as an effectively engaged caring person is not attributed much significance, not least because the teacher is largely seen as a midwife for delivering student performance*" (Lynch, Lyons and Cantillon,2007, p.14)

This aspect of the role is also a feature of the experiences of educational development units in the UK, Gosling (2008, p.43) comments that EDUs have to "*work hard to ensure that they work alongside academic staff, and learning support staff, in a way which is based on conversation and dialogue*….". A requirement for empathy, balance and dialogue are necessary to allow educational technologists to navigate through the various competing agendas that define higher education.

It is not surprising that the key attributes of their role as educational technologists identified by the participants included advocacy, good communication skills, supportive, possessing an ability to persuade and can provide training.

These are seen as common to both innovative academics in the educational technology field and formally appointed educational technologists. It clearly suggests that they do not see their role as a solely technical position which simply advocates technology for technology's sake – but continually assesses the alignment of the technology with the educational objectives.

This ability to negotiate and communicate with various parties is an important feature in this role as Oliver (2002) remarks educational technologists need to possess "*an open process of negotiation"* and "*…the ability to use a range of discursive repertoires…."*

Whilst others refer to the importance of building a rapport with academic staff:

> *If you are an educational technologist, try to break the habit of always discussing security, or the 'next big thing'. Try to address each teacher's needs individually. Pay attention to academic success and discuss them with others. Most educational technologists are very curious about and interested in the ways people learn. So is everyone else*. (Foti, 2005, p3)

The importance of staff training and their ongoing support is a critical success factor in any innovations within higher education. The challenge of ensuring that such training programmes are presented in a manner that will not alienate or undermine an academic's priorities requires sensitivity and adaptability. Oliver (2002) also noted similar findings:

> *It is important to note that the process is a two way one; in order to teach the collaborator, the learning technologist must first understand their context. This requires the learning technologist to organise their activity and expertise around the needs of the collaborator – a fundamentally learned centred model of professional development*. (p.247)

This ability to act as a broker between the hard edge of technocentrism and the needs of learners is echoed elsewhere. McCauley Jugovich and Reeves (2006) in describing feedback from academics who attended an intensive seven day technology workshop refer to one comment made to them:

> *'You're not like normal IT people.' When asked for clarification, the faculty member said that we (the authors) talk on their terms in non-technie language and that we are committed to their success instead of telling them what they should do or how they should do it*. (p.60)

Campbell captures this in her description of the role of instructional designers in the US context:

"*We believe that designers are not technicians that primarily implement techniques and principles, but principled actors whose practices embody core values*" (p.661)

[B2]More than just a technical role

the role is primarily to act as an advocate for using technology

This characteristic is common to both innovative academics and formally appointed educational technologists.

a key aspect of the work is communicating technical knowledge

ongoing support and training

persuasion is to show the educational value of the innovation rather than a purely technical demonstration.

"realign" the technology with the learning objectives.

attempts to impose educational technology were regarded as counter productive

interesting characteristics of successful educational technologists

with staff training identified as a key factor

This is an interesting development within the instructional design community in the US and Australia a recognition of the agency of the instructional designer. It also provides for an inclusive model for all of the actors that educational technologists engage with as part of their core function. But most importantly it shifts the role of the educational technologists out of the narrow confines defined by technical efficiencies and performance gains onto a plateau that allows the needs of the learner to be paramount in all discussions.

If we substitute "educational technologist" for "instructional designer" in Campbell et al's (2005) statement that:

> *Instructional design involves the ethical knowledge of the designer acting in moral relationship with others in a dialogue among curriculum, the sources and forms of knowledge and power, and the social world. As ethical actors in that world we use the language of design in collaborative conversation with our colleagues, our clients, and our institutions to create an alternate social world of access, equity, inclusion, personal agency and critical action.* (p.11)

Detailed accounts and arguments on how educational technology has the capability to impact on equity and access is a rare theme in the research literature that dominates this field.

Describing educational technologists as ethical actors whose personal agency has the potential to create alternative social worlds is even rarer. However, these positive assertions and alternative viewpoints are the necessary ingredients in any antidote to counter the diminishing beliefs and hope that technology and educational technologists can effect real change. Another potent ingredient is to allow the hidden voice of these practitioners to be heard.

The Hidden Voice

It should not be unexpected given the earlier discussion that the notion that educational technologists should possess a "voice" was met with surprise by the participants. The data also revealed that likewise there was a belief that the "voice" of an academic in the Institute of Technology sector was rarely sought. Voiceless educational technologists supporting the work of voiceless academics the residue of addressing many of the challenges, conflicts and contradictions identified earlier.

This sense of frustration, isolation, insignificance and of being "muzzled" is strongly expressed by the participants, often exacerbated by a hierarchical structure that reinforces their sense of isolation and insignificance.

[B3]My voice

an inability to identify with the pictograms

of isolation and being "muzzled

frustrated at not being listened to or not being able to bring their ideas to fruition

The sense of manipulation and insignificance

re-structuring the educational technology role with clearer communications and reporting lines

the notion that they should have a "voice" was met with surprise

commentary from academics in the IOT sector was not sought

This theme of a marginal existence within higher education has been ascribed to the levels of prestige and gravitas of the roles by (Conole, White and Oliver, 2007) and that these roles did not fit neatly into existing organizational structures (Oliver, 2002).

The sense of frustration at not being listened to or not being able to bring a project to fruition poses a major challenge for the future development of this role. Gosling (2008) also refers to this threat of re-organisation reinforcing a sense of marginalisation:" *The continued threat of re-organisation tends to create a sense of marginalisation and demoralisation among EDU staff. Reorganisation is often associated with a change of the senior manager responsible for the EDU*" (p.2)

However, the participants suggest that any re-structuring that does not improve the lines of communication will be counterproductive.

Some of the data also revealed apparently inherent contradictions in relation to the views of participants with regard to academic staff. Although it is recognised that academic staff have alternative forums and opportunities to give voice to their views – there is also a realisation that these discussions are often not related to issues associated with their core practice of teaching and learning. This contradiction manifests the strategic changes that have been imposed by an adherence to a neo-liberal agenda in higher education.

An agenda that supports the creation of Centres for Teaching and Learning on the one hand but diminishes the importance of these endeavours on the other by subscribing to league tables that fail to recognise these activities as core values of a modern higher education institute. As Lynch (2006) remarks:

> *Despite their proliferation, however, league tables direct us away from many of the core values that are central to university work, including quality teaching, outreach, inclusion and research which is of worth not only to our careers but to humanity in its entirety*. (p6).

[B4] Views on academics
lack of opportunity for academics to discuss their practice
interest in its application within education has provided an impetus for these discussions
academics however, it is regarded that they have other fora to give voice to their views
the lack of cross-discipline opportunities

The hidden voice of educational technologists bears a remarkable resemblance to the commentary by Riel and Becker (2000, p.2) who refer to Smyth (1989) who remarks that the isolation and silence of teachers in the discourse of teaching and learning can be seen as a "*protective response to subordination*". Teachers without a sense of agency or authority beyond the classroom, engage in a form of "private practice" behind closed doors. The social structure that teachers create for student learning in their classroom mirrors their own relationship to their colleagues in the larger educational community (p34). If we replace teachers with educational technologists in the above paragraph and assume the "students" are the academic staff to be supported, the system may inadvertently be encouraging a form of "private practice" which is predominately teacher centred. In particular where the structures have marginalised the function and role of educational technologists as described in the data.

But what is evident is that the "voice" of educational technologists carries important messages addressing many of the issues and concerns facing higher education.

But most importantly there is a consistent theme of care and concern that unfortunately has few avenues for expressions except in private spaces rather than on a public stage. An interesting observation in Campbell , Schwier and Kenny (2005) describes this dilemma in terms of a "*moral relationship*" – although addressing the role of instructional designers is equally applicable to educational technologists:

> *At the core, change agency is a moral relationship with others. Fundamentally, we believe that instructional design is not grounded in the rationality of behaviourism as much as in a "social morality in which caring values are central but contextualised in webs of relationships and constructed towards communities". (Christians, 2000, p.142)*

The next section will explore the values and beliefs of the participants and analyse the data regarding their underlying motivations and assumptions.

Theme C: Motivations and Beliefs of Educational Technologists

Underlying beliefs and motivations

The data provides an interesting insight into the values, beliefs, motivations, and assumptions that underpin the participant's current approach to their respective roles as educational technologists. This was a central question that prompted this research study to explore the motivation of educators who are usually represented as principally strong advocates of the adoption of technology in an education setting. Most of the research data on value and beliefs has focussed on teachers who either adopt or are resistant to the use of technology in the classroom. This body of data is an extremely valuable reference point – in particular educational technologists often share some of the backgrounds of teachers and they operate in similar although not identical environments. They also have to contend with addressing and persuading academics that are resistant to change – this allows the significant bank of data that exists addressing this issue from a teacher's perspective to be used. The literature clearly articulates the various motivations that prompt innovators in many different environments.

Pajares (1992) contends that all teachers hold beliefs, however defined and labelled, about their work, their students, their subject matter and their roles and responsibilities. (p314) Referring to the work of Rokeach who states that beliefs cannot be directly observed or measured but must be inferred from what people say, intend and do (p314). Similarly Kimbimbi (2009) referring to the work of O'Sullivan who contends that:

"*Understanding people's motivations and goals, rather than the characteristics of a technology will lead to reliable predications about the consequences of technology uses*" (p.1)

What is evident is that for the participants in general they offered a positive appraisal of their own educational journey and asserted their belief in the value of education. The data illustrates an inherent contradiction in the role of educational technologists who may well believe in the benefits of a "learner centred" approach but in order to encourage the adoption of technology by academic staff must promote initially its benefits to the teachers.

[C1]Personal beliefs
own personal motivation was very much learner centred
transformative educational experiences occurred later in life
of taking advantage of what education has to offer
the positive experiences in their own educational journey

Foley, J. & Ojeda, C. (2008) also discovered this conundrum and report that *"...many faculty are reluctant to use technology in their classrooms. This reluctance may stem from different assumptions about teaching and learning that are held by technology specialists and faculty*" (p.1).

The importance of providing the space to explore with academic staff their own motivations and beliefs is often absent from staff development workshops which usually focus on the functionality associated with a particular technology.

[C2]Professional Views

a more "teacher centered" approach is optimal

the life of an academic can be made "easier

academics must see the benefits for themselves

the main focus of academics would appear to be in identifying what would be of direct benefit to themselves

The "clash" between the participants own beliefs and views and those of the staff they are attempting to influence is captured in Diagram 6-1 below.

The Learner Centric - Pedagogic Centric (LP) quadrant represents a scenario where the underlying beliefs and motives place the learner's needs central and adopt the most appropriate pedagogic approach without the use of technology. An example would be the use of project based learning with a group of adult learners. Whilst the Teacher Centric – Technology Centric (TT) quadrant would reflect a technology solution that provides predominately benefits for the teacher. For example, an academic may convert their course material and assignments for distribution on a VLE which reduces the need to photocopy material and allows for an efficient means of tracking "participation" and assignment completion.

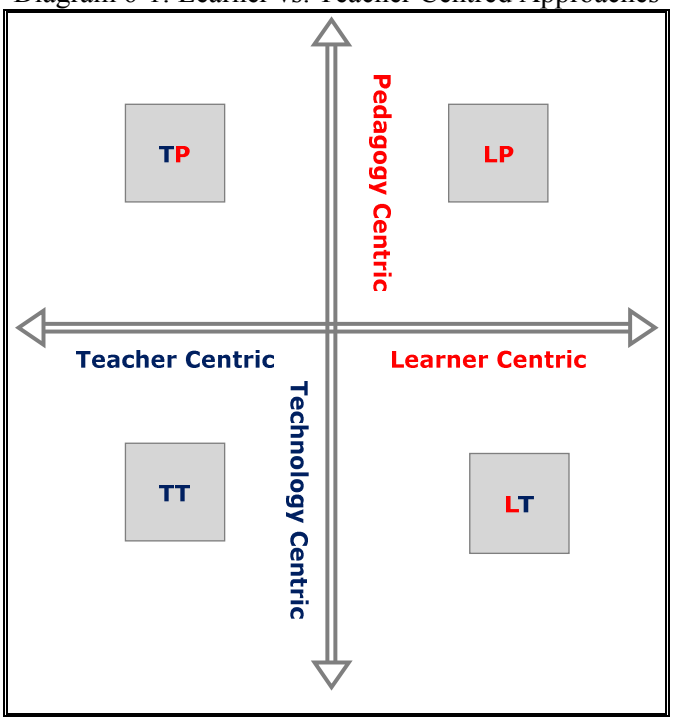
These combinations represent various positions on a spectrum – the challenge as described in the data is to encourage the shift from a teacher centered to a learner centered approach initially and in parallel to demonstrate how technology can be deployed to support the learner.

The difficulty of this task for educational technologists is compounded by a combination of (i) the sense of marginalisation described earlier and (ii) the requirement to follow policy dictates which may be simply seeking to achieve efficiency gains through the use of technology independent of any improvement in pedagogy.

"*Policymakers still tend to operate as if educational change is a unidirectional process. They assume teachers will accept and implement innovations such as ICT integration mandated from top down".* (Tondeur, Hermans, van Braak and Valcke, 2008, p.2551*)*

Inadvertently, the risk of supporting a "teacher centred" approach which results in efficiency gains (reduced photocopying, ease of administration of attendance and results) without the concomitant realignment of these "gains" to support the learner could well represent a colonisation of the educational technology agenda in higher education. This would not be the objective of the participants in this study.

Diagram 6-1: Learner vs. Teacher Centred Approaches



It is also evident from the data that the participants have reflected on their own motivations and beliefs. This could be as a result of their involvement with educational technology which can afford an opportunity to debate and discuss the essence of teaching and learning practice. The research literature rarely captures discussions on the values and beliefs underpinning the work and motivation of educational technologists. Although the importance of belief is recognised it is acknowledged that the educational research community has been unable to adopt a specific working definition of belief, Pajares (1992) suggests that "*Belief is based on evaluation and judgement; knowledge is based on objective fact*" (p.313).

It is also interesting to note that as the focus group discussions continued, some earlier contentions on motivation and beliefs which largely reflected their function as technologists were amended.

There was a tendency to deal in facts and knowledge which reflected their professional opinion, but as the participants became more at ease with each other they were comfortable in discussing their own beliefs and values. Memories and influences were recalled and personal statements emerged which captured "submerged" beliefs on the importance of the learner and the transformative potential of technology. A secondary set of beliefs and values that were not immediately on the surface but were of a more personal nature. Perhaps as the discussion unfolded the sense of identity was becoming more apparent to the participants.

Pajares (1992) also noted that beliefs help individuals to identify with one another and from groups and social systems (p.313). Although Ertmer (2005) referring to the work of Nespor (1987) (p29) described beliefs as relying on episodic memory, with information being drawn from personal experiences or cultural sources of knowledge.

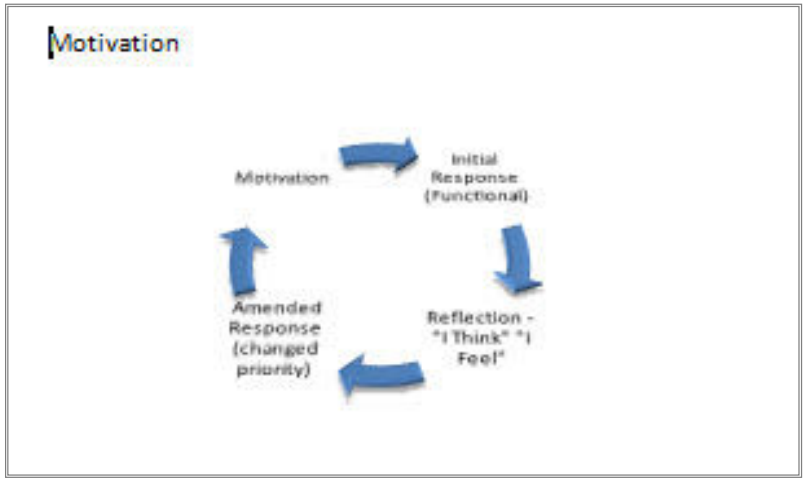
But he contended that belief systems, unlike knowledge systems, do not require group consensus and thus might be quite idiosyncratic. The emergence and subsequent reassessment of the beliefs and motivations is represented by Diagram 6-2 below.

Although a group consensus is not evident there is certainly a level of commonality among the participants with regard to their belief that education is important and their preferred approach would be learner centred. Similarly, on a professional level, highlighting the benefits of educational technology for academic staff must take precedence over any personal views.

Perhaps their own experience has shown that this initial effort at adoption even for selfish gains will sow the seeds to allow further discussion and reflection on the practice of teaching and learning by the academic staff. This outcome has been reported by Patterson and Norwood (2004) who state that:

> *Teachers construct their own knowledge based on experiences they had as students and the experiences the have once they become teachers. When teachers have the opportunity to reflect about their pedagogy, they become more aware of their instructional practices and any challenges they experience. Teachers may become motivated to make changes in their constructions, either to accommodate to or assimilate the experience*. (p.10)

Diagram 6-2: Beliefs and Motivations



The beliefs of educational technologists as presented by the focus group participants are multi-dimensional and multi-layered, with different dimensions coming into play depending on the task in hand. This resembles the commentary by Ertmer (2005,p.28) referring to the work of Scott, Chovanec and Young (1994) in their study of college professors who noted that their participants drew from more than one philosophical base and concluded that the "*..common theme in this research...is one of negotiation between what one assumes and believes to be true about teaching and the contextual factors (students, institution, and societal assumptions and beliefs) which serve as enablers or constrainers to playing out these assumptions and beliefs*"

There is no doubt that the data demonstrates that the participants are in constant "negotiation" with their own beliefs and assumptions, which at times may require the educational technologist to set aside their own beliefs and values on the short term.

Key Influences and Assumptions

The beliefs and motivations of the individuals discussed above did not emerge from a vacuum, but were formed by the key influences on the life story of each individual. The examples given included the impact of previous teachers, their own family of origin and their attitudes towards education and various influential people who triggered a key turning point in their lives.

Given the role of educational technologist it is not surprising that similar findings have been reported in relation to teachers, where often it is a "*crucial experience or some particularly influential teacher produces a richly episodic memory that later serves the student as an inspiration and a template for his or her own teaching practices*" (Nespor, 1987,p.317).

And Goodman (1988) who discovered that teachers were influenced by guiding images from past events that create intuitive screens through which new information is screened.

[C3]Personal Influences

previous teachers and their school environment

the family of origin

lessons learned from other people

other people from other disciplines

recognised educational theorist

Opportunities to meet with influential people were often the turning points or key moments in their lives

It is also apparent that the participants are still being influenced by interactions with other disciplines and by their own continued professional development. The importance of cross-discipline engagements, the lessons shared from other practitioners and the writings of recognised educational theorists have all had an impact. It is of interest that the lack of cross-discipline opportunities is noted as a contributing factor in the lack of change with regard to technology adoption in US education system.

Cuban, Kirkpatrick and Peck (2001) p815 have suggested that "*The cellular organisation, time schedule and departmental boundaries reduced cross-fertilization of ideas within and across departments*" (p.815), which helps to account for the dominant teacher-centred practices.

By encouraging and seeking out opportunities across discipline boundaries educational technologists are creating spaces within the higher education arena for the cross-fertilization of ideas to occur. The impact of positive role models and opportunities to observe examples of good-practice are also important influences. Educational technology has developed a maturing and resourceful range of professional and academic associations that enables and supports these activities. Often educational technologists are instrumental in encouraging academic staff to participate and contribute to this event, which also assists in consolidating and re-affirming the academic staff member's decision to experiment with the technology. As Yi, Jackson, Park and Probst (2005) conclude exploiting a social network should be actively pursued to facilitate technology acceptance. And a technology can be more successfully implemented if its tangible results are readily apparent or if the technology contributes to enhancing the image of the user. (p.361)

The ability and willingness to question your underlying assumptions is a characteristic of a reflexive practitioner. The focus group sessions certainly captured a range of assumptions which the participants were willing to share. In an era where students are often described as the "ultimate digital natives" it was interesting that this was considered an assumption that is not always reliable. Allied to this is the expectation that the students will be motivated to take advantage of any new innovative methods of courses delivery designed for them.

[C4]Assumptions

students always prefer using technology

the students are motivated themselves

you can't always rely on it

the belief that you have to be very high tech and innovative

low tech approach yielded significant benefits

assumptions regarding teaching and learning

was a need to re-assert that technology is not a vital cog in the education wheel

that educational technology has the potential to change indeed radically change higher education

Similarly, there also exists a healthy scepticism regarding the claims that technology is the panacea for all the challenges facing higher education. The assumptions that technology is a vital cog in education, can bring about radical change and that it can always be relied upon are challenged by the participants. This data reveals an interesting perspective on educational technologists who are seen as advocates of technology in an environment that is often reluctant and resistant to change. This ability to question some fundamental beliefs about the value of technology is never offered as part of the wider discourse within the field of educational technology. Perhaps, encouraging educational technologists to question the deterministic unequivocal stance that all things technology are for the benefit of education would allow for a more open and inclusive discussion.

Campbell et al (2005) lay some of the blame for the narrow confines of the current discourse at the "door" of professional preparation programmes:

> *...since most graduate programs of professional preparation in educational technology are silent on these issues , narrative communities seem the best sites for this inquiry as designers rehabilitate their identities and "emplot" new narratives that effect structural changes in their institutions (Hartmann,1991) . We are listening closely to the stories of the designers for hints for harnessing the transformational power of community. (p.243)*

Similar programmes are currently under development in the Irish higher education system, whilst simultaneously communities of practice are also evolving as important "narrative communities" within the sector. This is an appropriate juncture to shift our gaze onto the views of the participants in relation to the Higher Education system today.

Theme D: Higher Education Today

Political Commentary

Various opinions and views on the various changes and challenges impacting on the higher education system were very evident in the focus group discussions.

The topics for reflection although presented as separate themes had a number of common threads that ran through the entire session including the politics of higher education, the changing profile of the student body and the lack of priority regarding teaching and learning.

The emergence and influence of an economically driven agenda in higher education exercised the participants. This is a regular feature of commentary in the research literature; Rowlands (2002) states that:

> *There is lack of confidence in a Higher Education system that has become obsessed with narrow measures of accountability, standardisation and managerial control. Under this influence, university life – for students, academic staff and the managers and administrators who support their work – has become increasingly fragmented. (p.52)*

The widening gulf between "top" management and those involved in academic work is viewed negatively. This new managerialism is the result of a strange alliance of forces: "Contemporary further education has been shaped by a strange alliance of forces. Predominant amongst these has been what might be called the new managerialism with its vocabulary of efficiency and effectiveness, choice and markets" (Standish, 1997, p.440)

[D1]The Politics of Educational Technology

a consistent undercurrent of political commentary

government view was echoed by "top" management

an economically driven research agenda was identified as the main thrust of higher education

emphasis is viewed as dangerous

research agenda is seen to be at the expense of initiatives that focused on a civic responsibility

What was missing was "balance"

national quality assurance framework has contributed to this changing emphasis

Educational technology and the work and initiatives of educational technologists could be portrayed as supporting this agenda.

"*E-learning is seen by many as one means of supporting these agendas and as an essential element in delivering higher education efficiently and effectively to a diverse mass audience*" (Conole, 2006, p.9)

This strategy is viewed as "dangerous" by the participants who have also identified other consequences including the increasing prioritisation of the commercial research agenda allied with a decreasing emphasis on the value of civic and citizen related activities. This is supported by Lynch et al (2007) who comments:

> *Within neo-liberalism the ideal type human being is increasingly defined as self-sufficient, rational economic man [sic]. The focus of the Lisbon agreement on preparing citizens for the "knowledge economy" exemplifies this: in contemporary Europe, knowledge is reduced to the status of an adjective in the service of the economy. (p.5)*

It is also recognised in the UK that "financial rewards directed at research" have had a direct negative impact on teaching (Rowland, 2002, p59). One of the reasons that these questions are rarely debated in the educational technology literature is the result of the "quietening" of their voices to ensure the prevailing neo-liberal agenda is pursued:

> *A curious coalition of right and left interest quietens voices that would otherwise raise awkward questions. The radical right and neo-liberals like the Web because it seems efficient. It nicely fits the exhortation to "do more with less". Moreover, it straddles national boundaries and coincides with the interest in internationalising education within the context of the global economy. (Boshier and Onn, 1999, p.2)*

Even quality assurance initiatives are viewed suspiciously as representing formal mechanisms for changing the emphasis and priorities within higher education, which echoes Lomas (1999) who viewed the

"*introduction of terms such as templates, codes of practice and benchmarking to the quality management lexicon suggest that a more rigid and less flexible system is being developed*" (p.30).

But what is missing is "balance" but to restore the balance will require a greater level of debate within the educational technology field and as Conole (2006) has suggested:
"…one thing is evident; namely that practice follows policy directives and the general trend of technological developments, rather than informing them" (p.17).

Educational technologists need to see their role as one that informs policy in the higher education sector, rather than suffer the frustrations and tensions associated with the current arrangement where their voices are not being heard.

The changing student profile

The challenge posed by the changing profile of the student body was discussed with a combination of exasperation, annoyance and a genuine recognition that approaches to teaching and learning needed to change. The educational technologist has also to contend with the wide held belief at policy level that technology is the answer to the increasing numbers and diversity.

> *Barriers to learning whether they are categorised as cultural, structural and personal or situational, institutional and dispositional, are now seen as resolvable through the use of ICTs such as computers and the internet – themselves seen as providing learners with a hitherto unavailable flexibility and convenience when it comes to engaging with educational opportunities. (Gorard & Selwyn, 2005, p.71)*

However, the participants do recognise that interventions must be student centred, a view that is supported by Barnes, Marateo and Ferris (2007,p.2) who referring to Oblinger and Hagner (2005) observation that Digital Age students express a need for more varied forms of communication and report being easily bored with traditional learning methods.

[D2]Changing profile of students

increase in student numbers and the associated diversity

by adopting various interventions that are more student centeredchanges in the student cohorts' attitudes towards their studies

a change in their underlying motivations and priorities

the current student cohort has it "easier"

a reintroduction of fees could alter the agenda

The observation that students are less motivated and have other priorities is a concern to the participants. Although they do recognise that their learning styles have altered primarily due to the current generation's access to and reliance on technology. For Prensky (2005) however, the fault lies with the education system and what it currently offers "In my view, its not "relevance" that's lacking for this generation, it's engagement" (p.64). Rowland (2002) also comments on a recent study of the characteristics of current higher education students who were found to have become *"…… increasingly "apolitical", "apathetic", "instrumental", "consumerist", "competitive", "calculating", "pragmatic" and "job oriented"* or, as several Russians put it "*lacking in passion"* (p.54). But he also suggests that this may well reflect the feelings of the academics rather than the students:

The lecturers may have been inclined to project onto the students their own feelings of frustration and cynicism, due to the pressures under which they worked. (p.55)

A very interesting observation – which given the earlier discussions regarding the tensions and frustrations of the role of educational technologists may have some merit. A final comment that the re-introduction of fees could have a "positive" effect on the existing students is an interesting perspective. That placing a monetary value on an education may reset the focus that is claimed to be absent.

Although the demise of the Celtic Tiger and the disappearance of the phenomenon of the easy availability of part-time work and the "earner-learner" label, may inadvertently have had the same impact

The paradox of educational technology

The final comments on the changes in higher education have captured an essential paradox that has dominated this area since its inception. This is the recognition that although the participants can recognise an urgent need for the benefits of educational technology they are resigned to the fact that change will be slow. An essential paradox in the life and work of the participants – a source of frustration and annoyance or the underlying motivation to continue in their role of advocates and persuaders in the pursuit of a vision that is ultimately learner centred.

A dilemma that is well documented in the literature: "*There is a strong political rhetoric around e-learning but this is in many ways naïve containing unrealistic expectations about potential*." (Conole, 2006, p.17).

[D3]A paradox

that change is slow particularly in the field of educational technology

there will be a more urgent need to embrace educational technology

Even in a recent report examining the impact of Web 2.0 technologies on education and training across Europe there is the same note of hesitancy and caution about the Learning 2.0 phenomenon (Mutka,Bacigalupo, Kluzer, Pascu, Punie and Redecker, 2009):

"*Even though trends suggest that Education & Training may be on the verge of a new era, there is still a poor understanding of the Learning 2.0 phenomenon…*" (p.7).

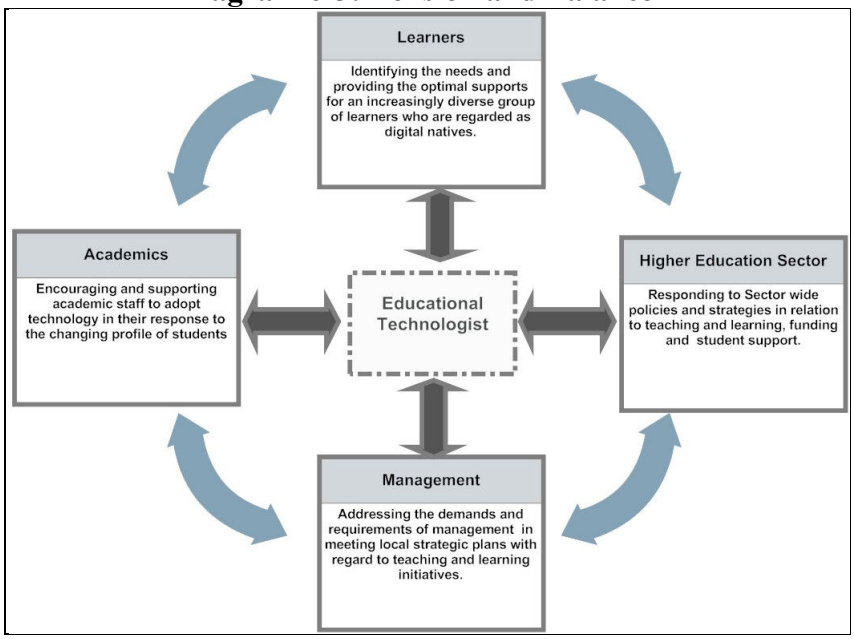
The participants may not share a common view on all aspects of the changes impacting higher education, but they do share a common dream – and as with all dreams it is not clearly articulated and visible. But at its core is a belief that technology has a central role to play in higher education and the promotion of a continuing discourse in relation to teaching and learning.

This has to be balanced with the operational aspects of their roles which are primarily technology lead – but always trying to ensure that their suggestions are aligned with learning objectives and that the benefits to both students and academic staff are clearly articulated, Diagram 6-3 below is an attempt to visually represent this dynamic. The educational technologist operates at the fulcrum of a number of competing fields. Their challenge is to balance the demands from the different players – for the academic staff it is both a support role for those that have adopted the technology and an advocacy role to encourage less reluctant staff to take the plunge.

The demands of senior management who will reflect the higher education sector policy and seek immediate returns for their investment and the learner who may not always be the main priority in decisions to embrace educational technology. The different players also engage with each other – the student may demand online resources from the academic; the academic may seek funding internally or externally and may view educational technology as a means to enhance their reputation; and the higher education sector drives the senior management strategies demanding lower costs and more flexibility.

Whatever the demands the impact will eventually be felt in the centre – the role may be marginal but the expectations are high. Another approach to examine this diagram is to consider each “box” as a field and each staff category as the social agents operating in that field – their habitus contributing to the shape of the field and the field contributing to the shape of the habitus. In the next section I will extend this argument and present a bourdieuian perspective on the findings.

Diagram 6-3: Tension and Balance[13]



The Findings: A Bourdieuian Perspective

In Chapter Three the research methodology, I stated that the main challenge for this research study was to design an approach that would capture the collective sense of assumptions and presuppositions of practitioners operating in the field of educational technology. The findings from this study would indicate that this has been achieved and they present a coherent, pragmatic and informed response to the original research questions (see Table 6-2), resonating with many respects with the existing research literature. It is also evident that the field of educational technology is active and that the habitus of the practitioners is contributing to its emergence within the wider context of the higher education sector.

[13] Adapted from ***The Balanced Scorecard*** by Kaplan & Norton

Table 6-2: Original Research Questions

1. What motivates an educational technologist?
2. How do they view the current profile of higher education?
3. What are their views on the purpose of higher education?
4. How would they describe their own role within higher education?
5. What were their main influences in life?
6. Is educational technology a tool for reproduction or transformation?
7. What are their assumptions about educational technology?
8. Are they willing to engage in critical self-reflection?

However a second layer of questions has also emerged from the findings that are not adequately explained by the current research literature, these are:

1. Why is the primary agenda within the field techno-centric yet educational technologists fundamentally believe that the needs and requirements of the learner are central?
2. Why are the values and beliefs of educational technologists undervalued within the field?
3. Who is dictating the current structures and roles within the field, which is leading to a sense of tension, frustration and isolation?
4. Why are some academic staff more resistant than others?

I now believe that a further unexpected finding from this study is the realisation that the existing theoretical framework as represented by the current body of research literature is inadequate and incapable of providing answers to these questions. In the final section, each question will be viewed through a lens based on Bourdieu's constructs of habitus, field and capital; I will argue that by extending the framework to incorporate these concepts we will be able to provide an explanation for these inherently contradictory and tense positions.

"Doxa" and "the feel for the game"

The first "unanswered question":

"*Why is the primary agenda within the field techno-centric yet educational technologists fundamentally believe that the needs and requirements of the learner are central?*"

captures the apparent contradiction whereby the techno-centric beliefs linked with a recognised field are apparently at odds with the private learner-centred beliefs of the active agents operating within the field.

One possible explanation can be offered is in terms of Bourdieu's concept of "*doxa*" and in the evolving nature of the habitus and field. The term "doxa" refers to "*the apparently natural beliefs or opinions that are intimately linked to field and habitus.*" which are pre-dominantly in this case techno-centric (Deer, 2008, p. 128). If we now consider the field of educational technology as a relatively new "*competitive game*" in which educational technologists are continually manoeuvring in order to maximize their positions within the field. What we are witnessing is the participants' "*feel for the game*" which is based on their current view of the "*the tempo, rhythms and unwritten rules of the game*" which are dominated by a techno-centric perspective. A perspective discussed in chapter two which is driven by the desire to experiment with the next "shiny new gadget" and foregoing attempts to assess the impact and value of new innovative technologies.

At some level the participants have adopted this "*doxa*" and are able to cooperate with other social agents within the field. Maton (2008) explains this in terms of the relationship between habitus and field:

> *Crucially, they are both evolving, so relations between habitus and field are ongoing, dynamic and partial: they do not match perfectly, for each has its own internal logic and history. This allows for the relationship between the structure of a field and the habituses of its members to be one of varying degrees of fit or mismatch. (p. 57)*

For some of the participants the degrees of "fit or mismatch" may be greater or lesser depending on their own habitus. If a person's habitus matches the logic of the field then they "*...are attuned to the doxa, the unwritten "rules of the game" underlying practices within that field*" like a fish in water" (Maton, 2008, p.57). The challenge of course for the participants in this study who described their personal discomfort with the rules of the game is how to influence and bring about change within the field? According to Deer (2008, p. 128) the only antidote to counteract the "*reproduction of the ruling doxa*" is a call for a more reflexive practice. This corresponds with one of the findings from this study, that there is a requirement for a formal critique and evaluation of technology projects with regard to the benefits for the learner.

"Field" and "cultural capital"

The second "unanswered question":

"*Why are the personal values and beliefs of educational technologists undervalued within the field?*

is related to the first question and it would suggest that the "ruling doxa" currently does not embrace this dimension in the practice of educational technology. Jenkins (2002) describes a field in terms of "power relations" and those positions within the field *"stand in relationships of domination, subordination or equivalence (homology) to each other by virtue of the access they afford to the goods or resources (capital) which are at stake in the field*" (p. 95).

At the moment the dominant force within the field favours a techno-centric practice. We are now witnessing a field within education where different actors are playing out the game of influence and control. Who will control the creation of "learning objects" and who will control the accreditation of "learning object" developers? It allows for the creation of a new hierarchy within academia – experts in teaching and learning – who will accredit would-be academics and admit them only if they adopt this "best practice". The cultural capital of the field (i.e. its legitimate knowledge) is represented by technical prowess, innovation and "legitimately" classified teaching and learning expertise.

Bourdieu (1988) recognised this dilemma within the university field in which he described the business of academia as "*the production of intellectually classified and legitimately categorised agents*" (p. 11).

The field of educational technology is adopting some of the characteristics of its dominant field (higher education). The impact of neo-liberal politics on higher education which has resulted in its redefinition as a market commodity (Grummell et al 2009) and the consequent subordination and trivialisation of aspects of education that have no market value (Lynch, 2006, p. 4) is mirrored in the field of educational technology by undervaluing the values and beliefs of its main protagonists. Griffen (1999) in his analysis of the educational technology revolution stated that

> *….the revolution has no content save more market growth. Rarely are problems of poverty, racism, violence, injustice, or ecocide threats discussed or even mentioned. 'Means justifying means' discussions and endless techno-instrumentality excursions protect all from any reflection beyond the present market growth, global capitalism goals.* (p. 18).

The field is currently protected from any reflection, as a consequence personal values and beliefs are not recognised as legitimate cultural capital and this belief forms part of the "ruling doxa". As indicated earlier, this can be altered if we encourage and demand a more reflective practice. There is no doubt the participants in this study are ready and willing. However their challenge is to encourage debate and discussion on the assumptions that underpin the field of educational technology. They must recognise that theses assumptions are what "*determines the limits of the doable and the thinkable*" within the field. (Maton, 2008, p.59).

"Autonomous and heteronomous poles"

The third "unanswered question":

"Who is dictating the current structures and roles within the field, which is leading to a sense of tension, frustration and isolation?"

represents the interaction between competing fields and subfields and ultimately the field of power. It is not surprising that the participants clearly articulated their sense of frustration, the ongoing tension in their role and the need to seek balance and compromise.

They occupy pivotal positions in an ongoing struggle within their own field and between other fields. Some of which are dominant ("senior management", "academic") and others are adjacent ("administration") and others are external. Thompson (2008) reminds us *"the game in subordinate fields is often dependent on activity in another"*.

Bourdieu also describes a field in terms of "poles" - the *autonomous pole* of a field (representing the specific capital unique to that field) and the *heteronomous pole* of the same field (representing forces external to the field – primarily economic). "*Fields are arenas of struggle in which individuals and organisations compete, unconsciously and consciously to valorize those forms of capital they possess.*" (Benson and Neweu, 2005, p. 4)

Webb et al (2002) illustrate this using the field of education as an example:

> *In practice, rather than being fixed to either the autonomous or heteronomous poles, teachers move between these extremes in order to negotiate the various forces and imperatives with which they are confronted. The degree to which a teacher is able and free to move between these poles, however, can be limited by their experiences and expectations (that is their habitus). (p. 109).*

Educational technologists are moving between these two extremes – no doubt giving rise to tension and frustration as they negotiate with the forces at play. Bourdieu also refers to "*free play*" in fields and that events such as demographic changes, new technologies, global crises, natural disasters and so on could also produce change within them (Thomson, 2008, p. 74).

The findings also refer to the concern that educational technology is being viewed as the necessary response to these external events. That the field of educational technology is itself being re-structured and is being elevated within Higher Education Institutes with the establishment of Centres for Teaching and Learning. Bourdieu sees this as a struggle for distinction in which a distinct class *habitus* is formed.

Groups form themselves, in some part by cultivating distinguishing features and signs of "*superiority*" (Crossley, 2008, p. 97). The participants in this study who were critical of the lack of proper structures and lines of communication which resulted in sense of powerlessness would indicate that the field of educational technology is in constant struggle with heteronomous forces from within the field itself and more importantly from external fields representing the higher education sector and the wider economy.

"Hysteresis"

The fourth "unanswered question":

"Why are some academic staff more resistant than others?"

can be explained from the perspective of how changing field structures impact on the staff (or social agents) who operate within them. Jenkins (2002) describes one of the defining characteristics of institutionalised education systems is its "*role in reproducing the conditions of their own existence"* (p. 109), they have to reproduce themselves as distinct fields, differentiated from other fields.

This is achieved through a relationship of "*mutual reinforcement between structural processes of institutionalisation and the professional interests of those who monopolise pedagogic work (teachers)*" (p109). The field of educational technology is having an impact on this monopoly with the creation of Centres of Teaching and Learning, the advocacy of technology to address the demands for flexible design and delivery of programmes, the emergence of online programmes supported by tutors who are "accredited" to teach in virtual environments and the emergence of a need for teaching and learning qualifications at third level.

For some the changes can offer new opportunities, for example an academic may avail of an opportunity to get involved with the newly created Centre for Teaching and Learning. Others who may not be overly active in other fields can gain additional prestige by operating in this field; and similarly non-academics can become recognised in an allied academic field (Thompson, 2008, p. 75).

For staff however who are slower to react they will find it difficult to maintain their current position within the changing field. Hardy (2008) refers to Bourdieu's concept of *hysteresis* as offering an insight into this scenario.

"*When hysteresis occurs, new opportunities are created by altered field structures. Often it is those already well endowed with economic and symbolic capital who are able to achieve the desirable dominant positions within the new field structures*" (p. 148)

The field of educational technology adds a further complication to this situation – as it is also recognised that technological changes also alter field structures. What the participants are responding to is the negative reaction of academic staff who are witnessing their relative field positions being undermined by government policy and technology. Hysteresis refers to the time lag required to allow staff to develop the new skills and attitudes.

> *Scientific and technological changes also disrupt field structures. Any new invention brings into being new possibilities in processes and product and hence, a revaluing of legitimate positions within the field. Hysteresis necessarily follows while field participants recognize the potential of new tools, learn new skills and reposition themselves within the field. (p. 145)*

The findings also describe how a significant part of their role is to persuade and encourage academics to embrace educational technology.

One strategy to overcome this resistance is to "sell" the benefits that the technology can afford the academic rather than prioritising the advantages to the learner. This allows the reluctant academic to learn new skills and inadvertently "reposition" themselves within their own changing field.

Summary

The findings show that there is a common set of fundamental principles about education in general and that the field has developed its own distinct "logic of practice".

The array of views, beliefs, values and assumptions of the participants were centred on the four main themes that emerged from the data (Table 6-1). However the participants views and beliefs were constantly being challenged within the field of educational technology and by the impact of other fields some from within their own institutions (e.g. quality assurance, senior management) and others that are external (higher education sector and political system). Tension, compromise and balance were a shared and common attribute of their daily practices – the ability to negotiate within the field and interact with social agents in other fields was a pre-requisite for the role.

The existing framework based on the research literature was unable to provide adequate answers to a number of key questions. However, by extending the framework to incorporate Bourdieu's constructs of habitus, field and capital we were able to provide an alternative perspective and subsequent explanations.

The final chapter will draw all the conclusions together and provide a final review and reflection on this study.

Chapter Seven: Conclusions

Introduction

I was originally enticed to investigate this area by the unexpected outcome of a request to a group of educational technologists, who were asked to choose which video clip they would prefer to view. One video segment described in detail the underlying architecture of an award winning educational technology solution, a second video clip presented a narrative of a student's experience – a student who because of a disability was unable to attend college, but access to the technology allowed her to attend online. The majority wanted to view the impact on the student – of course they were also interested in the technology but at that juncture they had a clear preference to view a narrative account of an educational technology intervention. This event had an impact on me because I recognised that a group that would be labelled as "techno-centric" displayed an emotional response which reflected values and beliefs that receive scant attention within the field of educational technology.

At this time I was also introduced to the work of Pierre Bourdieu whose concepts of habitus, field and capital resonated with me for reasons which I still struggle to explain. I do know that I had a "gut" instinct that these conceptual tools could explain the inherent contradictions and tensions within the educational technology domain.

It is important that I state that I am not presenting this work as an expert guide to the work of Pierre Bourdieu or anything even resembling an authoritative voice. In fact one of my greatest fears is that I am doing an injustice to his memory in my attempt to apply his complex but thought-provoking concepts to this study of educational technologists. I wanted to "excavate" beneath the surface of the emotional response described above, to illuminate the participant's views, opinions, beliefs and accounts of their practice and present a more accurate picture of the field of educational technology and the habitus of the main players within the field. I was also influenced by the realisation that this required an approach that would encourage self-reflection to counteract the criticism that Bourdieu (2000) has levied at research activity which tends to take as given the values, questions and categories of the field and the society in which it operates.

> *The agent engaged in practice knows the world…too well, without objectifying distance, take it for granted, precisely because he is caught up in it, bound up with it; he inhabits it like a garment…he feels at home in the world because the world is also in him, in the form of the habitus. (p.142)*

The first task on this endeavour was to reflect on my own beliefs, values and assumptions with regard to the field of educational technology and it's dominate neighbour the higher education sector. I posed a series of questions for myself and captured the responses on paper and on a website www.mosceal.com. This act took me on a path of seeking further contributions from players in the field, the first attempt at the EDTECH 2008 conference was too ambitious on the "data capture" expectations but proved very useful as a key moment of reflection and subsequent decisions to meet with individuals through focus groups sessions.

The finding from these focus groups are presented in chapter five – the voice of the participants without commentary and in chapter six – the voices in "conversation" with the existing body of knowledge. There was also a second dimension to this study I had chosen to apply Bourdieu's concepts of habitus, field and capital as a lens with which to review these findings, which presented a detailed insight into the daily practices of educational technologists. My conclusions are presented in the next section under two headings: the first *"the habitus of educational technologists"* and the second a *"the field of educational technology"*.

Conclusions: The Habitus of Educational Technologists

In chapter one I presented a description of the field of educational technology – one that was dominated by a techno-utopian discourse which had over-emphasised technology at the expense the underlying educational issues being addressed and where there appeared to be a lack of any significant published accounts of the views and beliefs of the main agents in the field. The original research questions (Table 7-1) were designed to investigate if the field was inhabited by a collection of disparate individuals without any shared values or beliefs brought together by a common interest in technology? Or is there a common set of fundamental principles about education in general that has influenced the desire to exploit the potential of technology in an educational setting?

Table 7-1: Original Research Questions

9. What motivates an educational technologist?
10. How do they view the current profile of higher education?
11. What are their views on the purpose of higher education?
12. How would they describe their own role within higher education?
13. What were their main influences in life?
14. Is educational technology a tool for reproduction or transformation?
15. What are their assumptions about educational technology?
16. Are they willing to engage in critical self-reflection?

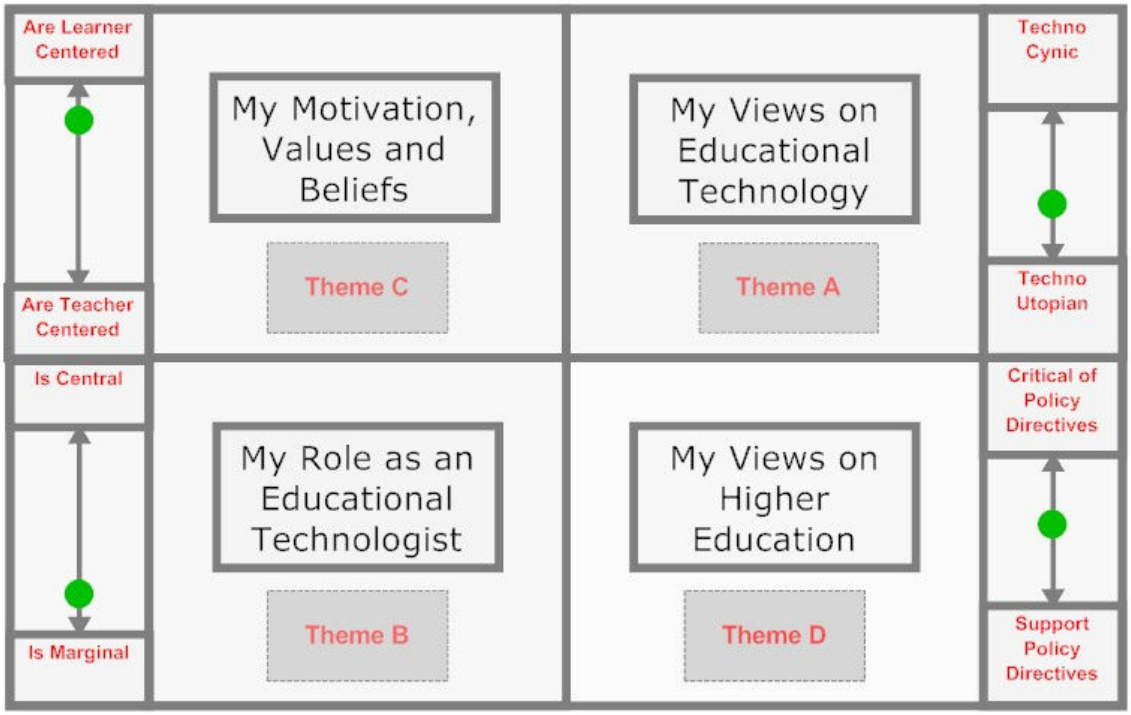
The main views of the participants were centred on the four main themes that emerged from the data (Table 7-2).

Table 7-2: Themes that emerged from the data

Themes	A	B	C	D
	Views on educational technology	**The role of the educational technologist**	**Motivations and beliefs of educational technologists**	**Views on higher education**

The main conclusions from this study are presented next and are captured in Diagram 7-1, a visual representation of the dominant views and beliefs within the field, an instance of the field of educational technology that is comprised only of the participants. If you could imagine that the "green spot" could be adjusted to reflect the common "temperature" of the field with regard to a particular theme, taken at a particular point in time. The diagram is designed to reflect the constant struggle and interplay that characterises this field.

Diagram 7-1: An Instance of the Field of Educational Technology



In relation to "Theme A: **My Views on Educational Technology"** I have used the terms introduced in Chapter 1 to describe the participants' views of educational technology. These are **techno-utopians** who are optimists who believe the Web leads to greater access to education and **techno-cynics** who do not believe the Web is a wired utopia for learning or education or much else (Boshier and Onn, 2000). The views expressed were optimistic and hopeful that the potential of technology would be realised. There was a shared belief that technology could indeed transform higher education however it was also accepted that presently technology is not a "lynch pin" or a transformative force within higher education. The participants demonstrated a subtle degree of pragmatism and could comfortably cooperate with other members of the field who shared different beliefs. There is also a sense that the participants are well placed to take advantage of technology to achieve the goal of transformative educational experiences should the opportunity arrive.

However, there was the underlying tension and sense of powerlessness to seriously influence that timeline. This is reflected in the response to "Theme D: **My Views on Higher Education"** which reflect the frustration and lack of opportunities to influence current policy directions within higher education. The views expressed on higher education articulated the many issues and challenges that existed. The encroachment of the new managerial agenda favouring performativity and the commoditisation of education, the changing profile of the student body and the dominance of the research agenda all contributed to their view. There is also an allied belief that technology could be deployed as an instrument for transformation – the only current example of where there was a glimpse of these possibilities was in the support of students with disabilities.

The dominant characteristic of the response to "Theme C: **My Motivation, Values and Beliefs**" of the group was learner centred. This also gave rise to one of the constant struggles within the field encouraging the adoption of technology by academic staff by using a "sales pitch" that was teacher centred. They had learnt the "rules of the game" in the academic field and were applying them with the hope that the learner would inevitably benefit. One additional corollary to this is that the main source of research literature on motivation, values and beliefs is within the teaching domain.

However, there are very few accounts within the educational technology arena which presents an opportunity to build on the work that exists within an adjacent field (teaching) and add a new dimension to the field of educational technology and the work of educational technologists.

The final theme, "Theme B: **My Role as an Educational Technologists**" describes a marginal position that struggles to have its voice heard within the wider higher education sector. The sense of frustration and tension was clearly evident with ambiguous reporting structures contributing to the overall sense of isolation and at times powerlessness. As the key advocates for technology as a force for change the ability to persuade and influence others is a core competency in the role.

In summary what Diagram 7-1 represents is a highly motivated and competent group of individuals operating within a sector that has adopted a very narrow techno-centric perspective on their role. Even though the field is evolving into a broader teaching and learning function, the remit still remains constrained and is designed to promote the dominant ideologies within higher education, ideologies that the field of educational technology has not been encouraged to discuss debate or confront.

This is surprising given the potential impact that educational technologists have, given their position within Centres of Teaching and Learning which are now the primary centres for accrediting the new generations of higher education professionals. Reflection on these tensions between marginal and central status, types of policies and knowledges supported (techno-centric/utopian and Teacher/learner-centric) are key points for educational technologists to consider. Their central role in training of the future academics and the ever-growing impact of technology on educational practices means that these are important factors for consideration across the education system. Educational technologists can no longer assume that their decisions in relation to technology are neutral positions.

The evidence is that technology is part of the infrastructure that allows the education system to reproduce existing inequalities. The risk of educational technology being colonised to serve the needs of a narrow educational agenda is at odds with the findings from this study. The voices of concerned educational technologists have spoken the next challenge is to take their messages to a public forum to allow the debate to continue and the discussion to address the issues in higher education and not the features of the next "shiny new gadget".

Conclusions: The Field of Educational Technology

The research work undertaken as part of this study was based on a major assumption that the field of educational technology existed. This assumption was examined and tested when faced with the realisation that the existing body of knowledge, pertaining to educational technology was unable to explain a number of key questions that emerged:

5. Why is the primary agenda within the field techno-centric yet educational technologists fundamentally believe that the needs and requirements of the learner are central?
6. Why are the values and beliefs of educational technologists undervalued within the field?
7. Who is dictating the current structures and roles within the field, which is leading to a sense of tension, frustration and isolation?
8. Why are some academic staff more resistant than others?

The adoption of Pierre Bourdieu's constructs of habitus, field and capital allowed us to examine and explain how educational technology as a functioning field can accommodate these inherent contradictions and tensions.

Key Message 1

The field of educational technology exists and as such is a legitimate research arena worthy of study in its own right.

The explorations and explanations afforded by Bourdieu's constructs are the foundations that allow us to theorise about the practice of an educational technologist, and on which a new doxa could be established. A doxa that will redefine the role of an educational technologist by releasing its current identity from the shackles of a techno-centric discourse to allow the field of educational technology and the role of educational technologist to evolve into a recognised professional discipline. Undoubtedly, a significant conclusion from this study is that the field of educational technology exists and is a legitimate focus for research activity.

Key Message 2

Researchers in the field of educational technology should adopt alternative research methodologies drawn from arts-based and narrative enquiry methods

The methodology adopted in this study was a response to the challenge of exploring the habitus of educational technologists. Accepting and allowing for the limitations described in the next section the advantages of the approach ensured that the voice of the practitioners was heard. The influence of arts based methods encouraged the use of visual media to stimulate and prompt discussion. The narrative that unfolded yielded insights into not only the practices but also to the personal values and beliefs of the participants. This study has illustrated the value and impact of alternative research methodologies that moved the research questions beyond the realm of "how" and "what" and gave pre-eminence to the question "why".

Key Message 3

The field of educational technology must encourage and embrace contributions that prioritise the personal narrative of the learner and the innovator.

As an evolving field, educational technologists must be prepared to challenge and question old assumptions and inherited beliefs and discard the debris of three decades of following the mantra that the "next shiny new gadget" will solve all our problems. There is a real need for a new vision of change and equality within higher education underpinned by a realistic and independent critique of educational technology. What this study has shown is that while this vision is already in place, it remains unspoken and buried in the hearts and minds of the participants who contributed to this work. A key to unlock this "buried treasure" is to encourage their stories to be told, not using a narrow technical vocabulary but employing the same richness, variety and humanity demonstrated by the debate and discussion captured by this work.

These initial analyses of educational technologists' stories reveal some of the core dynamics and tensions underlying their work and rationale which have significant implications for learning and higher education.

Key Message 4

Professional development programmes within the field of educational technology must include sociological, epistemological and philosophical dimensions.

A critical element in this endeavour will be to ensure that future professional development programmes within the education technology domain (and indeed the adjacent field of teaching and learning) prioritise and make the space for self reflection. Such a programme would ground the role of an educational technologist as a focal point for an ongoing critique of the political, economic and social cultures that pervade higher education. A programme that seeks to hear their voice and challenges them to raise it in the debates and discussions addressing the core issues facing higher education today.

Limitations

There are a number of limitations to this study which are important to note:

1. **Theoretical:** I have used Bourdieu's concepts of habitus, field and capital as key constructs and "thinking tools" in my work, but acknowledge my novice status in this endeavour. I consulted guidelines and reviewed expert studies available from primary and secondary sources to inform and guide my thinking. Other theoretical frameworks could also offer informative perspectives on this data, but this current work focuses primarily on the framework offered by Bourdieu's work. The wider theoretical limitation of this work springs from the intriguing possibilities that this dissertation raises – namely further studies of the reproductive forces operating within the educational system, and secondly the transformative capacity and nature of learning that educational technology and technologists can potentially offer.

2. **Methodological:** The focus groups varied in size from two participants to seven – however I decided to proceed with whoever turned up on the day and am confident that each discussion captured useful insights from educational technologists regardless of size. The richness of data emerging from these focus group transcripts meant that I had to select segments from the transcripts, but I am confident that they are an accurate reflection of the discussions.

   I accept this represents a narrow base from which to make the final arguments and draw the conclusions as outlined above. As such I would caution the reader to approach the study with this limitation in mind.

3. **Presentation of findings:** I choose to present the findings in two chapters – chapter five is the voice of the participants without commentary, following by chapter six which reviews the findings informed by the research literature. It was important for me to allow the participant's contributions stand alone in the first instance, before offering commentary on them. In addition, I did not explore the findings in relation to specific factors such as gender or age. This is a suitable avenue for future work which may yield informative analysis. To ensure that the anonymity of the participants was maintained, I only identified the quotations used in the data by focus group number.

4. **General presentation:** my personal preferences for visual learning styles, means that I prefer to use visual diagrams and charts to describe and analysis the data. This is not a presentation format that will suit all readers, so I hope that this approach does not detract from the overall narrative.

Future Work

As I type my final few words on this study, I realise that there are several other areas that deserve some further investigation. The first relates to encouraging and reflecting on the values and beliefs that motivate practitioners in the field. In particular to draw on the work within the field of teacher education and to identify synergies between these two domains that could add significantly to our understanding of how the "dominant doxa" within the field is determined. The second is to explore existing theories in adjacent fields, for example education, innovation, sociology and philosophy and to investigate how applicable these are to our current understanding of the field of educational technology. And the third area is to develop an appropriate methodology that would explore some of the hidden factors in relation to the development of the role of educational technologist, in particular the influence of gender, age, discipline, institution and culture. This could include an opportunity to adopt a triangulated approach incorporating the views of academic managers who support the current neo-liberal agenda within higher education and academics resistant to the adoption of educational technology.

The final area is to develop the essence of a reflexive practice for educational technologists – a practice that will seek to contribute to the debate on the future of higher education; practitioners who will view their professional role as educators first and technologists second and individuals who will sense that their personal values and beliefs represent the cornerstone of an evolving field.

And Finally

I can't believe this journey is drawing to a close – this study has been my constant travelling companion for almost three years. A companion that constantly asked questions; was always seeking to venture down paths that were not on the planned itinerary; that was determined to push me outside my comfort zone and had an interminable desire to listen to the stories of whoever we encountered en route.

The story commenced with a desire to ask "why we do what we do" and migrated to explore the characteristics of innovators. Individuals who through their own energy and enthusiasm have been the enablers of change and in their midst within the higher education sector are the educational technologists.

These “new” professionals believe in the potential of technology to transform education in a similar manner to its impact on other domains. However within the education sector the resistance to change and the reluctance to adopt new innovative techniques is all too evident. These key players on the education stage extracted an identity from their technical prowess – however when I enquired from the research literature as to “who they were?”, “what did they believe, value and assume?” there was very little information available.

How could I piece together a picture of the person behind their practice? An answer was provided by a fortunate encounter with the work of Pierre Bourdieu – who suggested that our habitus shapes how we view the world and our place within it. I now recognised a glimmer of possibility - by moving well outside my epistemological comfort zone there was an opportunity to construct an approach to explore the habitus of educational technologists. The approach and methodology was a gamble for me but I knew what my intent was – I needed to encourage people to tell their story. I also needed to provide a space where they could recount their personal story of encounters and opinions, views and beliefs, assumptions and aspirations.

As I embarked on my journey I was met by enthusiasm and openness – the stories were forthcoming, full of tension, frustration, hope and expectation. A shared experience that was full of richness and variety – a compendium of stories that reflected the day to day practice of the individuals.

When they were all completed they resided as digital imprints on my laptop, transferred from a digital voice recorder – technology embracing the technologists and with a touch of irony squeezing their life stories into a small sound file that now resided and battled for space amidst a sea of data on my hard disk. A scenario that perhaps mirrored in some way their own experiences of a marginal existence within a large higher education sector.

I now embarked on the task of weaving a collective story from their combined contributions. The threads of their stories wove a pattern that I certainly had not planned and when the keyboard fell silent, the “tapestry” that emerged captured the practices of an evolving field and the collective views and beliefs of its practitioners.

The final “tapestry” had a number of “hanging threads” that left a number of fractures throughout the pattern. In an attempt to understand how this had occurred, I once again delved into the work of Pierre Bourdieu who provided an explanation and some suggestions for the future. The “dominant doxa” needed to be confronted; know “the rules of the game”; be aware of the “heteronomous pole” and beware of “hysteresis”.

Bourdieu’s suggestions are a template for ensuring that the threads of future stories as told by future storytellers match a new pattern and create a new canvas portraying the field of educational technology as playing a central role in a learner centred higher education system.

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APPENDIX A

Presentations and Publications

April 2009	Larry McNutt, "*Embedding E-learning in Education:The Importance of putting the "I's" before the "E's"*", Keynote address at the JISC Regional Support Centre, Northern Ireland, Annual Conference, North West Regional College, Derry City.
September 2008	Larry McNutt, "*Educational Technology and the Reflective Engineering Educator: A Hidden Voice*.", Keynote address at International Symposium for Engineering Education, ISEE-08, Dublin City University.

May 2008	Larry McNutt, "*The Habitus of Educational Technologists: What does the research tell us?*.", Keynote address at The Ninth Annual Irish Educational Technology Users Conference, Dundalk IT, May 2008
February 2008	Larry McNutt, "*Educational Technology, Innovation and Habitus: What is the Connection?*" In Proceedings of Educational Studies Association of Ireland, Annual Conference, Galway.
December 2007	Larry McNutt, "*Educational Technology and True Innovation or A Field of Dreams and Dreamers*.", In Proceedings of the NDLR Inaugural Symposium, Trinity College, Dublin.

APPENDIX B

Code Family Diagrams from Chapter 4

Figure 4-1: Theme 1: Educational Technology: Views and Comments

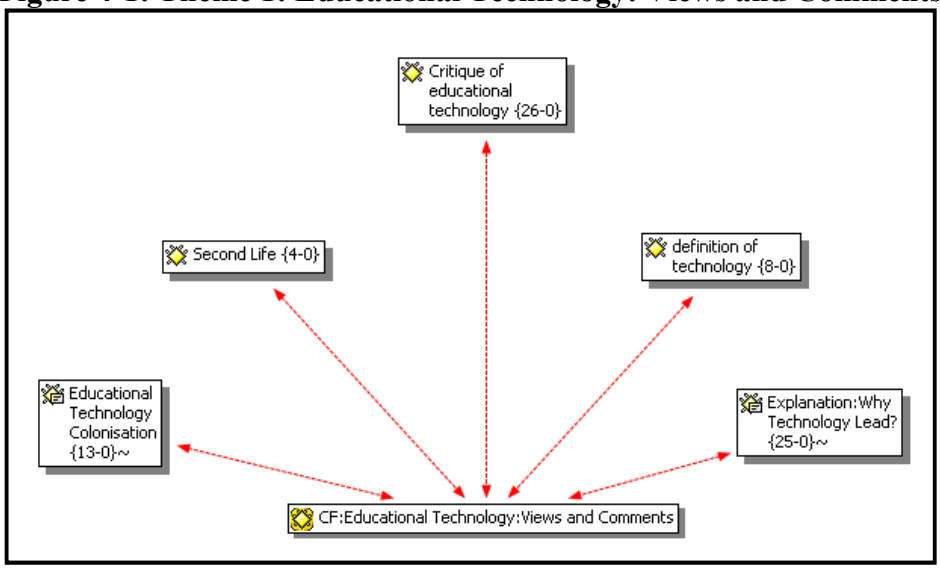


Figure 4-2: Theme 1: The Role of an Educational Technologist

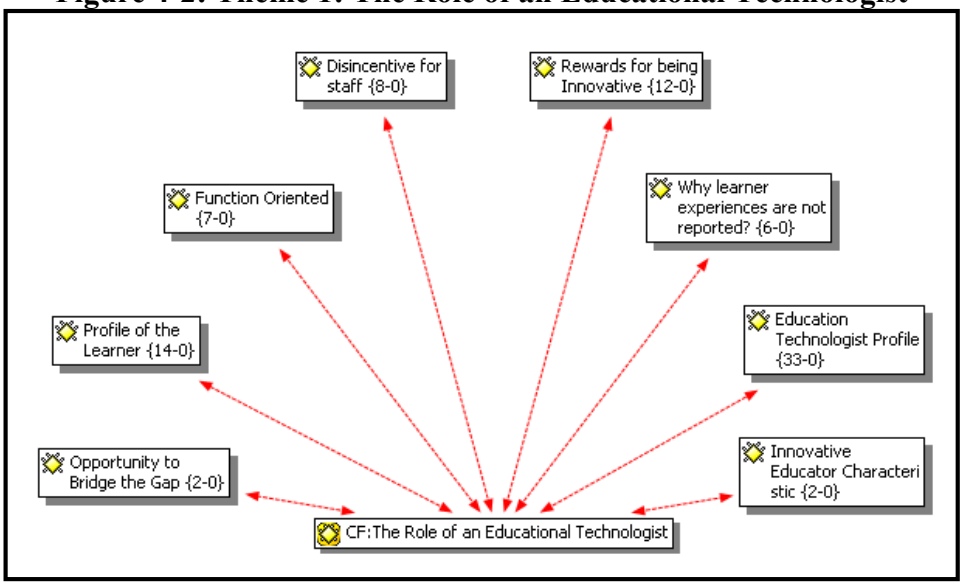


Figure 4-3: Theme 1: What Motivates an Educational Technologist?

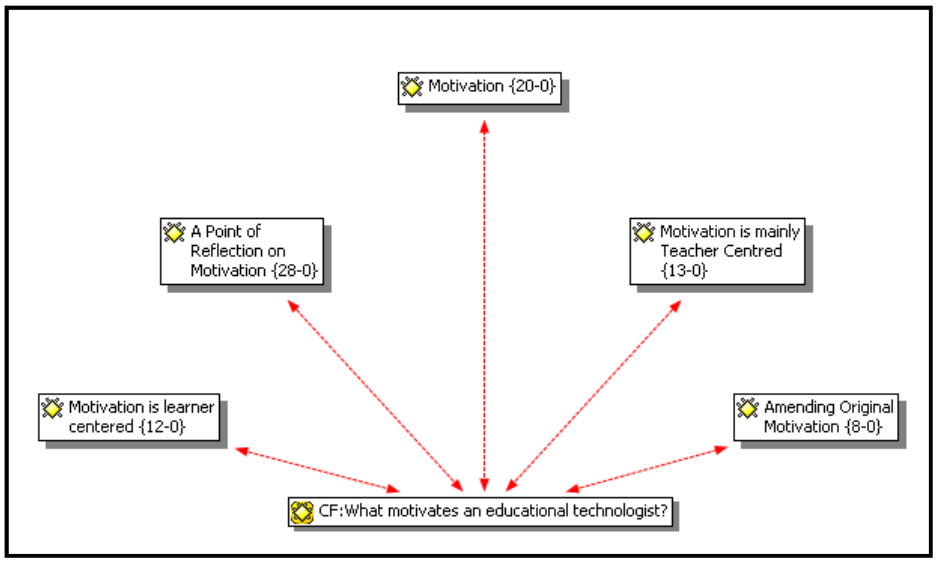


Figure 4-4: Theme 2: Changes in the Higher Education Sector

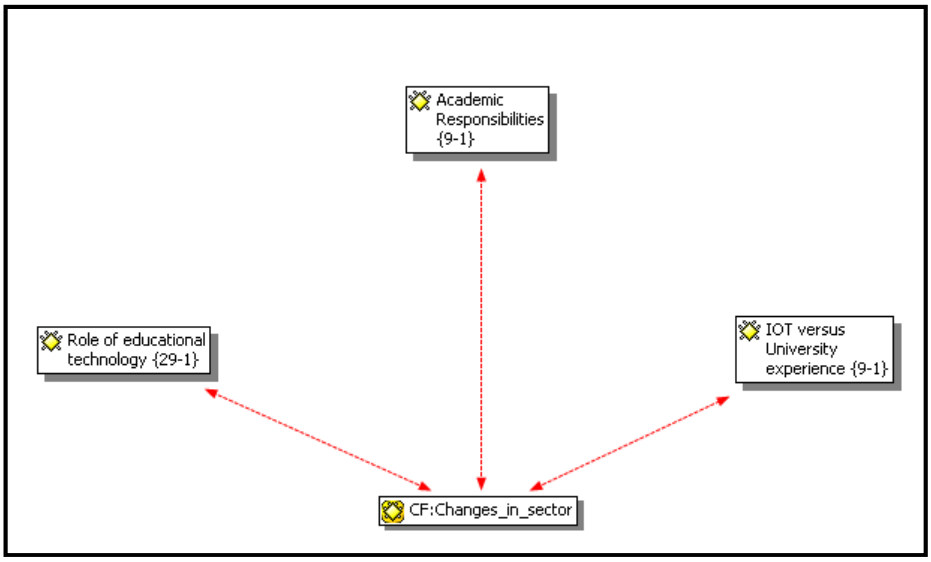


Figure 4-5: Theme 2: Learner Characteristics

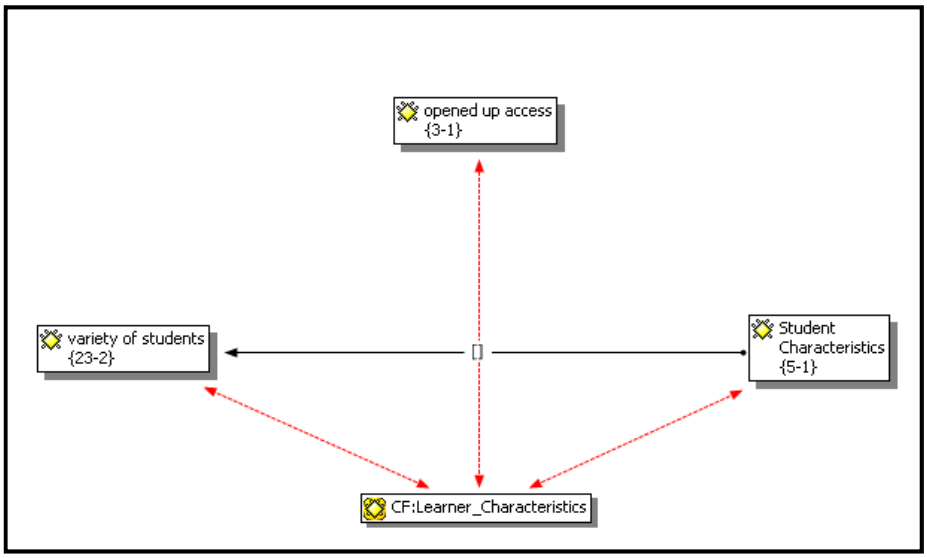


Figure 4-6: Theme 2: Higher Education Today

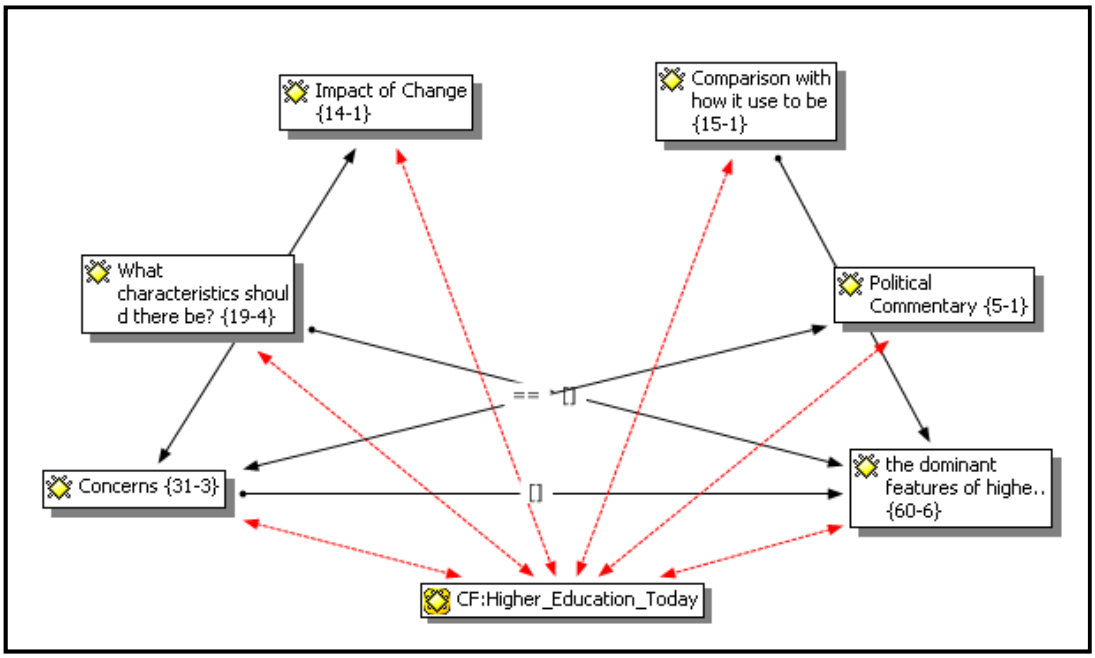


Figure 4-7: Theme 3: *"Going to College is not the same as getting an Education"*

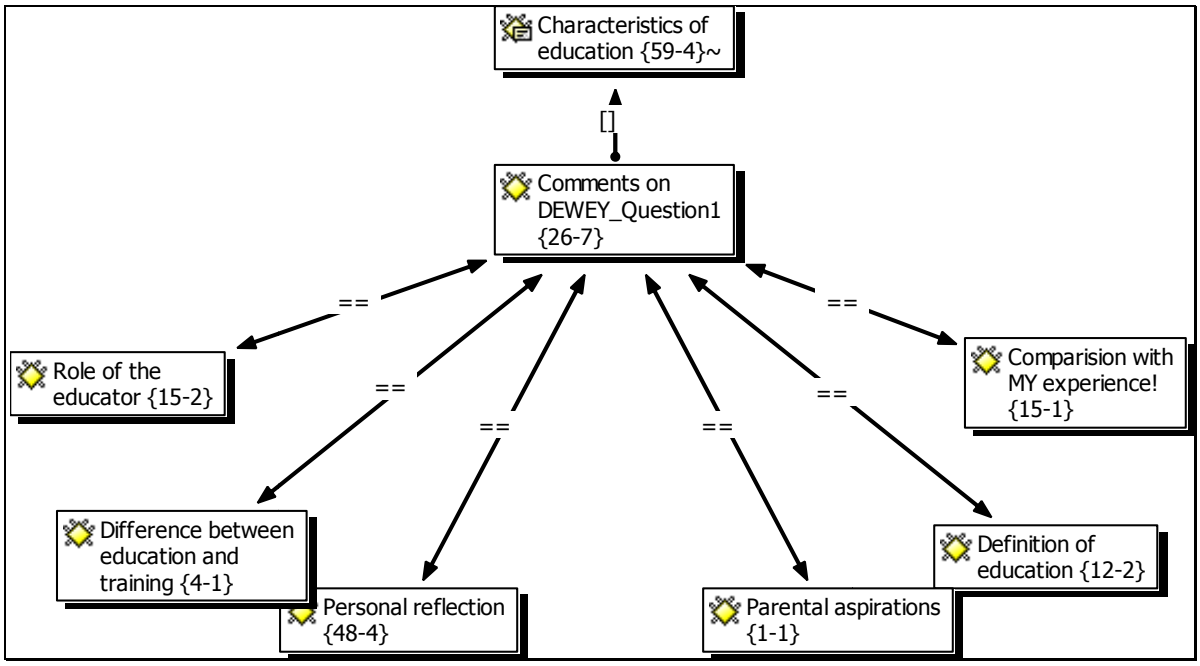


Figure 4-8: Theme 3: *"In the main education is part of the problem, not part of the solution…"*

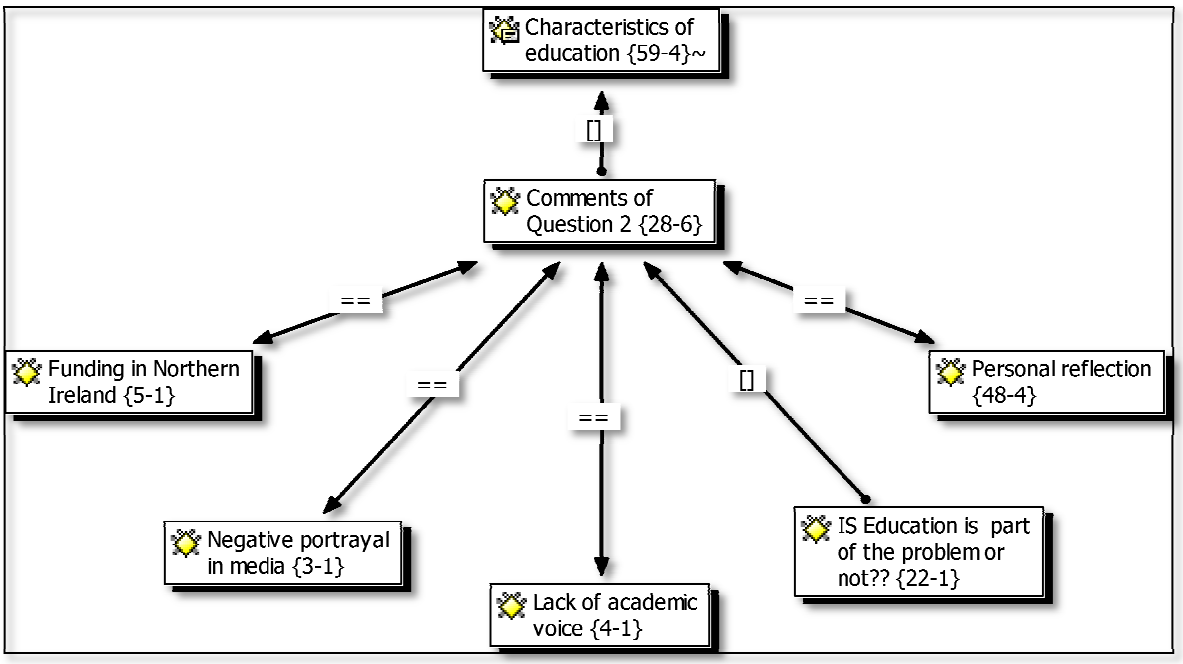


Figure 4-9: Theme 3: "*The primary function of the education system is to equip individuals with the knowledge and skills necessary to participate in the economy…."*

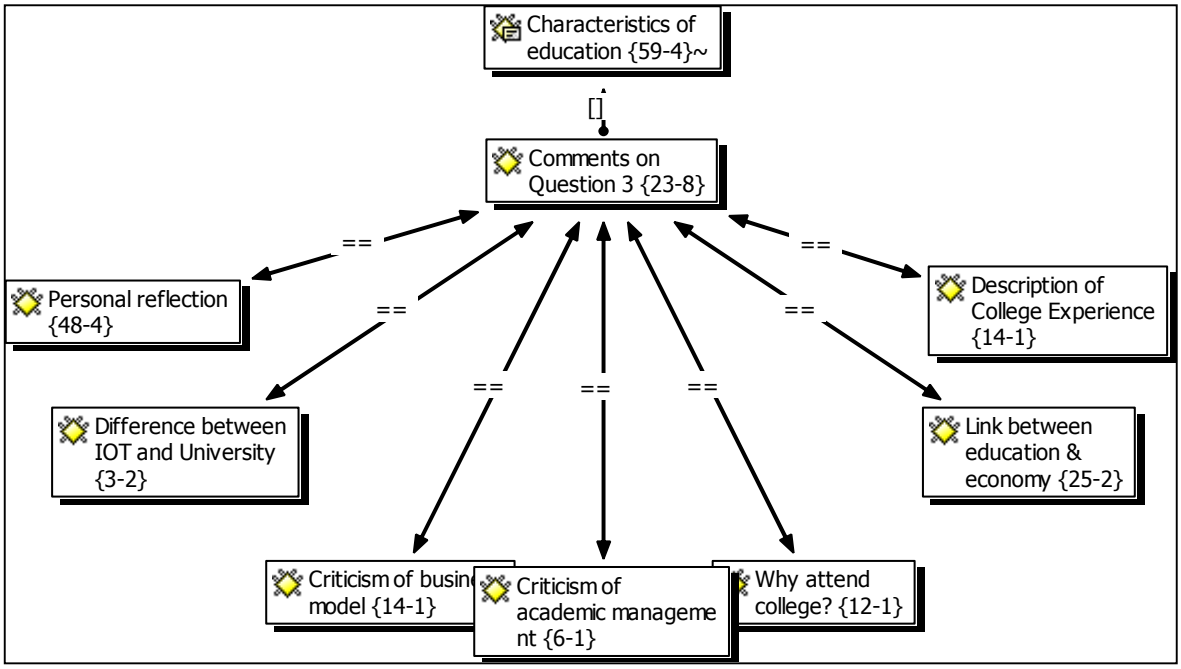


Figure 4-10: Theme 3: "*Education is the only business still debating the usefulness of technology.."*

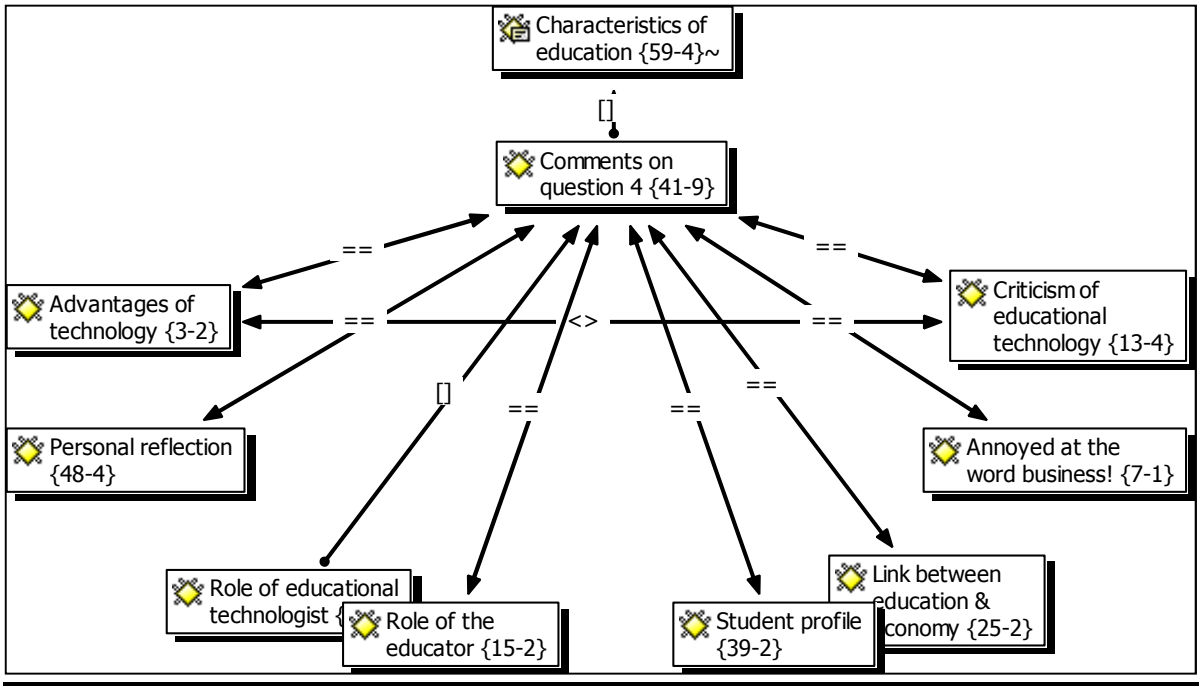


Figure 4-11: Theme 4: *"Characteristics of voice"*

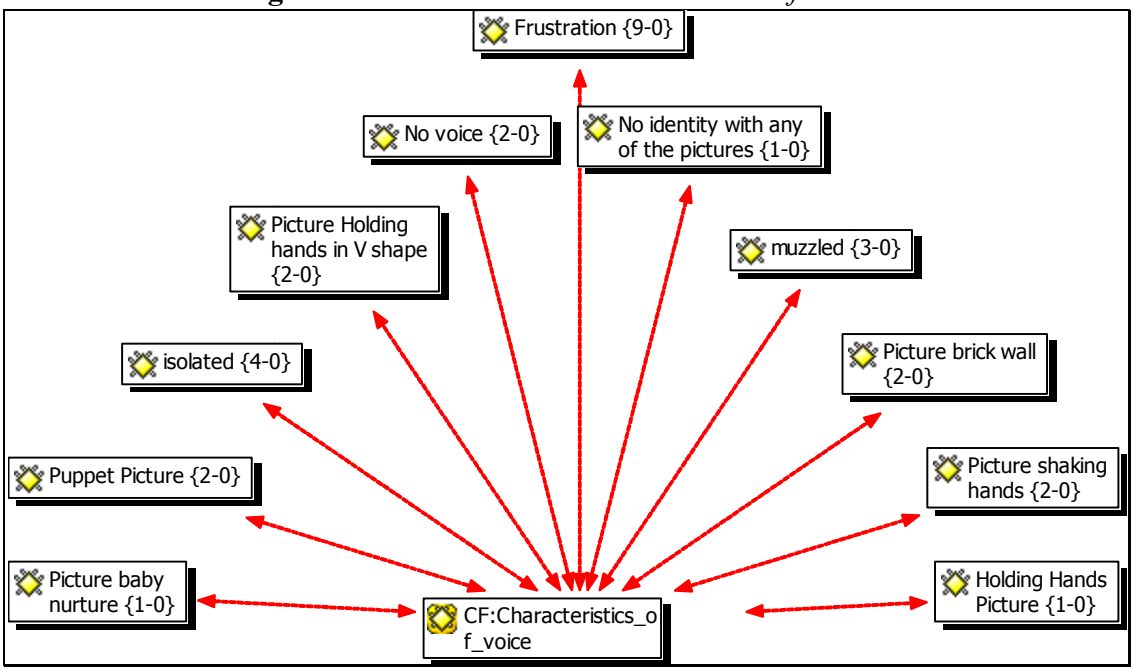


Figure 4-12: Theme 4 *"Educational Technologists Role"*

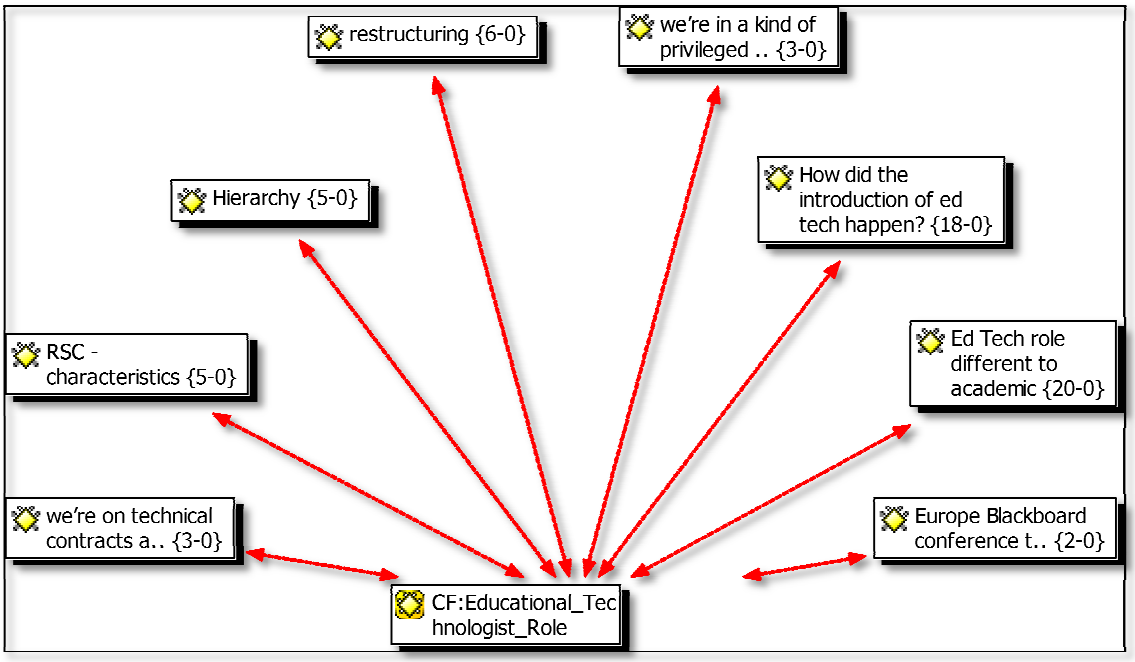


Figure 4-13: Theme 4 "*Role of the Academic*"

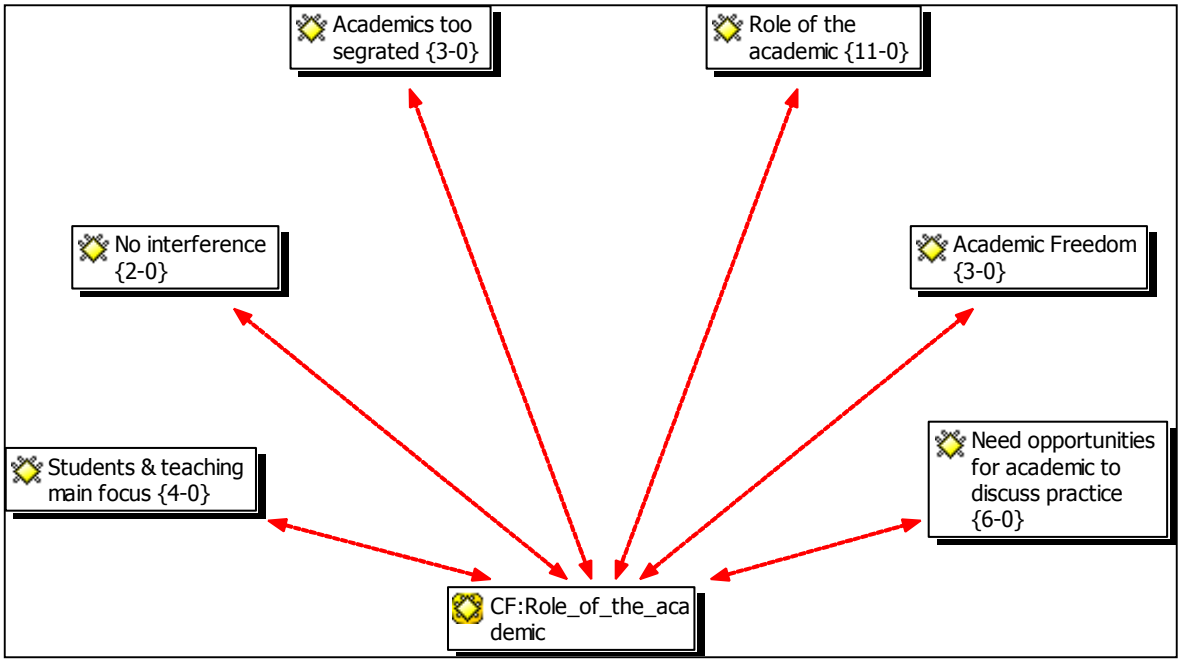


Figure 4-14: Theme 4 "*The Importance of Voice*"

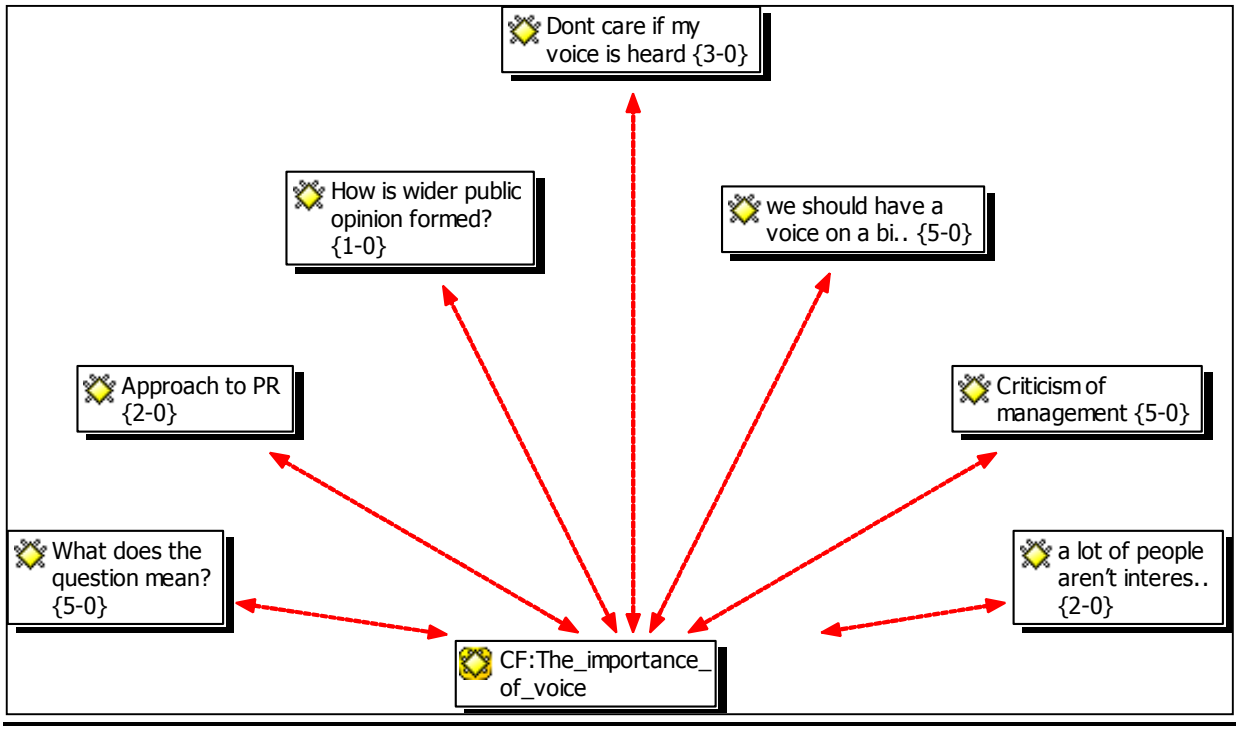


Figure 4-15: Theme 4 "*Where voice is heard"*

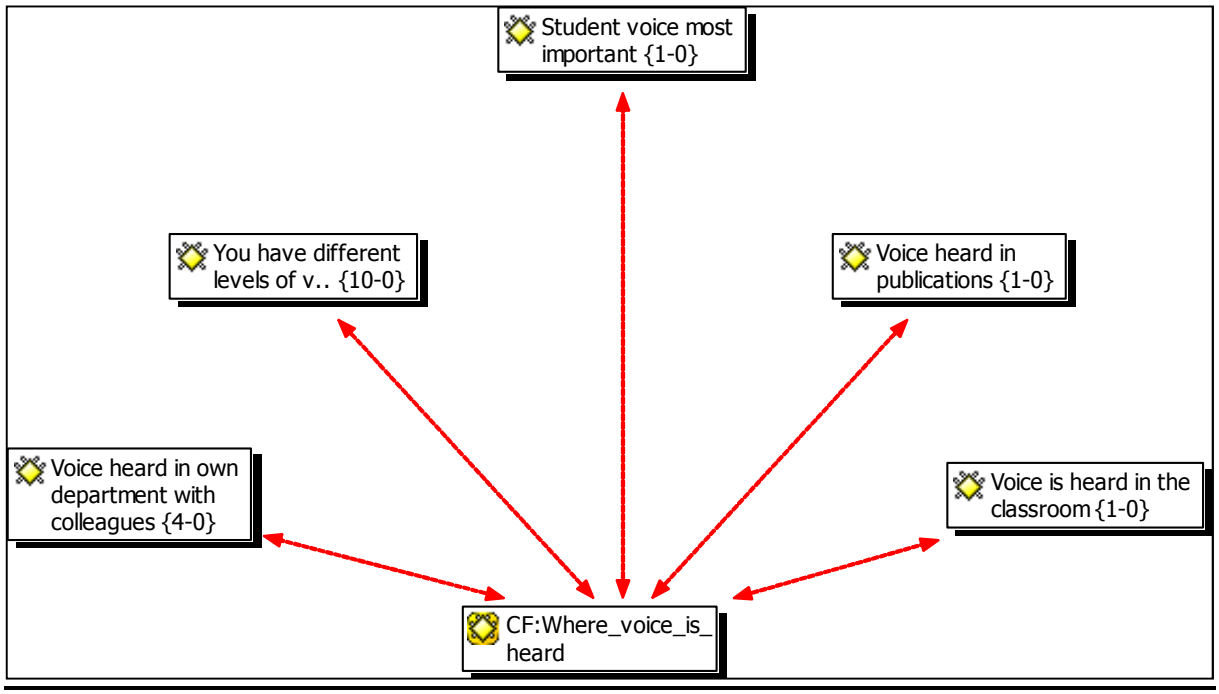


Figure 4-17: Theme 5: *"My Philosophy"*

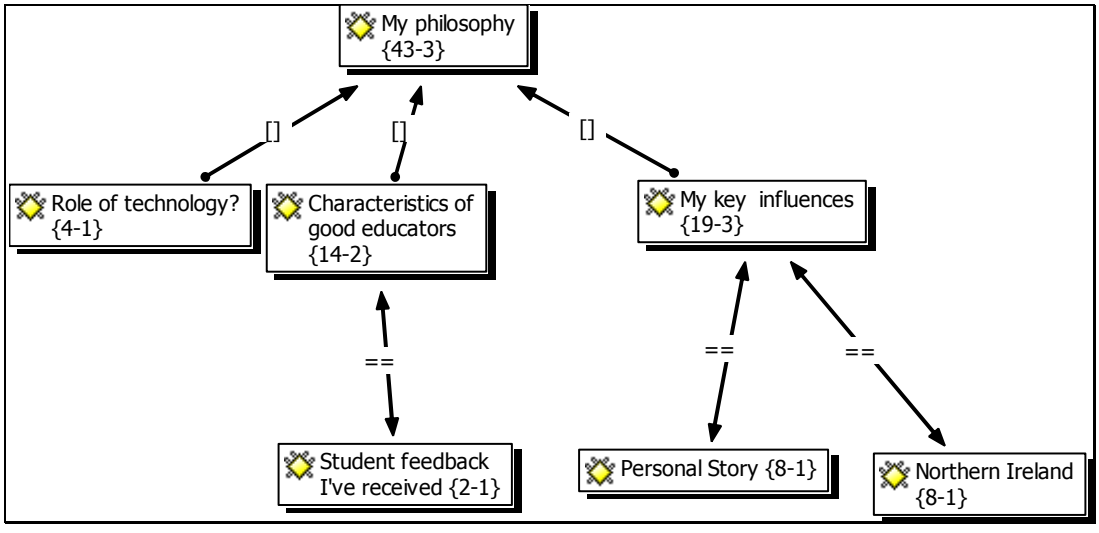


Figure 4-18: Theme 6: *"If educational technology was no more…."*

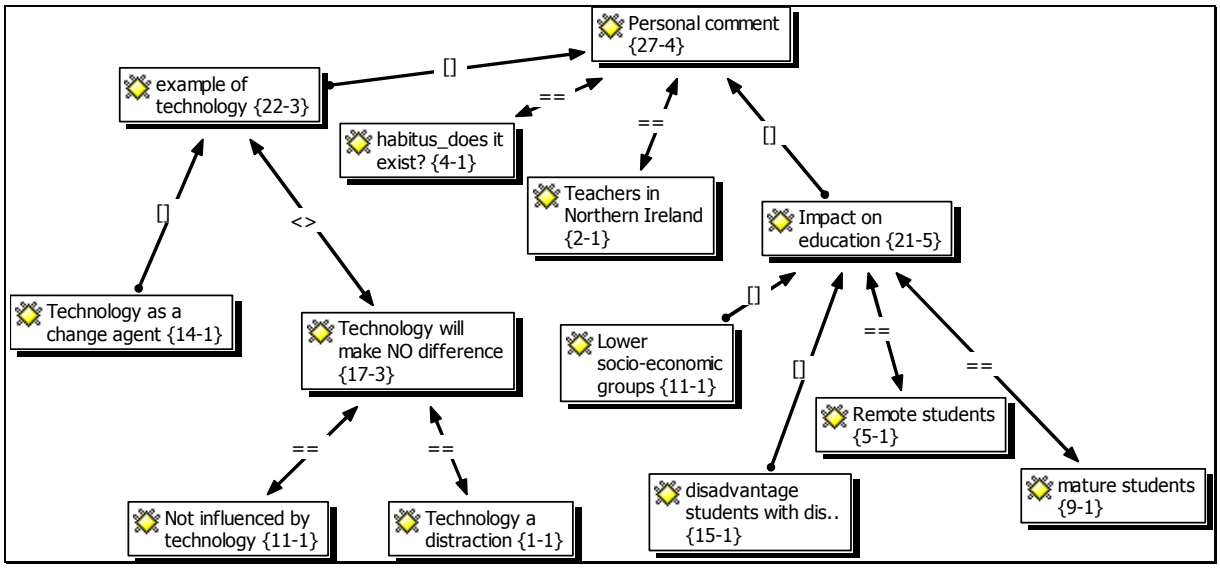
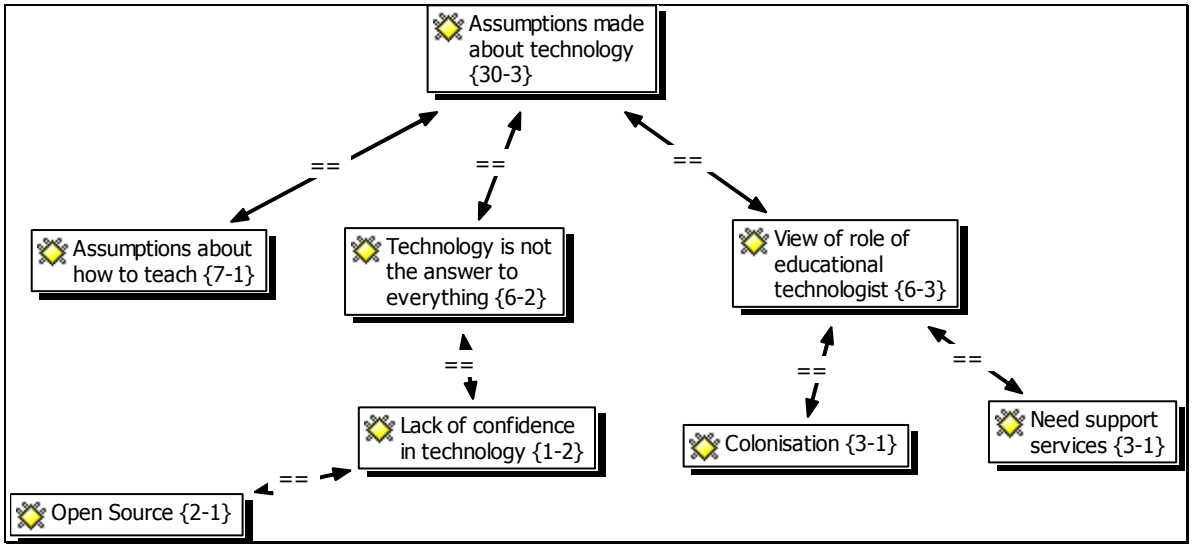


Figure 4-19: Theme 7: *"Assumptions we make about educational technology"*



APPENDIX C

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