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Building teacher professionalism in teaching-learning interactions between online tutors and learners during synchronous tutorials – a case study from Hibernia College.

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Building teacher professionalism in teaching-learning interactions between online tutors and learners during synchronous tutorials – a case study from Hibernia College.

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Doctor in Education

I hereby declare that except where explicit attribution is made, the work in this thesis is entirely my own.

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Abstract

This case-study is set within the context of a new online Masters Programme for teachers within Hibernia College, the Masters of Arts in Teaching and Learning (MATL). It explores how tutors and students interact using synchronous computer mediated conferencing (SCMC) technologies during live tutorial sessions. The study found that students and tutors did not have an agreed set of ground rules for these online events and thus there was a need for a signature pedagogy to clarify this. It was observed, using the Flanders Interaction Analysis Categories (FIAC) and tutor interviews, that the level of interaction during these tutorials was predominantly teacher led with little evidence of student voice. Further analysis found that there was also limited evidence of critical discussion.

The study has developed a toolkit comprising an expanded FIAC framework and an adapted version of Brookfield and Preskill's Dispositions for Critical Discussion. The toolkit is designed to enable tutors to reflect on their tutorial practice. Using a cyclical process tutors can capture, codify and analyse their existing knowledge with a view to developing critical discussion as the signature pedagogy for their online tutorials. In this way Hibernia College can assist tutors in building their own professional practice knowledge with the ultimate goal of enhancing student learning on the programme. The study is set against a backdrop where higher education institutions are placing greater significance on online interactions and this is placing new demands on the pedagogical repertoire of their faculty.

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Glossary

C	Content
CK	Content Knowledge
CMC	Computer-mediated conferencing
DE	Distance Education
ETs	Emerging Technologies
F2F	Face-to-face
FIAC	Flanders Interaction Analysis Categories
FTR	FIAC Tutorial Record
HE	Higher Education
ICT	Information and Communication Technologies
K	Knowledge
MATL	Masters of Arts in Teaching and Learning
OU	Open University
P	Pedagogy
PCK	Pedagogical Content Knowledge
PISA	Programme for International Student Assessment
PK	Pedagogical Knowledge
SCMC	Synchronous computer-mediated conferencing
TCK	Technological Content Knowledge
TK	Technological Knowledge
TPACK	Technology Pedagogical and Content Knowledge
TPK	Technological Pedagogical Knowledge
VLE	Virtual Learning Environments

Undertaking a Professional Doctorate

Preamble

Since graduating as a primary teacher in 1986 I have always been interested in the role technology, predominantly computers, can play in education. My honours degree project was entitled, *Managing the Micro-computer in the Primary Classroom* (Hallissy, 1987). Subsequently I enrolled on a Masters degree programme in the United States in 1989 where my coursework focused on the twin topics of education technology and assessment. This deep interest in the role technology or information communication technology (ICT) can play in teaching, learning and assessment has led me out of primary classroom teaching and into establishing a professional services organisation. Having completed my Masters degree I worked for a number of years as a research assistant in a school district in the United States where I witnessed how ICT can enhance teaching, learning and assessment. It was during this time, in the early 1990s, that I was introduced to the Internet and to the newly created World Wide Web, an event that has had a profound impact on my professional career ever since. Upon returning to classroom teaching in Ireland in 1994 I set about using the Internet in my own teaching and subsequently created a portal for schools, *EdNet* (Hallissy and Hurley, 1996a), with my colleague and now business partner John Hurley.

My work on the development and expansion of this website subsequently led to the creation of the first professional development course for teachers on using the Internet in Irish schools (Hallissy and Hurley, 1996b). The creation of this course and the publication of a booklet, *Using the Internet in Irish Classrooms*, provided me with the opportunity to teach in higher education, work in the private sector and within the Department of Education in Ireland. In 2002 my colleague, John Hurley, and I resigned our teaching posts and established our own company, H2 Learning, to specialise in work related exclusively to ICT and Education.

Why am I doing this?

I see the pursuit of the doctoral degree as essential to my development as a professional because “the professions, alone among occupations, rely on higher education for a requisite for access to markets” (Brint, 1994, p. 6). Within the literature on professionalism I now

feel comfortable in locating my general work as a consultant within the notion of new professionalism and specifically within “expert professionalism” (Brint, 1994).

Professional knowledge/expertise is important for professionals (Hodgson, 2005) because high levels of learning can be linked to status and ultimately the opportunity to attract additional work. My professional knowledge is in a relatively new field and much of my work is contractual and we are constantly seeking new opportunities.

In addition there are no professional organisations or guilds for educational consultants in Europe or in the US that I can find. There are many professional bodies within the field of education and technology but as yet there is no guild or tribe that regulates the work of consultants in this field. Prior to participating in the EdD I would never have viewed my work in this way and now I see opportunities to strengthen my own organisation and ultimately the profession of education consultancy in the future. There may even be an opportunity to establish a professional organisation for those of us working in this new and emerging field.

The International Doctoral Programme

What I expected?

I embarked on my studies to deepen my own personal knowledge and to complete a formal qualification in the highest form of accredited knowledge, the doctorate. I saw the professional doctorate programme as providing me with an opportunity to reflect on my own professional practice and to engage in academic enquiry. I also expected to learn how to read and write using academic conventions. Much of my writing, prior to entering the programme, was persuasive and lacked a theoretical framework through which to make sense of the world. The recognition and application of appropriate theoretical frameworks has, on occasion, been a challenge for me during the programme. Yet I expect that the development of these skills will deepen my specialist knowledge and will enhance the quality of my work. Therefore with these skills I will be equipped to assess educational research in a more critical and informed way while also being able to conduct and publish my own research to the highest academic standards. Consequently I view the doctorate as an investment in the highest possible form of work based learning that will ultimately benefit my work.

The Journey

The EdD thesis has been quite a journey for me professionally. I can still recall the first time I arrived in the Institute and encountered the notion of '*professionalism*'. This was a new concept for me and one I initially found irrelevant to my work and I struggled with how this theoretical notion could be applied to me as a consultant. Professionalism as presented in many of the readings and lectures spoke about teachers, academics and others but never of this new breed of professional working across many different work settings. Despite this I found the idea of professionalism extremely interesting in the context of those I worked with, namely teachers, principals and academics, but I initially struggled to apply it to my work and to the assignment module. However, I found the work of Eliot Friedson (2001) and Michael Barber (1996) of particular interest in the context of the professional development services H2 provided. Friedson defined professionalism as "an occupation to make a living while controlling their own work" (2001; p.17) in a specialised area of knowledge that cannot be "commodified". He also introduced me to notions such as "the expert" and the emergence of "new occupational professions" and these ideas resonated with me. Barber's work introduced me to the idea of teachers as "learning professionals", people who took responsibility for their own professional development, rather than waiting for government to tell them what to do. Initially I related Barber's notion of the learning professional only to teachers but now I see its relevance to all professions, particularly to my own. In particular I see that digital technology places new demands on teachers, it creates complexity within the learning environment, and therefore we need highly qualified professionals to negotiate this 'hot action' (Eraut, 1994).

Yet at the outset I did struggle with this notion of professionalism and it was during my Specialist Course that I realised I could reflect on my own professional practice through the lens of academic theory. In this paper I critically reflected on work I had conducted in Turkey while working as a consultant for the World Bank. This was a particularly challenging yet ultimately exceedingly rewarding paper and it showed that I could use my work as the setting for an academic paper. Professor Bob Cowan was enormously encouraging and critical and urged me to "say something interesting" and this was a valuable lesson. He always taught me to use literature, not to simply repeat what others had said but to use their ideas to construct my arguments.

However I faced my greatest challenge in locating myself within an appropriate professional discourse in writing my Institutional Focused Study (IFS). As a consultant

working across multiple projects I work in a variety of educational settings ranging from schools, youth projects, to online higher education settings. My work is primarily project-based and I provide consultancy services to a range of clients. Yet my statement of professional relevance in my IFS was deemed to be thin and this is something I have been very aware of in my thesis. The examiners also noted that my IFS dealt more with pedagogical rather than professional knowledge. It appeared as if I had undertaken a theoretical study rather than one associated with my professional setting.

3. The statement of professional relevance remains thin, perhaps in consequence of the continued vagueness around the research objectives.

(IoE, 2011)

Furthermore the IFS external examiner felt that “overall the discussion of literature and theoretical frameworks lack(ed) problematisation of taken-for-granted in digital literacy practices” (IoE, 2011). As a result I was determined to be more critical in my thesis and to question and interrogate similar “taken-for-granted”. Though the IFS was a challenging period for me I believe I learned an enormous amount from the entire experience and one that has stood to me during the thesis stage.

The thesis has been the most enjoyable part of my EdD journey. I identified a real problem within my work, the lack of engagement by students online, and this helped focus my research from the outset. I presented my research idea at poster sessions at numerous conferences (Hallissy, 2010 and Hallissy 2011a, 2011b, 2011c, 2011d) and published an academic paper based on one presentation (Hallissy and Casey, 2013a). This engagement with other academics helped crystallise the idea and reinforced the need for my research. I focused on identifying the theoretical constructs that were most relevant in this study and over time focused on teacher knowledge and interaction online. In particular, the research on interaction was extremely interesting and once I found the Flanders Interaction Analysis system the study began in earnest as it allowed me to capture what took place in the tutorials. Later the work of Michael Eraut (1994) assisted me in defining what I meant by professionalism and in particular the notion of professional practice knowledge. I found this text particularly relevant and many of his ideas resonated with what I experienced tutoring online and it impacted on my thinking.

I then came across the work of Brookfield and Preskill (2005) and the notion of critical discussion and it fitted very nicely with the notion of an online tutorial. Prior to finding

Brookfield and Preskill I had struggled to articulate what a normative pedagogy could look like for an online tutorial. At all times I was conscious to link my findings to a number of theoretical constructs and “to problematize taken for grant[eds]” where possible. During the thesis stage I felt I achieved this and my level of critical awareness increased significantly.

Finally, I have been more focused during the thesis and I have worked on it daily for over two and a half years. I have discovered that one keeps moving forward and that there is no right answer and that you have to continually engage with the study until you can make sense of your findings. In recent months I found that I achieved this and again the feedback of colleagues and peers was invaluable (Hallissy 2013a and 2013b).

My development as an academic and as a professional

I view myself as a ‘learning professional’ and one who still has much to learn yet I have grown significantly over the course of this programme. In particular I believe that I now view issues and challenges within education differently. The engagement in educational research has allowed me to look at the world in a different way, to ask additional questions and to engage in further research (Dowling and Brown, 2010).

I have also learnt the importance of using theory to try and make sense of the world in which I work in. For example I recently encountered a quote from Comenius where he said that his objective was to “seek and find a method by which the teachers teach less and the learners learn more” (Comenius, 1896 in Angelo, 1993). These profound words are as relevant today in an online classroom as they were when written in 1896. So what this has taught me is to take a more reflective view on the challenges I face in my professional life and to review them in the context of appropriate theoretical frameworks.

Philosophers of science have argued that one of the most important functions played by theoretical frameworks is that they guide observation.
(Mishra and Koehler, 2006, p. 1039)

This has been one of the key lessons I take from the International EdD into my professional life.

1. Introductory Chapter

1.1. Introduction

There has been significant discussion in recent times around improving the quality of teaching and learning in higher education (Laycock, 2009; Laurillard and Masterman, 2010; HEA, 2011). *The Lisbon Strategy* (Commission to the Council and the European Parliament, 2006) has framed much of this discussion at a European level with individual countries, such as Ireland, developing their own targeted strategies to expand and improve higher education (HEA, 2011). In the case of Ireland these strategies specifically mention the need for institutions to provide excellent teaching whether in face-to-face (f2f) or online settings. Significant research has been conducted around the notion of effective teaching in f2f settings in higher education over the past decade (Bennett and Barp, 2008) but it appears we still have more to learn in relation to online teaching settings. Much of the research associated with teaching online has focused on supporting teachers to use technology and this is very valid and important. However, some are of the view that there is an even greater need to provide pedagogical support to faculty teaching in these new settings (Kim and Bonk, 2006; Lee and Hirumi, 2004). Kim and Bonk note that the role of the teacher online differs from that in f2f settings and as a result there is a need to provide them with appropriate support and training.

Though organisations such as the Open University (OU) have conducted significant research in the area of online learning since the 1960s there is still much to learn. It seems we are still learning what ‘effective teaching’ might look like in a range of online settings and how institutions might support their tutors to implement appropriate strategies (Lee and Hirumi, 2004; Kim and Bonk, 2006; Palloff and Pratt, 2011). Within any discussion around effective teaching it will be important to focus on the context in which online teaching takes place and in particular how technology is being used and how learning is organised.

1.2. Research Focus

This study investigates the use of synchronous computer mediated communication (SCMC) technologies within an online Masters programme for teachers. The programme was delivered entirely online and it used SCMC technology to enable tutors and students to interact during ‘live’ scheduled events. This study has captured and analysed a sample of tutor practice across a selection of ‘live’ tutorials. This practice was also compared to a normative pedagogy of critical discussion as this was deemed the most appropriate pedagogical approach for this set of online tutorials. The setting for the study was the Master of Arts in Teaching and Learning (MATL) programme within Hibernia College, an online private college based in Dublin.

SCMCs can be viewed as an emerging technology within higher education. Emerging technologies (ETs) are defined as “tools, concepts, innovations, and advancements utilised in diverse educational settings to serve varied education related purposes” (Ng’ambi and Bozaleck, 2013, p. 531). ETs are a broad category that also describes older technologies, such as Twitter and online gaming, which are now being used in new ways within education. Many higher education institutions are experimenting with these tools in an effort to expand and improve learner experiences online.

The range of SCMC technologies has grown in recent years and they have their origins in computer-mediated communication (CMC) technologies that facilitate “communication that takes place between human beings via the instrumentality of computers” (Herring, 1996, p. 1 in Rosell-Aguillar, 2007, p. 81). Such communication can be asynchronous (e.g. via email, message boards etc.) or synchronous. When used initially synchronous CMC (SCMC) was limited primarily to text chat but it now includes both audio and video conferencing. Today there is a growing list of audio-conferencing software, such as Adobe Connect, Blackboard Collaborate and Elluminate, which allow teachers and learners to interact in ‘virtual’ classrooms. Typically these interactions are scheduled in advance so that students and teachers can attend at the same time (Hyder et al., 2007).

Some researchers believe that SCMC technologies contain the “natural conditions for interaction, especially between the student and teacher and often among students” (Bernard, 2009, p. 1247) while others claim that “while certainly being a great deal of

fun, [the SCMC technology] does not lend itself to a deep, complex discussion because it is too hectic" (Bender, 2012, p. 177). In this study I wanted to establish if these tools did possess the natural conditions for interaction. Though there has been significant research on the use of asynchronous or CMC technologies (Gunawardena et al., 1997; Vrasidas, and McIsaac, 1999; Heejung et al., 2009; Abrami et al., 2011; Bain, 2011; Blanchette, 2011 and Zheng and Spires, 2011) there has been limited research on the use of SCMC technologies in higher education settings (Buckingham Shum, 2001; Price, Richardson and Jelfs, 2007; and Bender, 2012).

Though the companies creating SCMC technology promise they can 'transform' or 'recreate' the f2f classroom online others, such as Diana Laurillard, have cautioned that we require greater evidence to support such claims (2002). Much of the literature associated with the use of technology in higher education appears to 'over hype' the use of these tools (Veletsianos, 2010). There is often limited scholarly evidence on the impact ETs are having in higher education and in particular how they are impacting on student learning (Kirkwood and Price, 2013b). Thus I wanted to explore how SCMC technologies were being used within my institution and what role tutors played in designing and mediating these sessions. Therefore they, rather than the students or the technology, were the focus of this study.

The main research question, discussed more fully in Chapter Three, is

What professionalism do teachers require in order to interact effectively with their graduate students during online synchronous tutorials?

The remainder of this chapter sets out the conceptual framework for the study, my professional context, and the overall structure of the thesis. I will provide further justification for my research question in the section on my professional context as this had a major role in defining the above research question.

1.3. Conceptual Framework

A key assumption underpinning the design of this study is that teaching is a complex profession and that teachers require high levels of professional practice knowledge to work in settings that use ETs. This appears to be especially true in the case of SCMC technologies where teachers are operating in new spaces and in roles where they

often require additional training and support to use the technology effectively. Integrating technology into one's teaching is a complex task (Mishra and Koehler, 2007) that requires teachers to rethink how they teach. Undoubtedly teachers require technological knowledge but this also needs to be balanced with pedagogical knowledge. Ultimately teachers will need to develop their "professional practice knowledge" (Loughran, 2010) around using these technologies in order for them to create quality teaching-learning interactions. Loughran defines professional practice knowledge as the 'craft' or 'tacit' knowledge that teachers develop from using technology in the classroom.

There is growing evidence that the use of online technologies in higher education is already placing demands on teachers to update their skills and competences in order to enhance teaching-learning interactions in such settings (Laycock, 2009).

Laurillard and Masterman (2010) have raised concerns that teachers are not fully utilising these tools and the new opportunities they offer for recasting teaching-learning interactions online. Instead, many teachers appear more comfortable transferring existing 'traditional'¹ teaching approaches from f2f to online settings (Kim and Bonk, 2006), despite a growing literature that recommends the need for more active teaching approaches in such settings (Conrad, 2007; Hrastinski, 2009; Laurillard and Masterman, 2010). Much of this literature acknowledges the social nature of teaching and learning online and calls on teachers to transform their practices in order to create more collaborative and co-operative learning activities for their learners (McInnerney and Roberts, 2004). This knowledge is placing new demands on teachers and requires them to invest time in updating their own professional knowledge (Loughran, 2010) in order for them to teach more effectively in these new environments.

Technological developments are happening so fast that institutions often struggle to design timely professional development interventions for their staff. Faced with this constant challenge some believe that teachers, at all levels, need to take more responsibility for their own learning and not wait for their institution to provide such 'training' (Barber, 1996; Mishra and Koehler, 2006; Laurillard and Masterman, 2010). Within this discourse teachers are viewed as 'learning professionals' who take

¹ Traditional teaching approaches typically refers to teacher directed or didactic teaching approaches as opposed to student-centred approaches.

responsibility for developing their skills and professional competences right throughout their careers (Eraut, 1994). As 'learning professionals' they are expected to share and publicise their professional knowledge of working online, something many teachers have been slow to do in the past (Loughran, 2010).

Within online learning there is a large literature on the competences and strategies tutors require to 'teach' effectively online (Collison et al., 2000; Cornelius and Higgison, 2001; Ko and Rosen, 2004; Palloff and Pratt, 2007; Salmon, 2008; Palloff and Pratt, 2011). To date much of this research has focused on the role of the tutor in organising learning in asynchronous settings where tutors and learners predominantly use text to communicate. In contrast real-time 'discussions' or 'dialogues' using SCMC technologies require teachers and students to interact almost immediately using a combination of text, audio and video in a 'live' setting. Such contexts can pose new challenges for teachers and they may require them to develop new strategies or 'craft knowledge' to work online. Teachers typically need to acquire a different set of 'tacit' knowledge in order for them to teach effectively online, as they are different from f2f classrooms (Treacy, 2007).

Finally, at present there appears to be a lack of practical support and scholarly knowledge for tutors working in these live online classrooms. It is worth noting that there are support materials already available for the use of SCMC tools within corporate training environments (Finkelstein, 2006; Colvin Clark and Kwinn, 2007; Hyder et al., 2007). These are written in the format of guides and contain craft knowledge to assist companies and their employees to use the software tools more effectively within an organisational setting. However, within higher education there is a dearth of such knowledge and it seems timely to capture and codify tutor practice in these spaces with a view to contributing to professional practice knowledge.

1.4. My Professional Context

I work as a self-employed professional assisting teachers, at all levels of the education system, use digital technologies to enhance teaching, learning and assessment. My primary degree was in teaching and since the late 1980s I have been interested in how technology could be used within education to improve learning (Hallissy, 1987). For the past 11 years I have designed and project managed a series

of projects with schools, industry and government agencies on the use of ETs in education. In addition to directing these projects I have also worked as a part-time tutor within higher education settings in Ireland and I have also been engaged in research on the use of technology in schools (Hallissy et al., 2013; Hallissy and Casey, 2013; Casey et al., 2009; Hallissy and Hurley, 2006). Consequently my work places me in multiple settings and is often for set time periods. Thus it can be challenging for me to identify my 'institution' because I work across multiple institutions on a daily basis. Therefore in this study I have chosen my role as Course Director within the MATL programme in Hibernia College where I worked part-time between April 2010 and October 2012.

In 2009 I was hired to develop a series of online lessons on the use of digital technologies in education for a new Masters degree programme for Hibernia College. Hibernia College was founded in 2001 and offered its first Masters level programme, the Master of Arts in Teaching and Learning (MATL), for teachers in 2009. I began teaching on this programme in October 2009 and this was my first experience of teaching online, although I had had almost twenty years experience of using technology in other settings. In April 2010 I was contracted to the role of programme director in a part-time capacity. This role was multi-layered and involved working with college administrators, external awarding bodies, faculty, e-learning staff and students within the College. It afforded me the opportunity to work closely with my fellow teaching colleagues² in designing and mediating their online lessons. This role also gave me greater access to the students who were all practising teachers.

Within the professional literature associated with the work of consultants in education I view myself as an Academic Consultant (Whitchurch, 2012). Celia Whitchurch's research has identified a new group of professionals working within higher education and this new tribe typically works in a project management role within an institution for a period of time. Typically academic consultants can perform a range of roles within their adopted institution and these can include project management, teaching, administration and research. Within Hibernia I performed all these roles and I will return to the concept of the academic consultant in greater detail in Chapter Two.

² Within Hibernia College teachers or lecturers are referred to, as tutors and I will use this term for the remainder of the thesis.

The MATL is a modular programme (see Figure 1.2) with each module consisting of ten pre-recorded lessons. Over the course of a module a lesson is released weekly and students access it through the College VLE. Each lesson has three core components: the tutor created lesson content; an asynchronous forum; and a live tutorial, as depicted in Figure 1.1 below.



Figure 1.1, Components of MATL Lesson

The tutors worked with a team of instructional designers to create the pre-recorded lesson content. This multimedia lesson was the central component of each lesson and contained the tutor's narrated lecture notes, assigned readings and hyperlinks to external resources. Secondly, each lesson was associated with an online forum where students posted their thoughts and views on questions or issues the tutor had initiated. Thirdly, students were encouraged to attend a weekly online synchronous tutorial that was scheduled in the student's calendar. These live events brought the tutor and his/her students together online for approximately sixty minutes each week. Attendance was not mandatory and they provided opportunities for students and tutors to 'unpack' the lesson content.

The College had developed a series of processes for creating and publishing lesson content and these involved the use of ‘Knowledge Officers³’, copy editors and graphic designers. This process was well developed and ensured that the multimedia lesson content was produced to a very high standard. The online tutorials on the other hand were not designed in the same way and tutors had much greater freedom in designing their own materials and in how they structured these events. Each tutor received online technological training on the key features of the SCMC software, in this case AT&T Connect. This training typically lasted one hour and took place in advance of the first tutorial session.

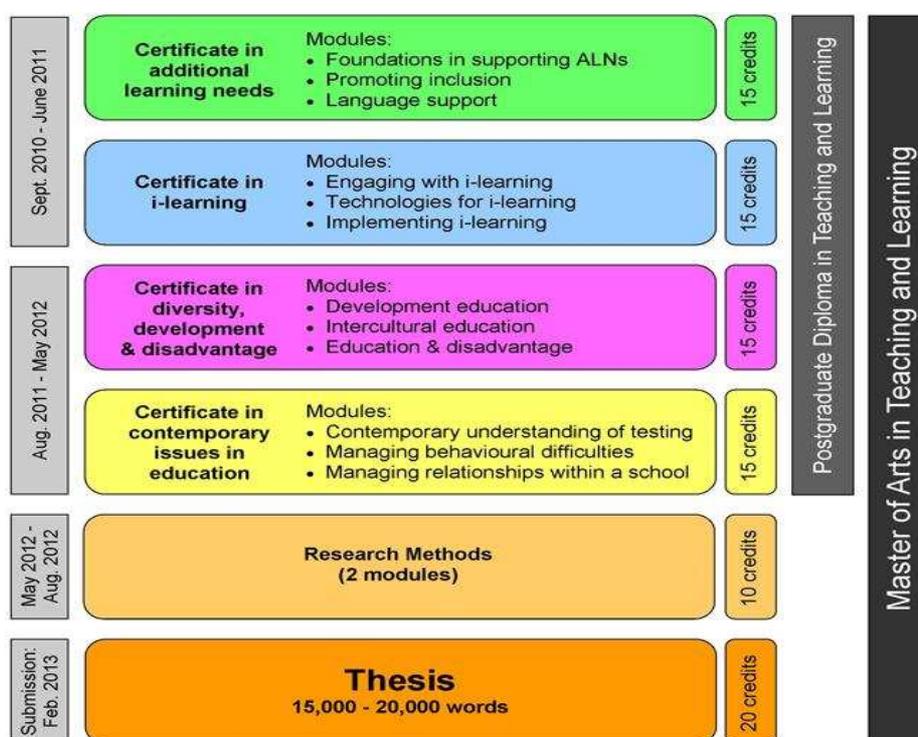


Figure 1.2, The Structure of the MATL Programme

The MATL programme consisted of four certificates, two modules on research methods and a thesis. The four certificates and Research Methods equated to fourteen modules, with each module consisting of ten lessons. The programme was designed to inform and enhance teacher practice around three pillars: the Inclusive Classroom, Personalised Learning and Communicating to Learn. It was designed so

³ Knowledge Officers (KOs) typically had an instructional design background and they ensured that lesson content was coherent and it met the learning outcomes for the lesson. They sourced appropriate images and ensured all materials did not breach copyright rules.

teachers could apply their learning immediately in their own teaching setting. At the end of each module students completed a written assignment of five thousand words. The tutorial was the space for live interaction within the programme and in this study the tutor group consisted of thirty teachers and average tutorial attendance varied between twenty and thirty students.

Leading an online tutorial can be a daunting experience and is very different from interacting with students in f2f classrooms. I had expected these tutorials to be highly interactive and that the students would actively engage in discussion. Unfortunately I, and other tutors, found this was not the case and therefore I began to question the nature of the interaction that took place and the roles tutors and students performed.

On assuming the role of Course Director in 2010 I surveyed the students (circa 30) on their experiences on the MATL and one question focused on the purpose of the online tutorial. It revealed that students appeared to have mixed views as to the purpose of the events, as evidenced in Table 1.1.

**Table 1.1
Purpose of the MATL Online Tutorial**

Tutorial Purpose	Percentage
Opportunity for the tutor to present new content	57%
Opportunity for the tutor to revise content presented in the recorded session	93%
Opportunity for students to raise questions and discuss the lesson content	100%
Opportunity for students to work in small groups	20%
Opportunity for students to present their work to colleagues	21%

Though the majority of students viewed the tutorials as events where they could raise questions and engage in revision activities only a minority (20 and 21%) viewed them as spaces for collaborative engagement and knowledge sharing. These responses seemed at odds with much of the literature associated with teaching online, that advocated the use of social-constructivist teaching approaches (Rovai, 2004; Pallof and Pratt, 2007 and 2011; Stavredes, 2011). Table 1.1 appeared to indicate that students did not view these sessions as opportunities to interact with their peers to co-construct knowledge and instead they saw them as teacher-dominated events. Thus

this finding became the focus for my thesis and I subsequently shared my proposal at a number of conferences (Hallissy 2010, 2011a, 2011b, 2011c, 2011d) to assist me in developing my research proposal. This process was extremely helpful and assisted me in refining my research questions, which I will outline in greater detail in Chapter Three.

1.5. Summary and Thesis Structure

This chapter began by outlining the new pressures on higher education institutions to expand their provision while also ensuring they provide learners with quality learning experiences. It then established that there is limited research on the use of SCMC technology in higher education and the impact it is having on effective teaching. The chapter then introduced a key conceptual construct in this study, that of teacher professional practice knowledge in the context of using SCMC technology online. Finally I outlined my own professional context and my rationale for engaging in this study.

The next chapter, Chapter 2, will discuss the literature associated with professional practice knowledge and will make the case for establishing a signature pedagogy around the use of SCMC within the Hibernia MATL. Chapter 3 will then discuss the literature associated with learning online and will advocate that critical discussion should become the signature pedagogy for the programme in the future. Chapter 4 outlines the research design and describes how the data were collected and analysed during the study. Chapter 5, the Empirical Chapter, provides a detailed snapshot of the data collected and how they were analysed. Chapter 6, the Discussion Chapter, summarises the main findings and interprets them in light of existing academic literature. Chapter 7, the Conclusion Chapter, discusses how the study might contribute to the field; it also discusses a number of limitations with the study before outlining some areas for further research and implications for my own professional practice.

Though this study was located in a small online higher education institution in Ireland it potentially has a much wider relevance for the entire sector. The study should have particular relevance for an emerging practitioner community that will use SCMC

technologies in their teaching. By capturing and codifying the professional practice of tutors in this study it should help others develop their practice in the future.

2. Professional Practice Knowledge

2.1. Introduction

In this chapter I will explore the notion of professionalism and in particular how it applies to this study. In this context I will locate the role of part-time online college tutors within a new and emerging field of professionalism, ‘the third space’ where experts in emerging fields tend to operate (Whitchurch, 2008). I will then explore the importance of professional practice knowledge within professions and make the case that there is a need to place a greater emphasis on such knowledge, particularly in new and emerging settings. Finally I will close the chapter by linking the concept of professional practice knowledge with the idea of developing a signature pedagogy for tutors within SCMC settings in higher education.

2.2. What is meant by Professionalism?

2.2.1. Traditional Professionalism

In the most elementary sense, professionalism is a set of institutions which permit the members of an occupation to make a living while controlling their own work. That is a position of considerable privilege.
(Friedson, 2001, p.20)

Traditionally the institutions, referred to by Friedson, provide a range of highly complex and specialised services to the community, through their members who are referred to as ‘professionals’. The members of these institutions often have considerable status and prestige in society. For centuries judges, doctors, lawyers and university professors were viewed as the ‘status’ or ‘classic professions’ (Noordegraaf, 2007) as they were seen as ‘experts’ who possessed a unique knowledge base that the ordinary citizen did not possess (Eraut, 1994). These “unique forms of expertise” (Ibid p. 14) were typically “highly specialised and complex but codifiable” (Noordegraaf, 2007, p. 765). Others, such as Schön (1983, p.21 in Ibid, p. 765) have stated that “Professional activity consists in instrumental problem solving made rigorous by the application of scientific theory and

technique.” Thus professionalism is typically about applying knowledge, both general and scientific, to solving specific problems in society. This can often be a complex and challenging task, one that requires the professional to possess both highly developed knowledge and skills.

The professions, through their various institutions, took great care to codify this knowledge and to establish codes of conduct for their members thus giving them control over entry and membership of their respective professions. Thus the maintenance of a highly specialised body of knowledge and the maintenance of control over who was admitted to the profession were two of the main pillars of “pure” professionalism (Noordegraaf, 2007). In addition the public often held these individuals in high esteem and expected them to operate to the highest ethical principles for the good of society. They were often viewed as “trustees” of socially important knowledge” (Brint, 1994, p. 5) and were expected to make a social contribution to society. Thus they were seen as powerful institutions within society that were trusted to monitor and regulate the activities of their members.

Such a view of professionalism reached its zenith during the industrial revolution and it is questionable if it is fit for purpose in today’s society. For example Kearny and Sinha (1999, p. 222) in Noordegraaf (2007, p. 773) stated that “Terminology such as ‘true profession’ should be viewed as flawed and suspect, because the definition of profession is relative to time and space”. It seems that in today’s fast changing world, where some argue “knowledge is now the key capital resource” (Wilson, 2010), there is a need to expand this notion of professionalism. Furthermore, it should be noted that professionalism is a contested notion and there are numerous views in relation to how society might categorise professionals and the work they engage in.

Noordegraaf (2007) presents three views of professionalism and they are *Purified*, *Situated* and *Hybridized*. Scholars supporting a *Purified* view are against expanding the traditional view of professionalism and call for a return to a more traditional notion of professionalism that gives greater autonomy to the profession. As argued above such a view seems at odds with the needs of

society today, however the other views appear to have a much greater relevance to this study and the world today.

2.2.2. Situated Professional

Those who take a situated professional view want to see professionalism broadened and in particular take cognisance of the reality that many professionals today often work within an organisation. Within this view traditional professionals, such as doctors or lawyers, work in organisations as opposed to being self-employed. In addition to losing some autonomy many of these professionals develop specialisms in what Brint has labelled “an age of expertise” (1994, p. 124). The lawyer who works for a large legal firm and specialises in copyright law or the doctor who specialises in cancer research within a hospital, would all appear to fit his definition. He has noted that the past century has seen a rise in professional organisations that provide a range of specialist services to their clients across a range of professional fields.

Universities played a central role in the rise of such “intellectual specialisation” during the late nineteenth and early twentieth century according to Friedson (2001) with the creation of new disciplines and sub-disciplines. In this way they supported the expansion of the professions and the rise of the “expert”. This in turn led to the establishment of new “occupational professions” (Ibid) or “expert professionalism” (Brint, 1994) where the focus was less on being a social trustee and more on providing a service for profit. Brint observed that these newer professions were more associated with notions of business rather than with notions of trust and doing social good. He believed that over the last fifty years “the idea of professions as a status category has become increasingly disconnected from functions perceived to be central to public welfare and more exclusively connected to the idea of expert knowledge (Ibid, p.8). This expansion of professionalism has led to the creation of “organisations and industries that employ large numbers of professional specialists” that sell their expertise as “a resource sold to bidders in the market for skilled labour” (Ibid, p. 15). This new form of professionalism has placed a much greater emphasis on the notion of expert knowledge and less on the old values of professionalism and thus has led to a new epistemology of practice.

2.2.3. Hybridised Professionalism

This view of professionalism is more expansive and is linked to Schön's notion of the *reflective practitioner* (1983) and instead of defining professionalism "according to a model of technical rationality (cf. Schön, 1983) authors like Schön tend to define professionalism in terms of a new epistemology of practice" (Noordegraaf, 2007, p. 774). Professionals are individuals who are constantly growing and learning throughout their careers as they often work in interdisciplinary teams with colleagues from other fields to solve problems. Thus there is a move away from defining professionalism in terms of the work people carry out to viewing it as a relational concept where professionals link with "outside worlds, organisational rationales, and other professionals become essential parts of professionalism" (Ibid, p. 774). As Barnett (2012) has expressed it "there is no alone professional" and thus notions such as teamwork and lifelong learning appear to be central to such views of professionalism.

Having analysed these three views of professionalism it seems that elements of *situated* and *hybridised* professionalism are very appropriate for this study. Firstly, the faculty members who participated in this study all have attained high levels of academic knowledge in the form of Masters and Doctoral degrees. They were 'hired' by Hibernia College because of their expertise in certain fields such as testing, technology-enhanced learning, combating bullying etc. to provide a service. This notion of supplying a service appears to resonate with Whitley (in Noordegraaf, 2010; p. 773), who noted that some professionals "rent their certified skills to employers who coordinate and organise them for their own purposes". They are part of a team within the college where they, along with college management and support staff, are responsible for the creation and implementation of the programme. Thus they work in virtual inter-disciplinary teams with KOs, technical support staff and college management.

2.2.4. *The Rise of a Third Space*

Celia Whitchurch (2008 and 2012) has written extensively on the subject of extending professional identities within higher education. She has argued that traditionally there has been a binary view of the roles people performed within such institutions: you were typically viewed as 'academic' or 'non-academic'. Those carrying out teaching and research duties were viewed as academics while those who

held managerial roles were viewed as non-academic staff. However, this view has eroded over time as members of the non-academic staff have acquired doctoral degrees and have extended their roles by engaging in teaching and research activities. A consequence of these developments has been a blurring of traditional roles within institutions thus leading to the need for a reconceptualisation of these spaces.

Whitchurch (2008) has defined this new space as a “Third Space”, a space where teams of people, often with mixed identities, come together within an institution to work as a project team. Within such teams there is often a range of expertise such as project management, IT and knowledge of academic disciplines and these individuals form teams to solve particular issues. This notion of professional teams also seems to resonate with Schön’s earlier definition of professionalism where professionals use knowledge to address real-world problems.

She has also observed that this move to create project teams has led many institutions to recruit people with new skill-sets. She has described them as “blended professionals”, individuals who have “an academic background ... but they also have some experience of harsh and business realities” (Whitchurch, 2008, p. 391). They typically work on a project team within the institution before moving on when their work is completed. She notes that these individuals tend to have greater mobility than permanent academic staff and move between institutions, as and when their expertise is sought. This again seems to have relevance to this study as all MATL tutors are on contract, as there are no permanent staff, unlike the model of contract teaching staff who traditionally support permanent academic staff in universities. Thus it is a different type of organisation from a typical higher education teacher education college.

Clegg (2008, p. 330 and 343 in Whitchurch, 2012, p. 103) has observed that “universities are becoming “more complex and differentiated spaces ... [in which] identities ... are expanding and proliferating”. Furthermore Whitchurch noted that many institutions now have “fractional and short-term contracts” for staff who are brought in to assist in teaching and research duties. In light of the complexity of roles and identities within universities today she has developed three models of “academically oriented project work” and these are the *integrated model*, the *semi-*

autonomous model and the independent model. Of these, the “independent model” seems most relevant to this study as it applies to “individuals who worked more independently, often by choice, within traditional institutional structures” (Ibid, p. 108).

To illustrate the independent model she presents a case-study of ‘academic consultants’ based in an Australian university where they perform both a project management and a teaching role. Though not academics they “described themselves as having acquired an “academic headset” which enabled them to move between environments” (p. 110). They noted that “to become an academic” they had to “go casual” (p. 110), which meant that they only had contact with their students and the academic who employed them. Often they had limited contact with other faculty and worked very much on their own project. Such a role closely mirrored the work I performed in Hibernia.

Thus this notion of the “academic consultant” also appears very appropriate for many of the faculty employed on the MATL. Though they may not have had a project management role they had expertise that was sought after by the institution. Similar to the case study, they appeared to adopt a “go casual” view of themselves as academics and typically only had contact with the programme director and their own students. By going “casual” they sometimes struggled with their identities within the institution and beyond. Yet they had made a lifestyle choice to teach part-time online from the comfort of their home or office.

The recruitment of such individuals is adding to the “plurality of voices” and a “re-imagining of academic identities” within higher education (Fanghanel, 2012, p. 81). They appear almost to be a new tribe or a new community within higher educational settings bringing their own specialist knowledge and skills to the institutions with which they work. This raises the question, as to what types of knowledge and skills might these professionals possess and why they might be so sought after?

2.3. Professional Practice Knowledge

Eraut (1994) also viewed professionalism as an ideology that placed great store on the knowledge professionals require to practise. He observed that there were two kinds of knowledge, scientific and professional. Scientific knowledge is created and codified as a result of research while professional knowledge is typically the knowledge and skills professionals use in their everyday work. However, scientific or technical knowledge is often viewed as being of higher value than professional knowledge. Eraut took a broad view of professional knowledge and defined it as including “procedural knowledge, propositional knowledge, practical knowledge, tacit knowledge, skills and know-how” (Ibid, p.16). Thus it applies to a range of knowledge types and furthermore he noted that, “professional knowledge cannot be characterised in a manner that is independent of how it is learned and how it is used. It is through looking at the contexts of its acquisition and its use that its essential nature is revealed” (Ibid, p. 19). This seems to have a resonance with Kearny and Sinha’s view (1999 in Noordegraaf, 2007) that professionalism is “relative to a time and space” and similarly professional knowledge is very much associated with the context in which it is developed.

Unfortunately professional knowledge, in contrast to scientific knowledge, is often “little studied and little discussed” (Eraut, 1994, p. 39) in contrast to scientific knowledge. Some professions, such as nursing, have constructively engaged in capturing and studying professional knowledge since the 1980s (Bradbury et al., 2010) to enhance their professional standing. Other professions, such as medicine, also place great store on codifying and sharing such knowledge, but it appears that education places less value on this type of knowledge (Loughran, 2010). So what is professional practice knowledge and what is its importance to professionals?

Lee Shulman (2005) in a study of how the traditional professions train new entrants highlighted the complex and uncertain nature of their work. He argued that typically such professionals possess a highly developed knowledge base and skill-set that has been developed over many years of practice. Much of this knowledge is intuitive and essentially ‘tacit’, what Eraut (1994) described as “practical know-how which is inherent in the action itself and cannot be separated from it” (p. 15). Typically this knowledge has not been codified or written down because in many instances “people do not know what they know” (Ibid, p. 15). Rather it is experienced across a range of situations and can be referred to as “derived know-how”. Many professionals

instinctively use such knowledge when they encounter unexpected events in the course of their work. Typically this happens so quickly that the professionals are not even aware of their actions, it is instinctive and they move on.

Schön (1983 and 1987) has highlighted the value of reflection and in “raising awareness of tacit knowledge and transforming knowing-in-action to knowledge-in-action” (Noordegraaf, 2007, p. 15). Polanyi (1967, in Ibid, p. 15) has described such tacit-knowledge as “that which we know but cannot tell”. As a result it can be a challenge to capture it, yet it is critical for the development of a profession to capture, analyse and share it.

Research into professional practice is beginning to explore the scope for making practical knowledge more explicit, and thus more capable of being discriminated, criticised, codified and developed.

(Eraut, 1994, p. 47)

Eraut noted that professional practice can be very difficult to capture, particularly where verbal activities are prevalent and he notes that, “the unscripted and intuitive nature of much verbal action makes attempts to describe or criticise it equally different” (p. 42). How do we catch it while it is in the ether – once the moment passes it is gone. Furthermore he notes that it is particularly challenging to capture such knowledge within ‘performing’ professions, like teaching and medicine, where immediate action is required. He uses the term “hot action” to describe what goes on in such settings and he notes that:

the teacher has no time at all to reflect: choices made during the preparation of teaching may be decision-governed, but those made during the course of teaching are largely intuitive. The pressure for action is immediate and to hesitate is to lose.

(Eraut, 1994, p. 53)

Thus no matter how well prepared teachers are in advance of a lesson they may inevitably encounter situations that they had not prepared for and they may be required to take a course of action on the spot. In such settings professionals “must rely on concrete, clinical experience” and inevitably there is no room for abstract theoretical notions at that particular moment. “Unlike, the academic, practising professionals are in a ‘what ought to be done’ environment. The aim is not knowledge but action.” (Ibid, p. 52). Eraut notes that in order to survive and function in such complex environments professionals require routines and rituals to

enable them to operate and to cope with this complexity. He argues that it is too stressful for them to just rely on their instincts and their experience on such occasions.

In particular, the development of professional practice knowledge, is limited within new settings such as SCMC and invariably this takes time to collect and codify. Eraut observes that the collection and codification of such “practical knowledge is never tidy, [and] an appropriate language for handling it has yet to be developed” (Ibid, p. 56). However, he argues that reflection and codification of such action is essential in order to add to the professional practice knowledge of a profession. Here he and others, such as Goodson (2003), argue that such reflection needs to take cognisance of theoretical constructs in order for it to be generalisable and relevant to the wider profession.

While I believe that the best mechanism for improving practice is if teachers in an ongoing way research and reflect upon their practice, I do not believe that a narrow focus on practice in collaborating on research, is a panacea that is politically popular at the moment, will take us very far.

(Goodson, 2003, p. 19)

If this takes place the emerging research then “can be criticised and refined” so that attention can be given “to specifying the conditions under which any practical principle or generalisation was held to apply” (Eraut, 1994, p. 44). In this way professionals can use their work setting as a focus for their research, to engage in action research (e.g. McNiff, 1995), so that they can investigate the problems and challenges in their daily work. Such research, as stated earlier, has been widespread in other professions and addressing the theory-practice gap appears essential in expanding professional practice knowledge. Loughran’s comments below capture this sentiment very nicely.

Early last century, John Dewey (1929) stated that educational practices themselves must be the source of the ultimate problems to be investigated if we were to build a science of education. Knowledge of practice is crucial if education is to be advanced in ways that might be transformative, and such advancement lies in better understanding the problems derived from teaching and learning. Hence there is an ongoing need to maintain a clear and sustained focus on pedagogy. Knowledge of teaching and learning should be such that it informs the practice setting. Therefore, addressing the theory-practice gap is essential in progressing teaching and learning in productive ways.

(Loughran, 2010, p. 42)

2.3.1. Learning Professional

Thus when professionals are cast into new situations, such as tutoring using SCMC technologies, they are moving into environments where they engage in “practical action” (Friedson, 1971 in Eraut, 1994, p. 53). Though they may be experienced in teaching in other settings, such as in a f2f classroom, they invariably have to learn how to practise in their new environment. Eraut (1994) noted that, “professionals continually learn on the job, because their work entails engagement in a succession of cases, problems or projects which they have to learn about” (p. 10). He noted professionals typically learn from three sources, “publications in a variety of media; practical experience and people” (p. 13). In particular he highlighted the importance of learning from colleagues and co-learners “by bringing different knowledge and perspectives, by sharing the burdens of finding ... so often engendered by group work” (p. 13). This appears to be particularly important in new and evolving areas, such as SCMC, where there is currently a lack of professional practice knowledge.

Against a backdrop of change and increasing complexity within higher education many believe that teachers, at all levels, need to take more responsibility for their own learning and not wait for their institutions to provide training (Barber, 1996; Mishra and Koehler, 2006; Laurillard and Masterman, 2010). In developing their own knowledge they are also expected to share and publicise it with others (Loughran, 2010) thus improving the practice of the profession.

It can be challenging to ask teachers to reflect on their work as they invariably ask ‘where will I start?’ Thus there is a need to provide teachers with tools or frameworks that enable them to reflect critically on their work as part of their “academic development” (Oliver and Conole, 2002, p. 63). There is a long tradition of using frameworks and toolkits to help teachers capture such action in their own teaching thus allowing them to reflect on it. Examples include Bales’ Interaction Process Analysis (IPA) (Bales, 1950), the Flanders Interaction Analysis Categories (Flanders, 1961) and Laurillard’s Conversation Framework (2002). Flanders specifically designed his framework to enable teachers to capture classroom action and to use this data to improve their practice in the future. Yet it is essential that such reflection be aligned with appropriate educational theories, so that the findings

are more generalisable. Thus the use of theoretical frameworks is critical in capturing and codifying professional practice knowledge.

2.3.2. Theoretical Frameworks

Loughran (2010) earlier highlighted the need to focus on pedagogy and on the need to think about the knowledge of practice. He observed that Lee Shulman's (1986) notion of pedagogical content knowledge (PCK), the knowledge teachers require to transform their subject matter for their teaching context, is one such theory that is "a concrete example of thinking about knowledge of practice" (p. 45). More recently Shulman's model has been developed and expanded in light of the growing use of digital technologies within educational contexts. Building on the work of Shulman two US researchers, Mishra and Koehler (2006), have developed the Technological Pedagogical And Content Knowledge framework (TPACK) to facilitate philosophical discussions around the nature of knowledge and technology usage (Koehler and Mishra, 2008). The framework is illustrated graphically below.

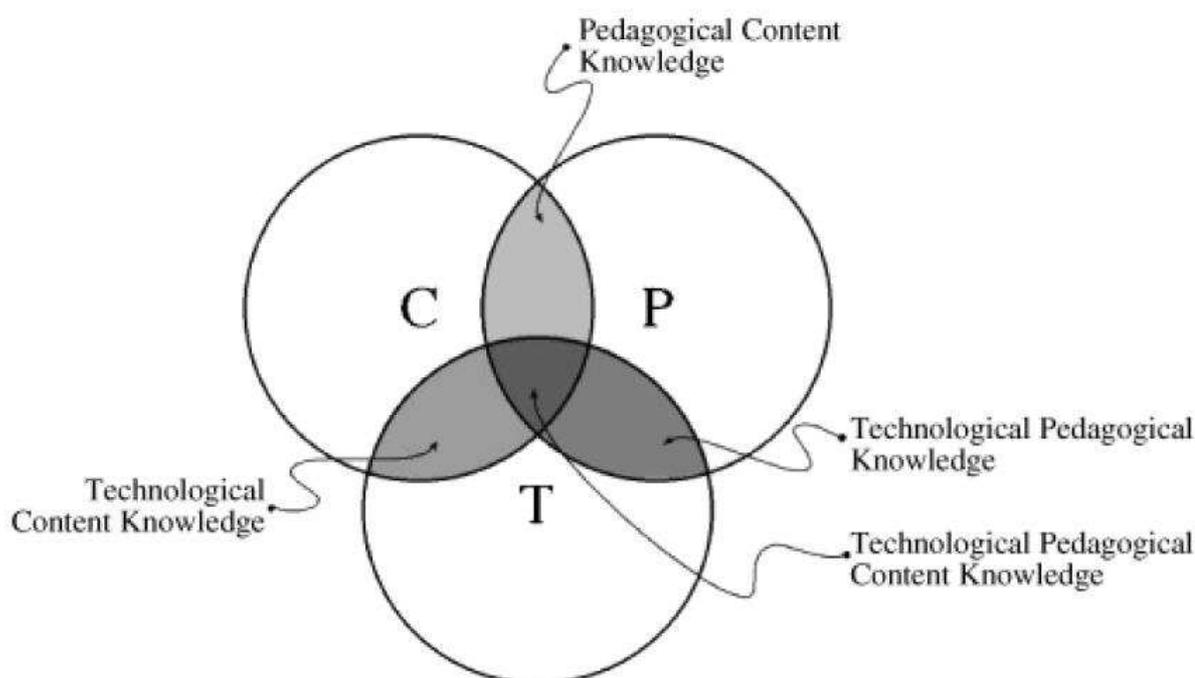


Figure 2.1, TPACK Framework (Mishra and Koehler, 2006, p. 1025)

Specifically this provides a framework by which to design, identify and analyse the knowledge teachers require to teach using technology within a specific context. To date, the model has been used widely within pre-service teacher education and in the context of compulsory schooling, while it has also been used to a lesser degree in the

context of online teaching and learning (Koehler et al., 2004; Peruski et al., 2007; and Archambault, 2008).

Despite its widespread use some, such as Cox and Graham (2009), have questioned the validity of the model as a method for examining teacher knowledge. They have questioned the validity of the construct definitions that constitute the model and have further refined the framework in light of these concerns. In addition it should be noted that others have also created theoretical frameworks around teacher knowledge and technology (Pierson, 1999 and 2001; Keating and Evans, 2001; Zhao, 2003 in Koehler and Mishra, 2008, p. 24). Such concerns are not surprising as some, such as Lowenberg-Ball, Thames and Phelps (2008), have argued that PCK's theoretical foundations still require further development. However, despite known limitations others, such as Carlsen (1999; p. 134), maintain that PCK "has certainly proven to be useful". Similarly I anticipate that TPACK will also prove to be useful as a guide to the analysis of the data collected and I will return to this again in the Methodology Chapter where I will elaborate further on the framework.

Ultimately teachers want to know how they can improve student learning and in particular what pedagogies they might use to this end. Teachers want practical action strategies on what works for other teachers so that they can try these out with their learners. In this context recent work around the use of signature pedagogies within a number of professions appears particularly relevant to this study.

2.4. Towards a Signature Pedagogy for Online Tutorials

As noted earlier, Shulman (2005) studied the signature pedagogies that certain professions have traditionally used to prepare future entrants. He defined these pedagogies as follows:

They are the forms of instruction that leap to mind when we first think about the preparation of members of particular professions – for example in law, the quasi-Socratic interactions so vividly portrayed in Paper Chase.

(Ibid, p. 52)

Medicine has the signature pedagogy of bedside teaching to develop the "personalities, dispositions and cultures of their fields" (Ibid, p. 52-53). Other professions, such as law, even design their classroom layouts to resemble the

courtroom settings in which many of their graduates will work⁴. Thus these institutions go to great lengths to design teaching experiences that will prepare their graduates for the world of work.

Shulman and his colleagues spent a “lot of time observing, analysing, and documenting how teaching and learning occur[ed] in many kinds of settings” (Ibid, p.54). In so doing they identified the signature pedagogies of these professions. He believed routine was important as a feature of signature pedagogies as it permitted “both students and teachers to spend far less time figuring out the rules of engagement, thereby enabling them to focus on increasingly complex subject matter” (p. 56). This has resonance with Eraut’s (1994) earlier assertion that professionals working in complex environments require some level of routine and ritual in order to function effectively. Shulman cautioned that routine can be dangerous but on the whole he believed it has “great virtues” (p. 56).

Secondly Shulman noted that a key feature of any signature pedagogy is the performance of the students and he had the following to say on this matter.

Signature pedagogy is ultimately associated with the performance of the students. If they are **not** doing well then the signature pedagogy **isn’t** appropriate. [emphasis added]

(Ibid, p.56)

Thus at all times tutors should review their pedagogies in the context of how their students are performing, as he states this is the ultimate yardstick. He elaborates that “active performance” is often essential in ensuring students learn as it “reduces the most significant impediments to learning in higher education: passivity, invisibility, anonymity, and lack of accountability” (p. 56). He states that students should be expected to engage rather than remaining passive or anonymous in class, as ultimately they need to take responsibility for their learning. But he notes this feature can often provide a challenge and a level of “uncertainty” for teachers, if their students don’t engage, if they remain invisible. Dealing with this uncertainty is “one of the most crucial aspects of professionalism, namely the ability to make judgements under pressure (p. 57). Again this notion appears to have strong

⁴ It should be noted that these settings are often known as ‘moot courts’.

similarities with Eraut's earlier comments in relation to 'hot action' and the skills professionals require when working in such settings.

Typically signature pedagogies evolve over a long period and they normally last the test of time yet this can sometimes lead their professions into a state of inertia and a reluctance to bring about change. Yet he notes that change is important and that new technologies, such as SCMC, can provide opportunities for new thinking as outlined below:

New technologies of teaching via the Internet: Web-based information seeking; computer-mediated dialogues; ... all create an opportunity for re-examining the fundamental signatures we have so long taken for granted.

(Ibid, p. 59)

Therefore it seems that there is now a wonderful opportunity to explore what a signature pedagogy might look like within the MATL, specifically within the live tutorials where the 'hot action' should take place. SCMC is one of these new technologies that Shulman refers to above and surely there is an opportunity to re-imagine how tutors and students engage in these spaces by firstly observing what is taking place. In this study the notion of a signature pedagogy will be associated with those individuals tutoring on the MATL and it is open to debate whether they are a new tribe or an existing one within higher education. In this case I view them as an emerging professional group within higher education.

Masters degrees in teaching and learning are relatively new programmes within higher education and they are typically practice-based and designed to "develop and improve teacher quality" (McAteer et al., 2010, p. 2). They are typically "rooted in professional practice development" and teachers who complete them should be equipped "with higher-order skills, improved practice and attributes of, and desire for, lifelong learning" (Ibid, p.7). Thus it would be interesting to observe if the signature pedagogies of the MATL are attempting to develop such skills during the live teaching interactions online. As SCMC technologies are still relatively new there appears to be an opportunity to observe, analyse and reflect on the hot action that takes place in these spaces. By engaging in such a process tutors can capture and articulate their signature pedagogy by describing their practice and this is "a valuable starting point for reflection and for cross-disciplinary discussions of

pedagogy and practice” (Oliver and Conole, 2002, p. 64). Once captured it can be compared to the signature pedagogy for the programme. In this way tutors can engage in professional conversations with their colleagues and ultimately improve their practice.

2.5. Professionalism in this Study

Thus the notion of professionalism in this study is very much aligned with the practice knowledge tutors possess and require to tutor using SCMC technologies. Similar to Eraut (1994) and Schön (1983 and 1987) professionalism in this study is viewed as an ideology where professionals working in new settings continue to learn and create new professional practice knowledge. Noordergraaf, when speaking about hybridised professionalism, stated that it is “not as much about being as it is *becoming professional* in modern times, or more precisely, about showing that one is *becoming professional* without necessarily ever becoming one” (2007, p. 775). So in this study professionalism is associated with tutors acting in professional ways to enhance the level and quality of their practice so that their students have the best possible opportunities to learn. The study will also afford the tutors time to reflect on their practice and thereby add to a body of knowledge in this field. By observing tutor practice it should help inform an initial signature pedagogy for others tutoring on the MATL programme, so that they have some concrete rituals to fall back on in times of complex action. Though signature pedagogies typically take a long time to establish this study will start the process for the use of SCMC technologies and other researchers can add to this in years to come.

3. Theory of Discussion Online

3.1. Introduction

In this chapter I will present a review of literature associated with the use of communication media in online courses and in particular the role of the tutor in promoting critical discussion. I will initiate this discussion by reviewing the two main types of learning environments, traditional and constructivist, typically found within higher education. I will then discuss the role of discussion, as a teaching theory, within graduate programmes. In conclusion I will also review the literature associated with the role of tutors and students within critical discussions, particularly when they are mediated by online communication technologies.

3.2. Setting the Context

Online courses are a relatively new phenomenon within HE when compared to institutions offering courses at a distance, which began in the 1890s (Wallace, 2003). The Open University (OU) offered its first online course in 1988 (Mason, 2001) and many agree that the Internet has now allowed institutions to offer new forms of education, that previously were difficult to offer (Mayes and de Freitas, 2004 and 2007; Laurillard, 2012). However, Laurillard notes that “the internet does not educate, nor does it actively support learning. Mostly, it provides information” (2012, p. 29). This appears to be a challenge at the graduate level, where this study is located, where tutors and students typically want to engage in critical discussion and reflection. Harasim (1987, p. 119), in one of the earliest studies on computer-mediated conferencing at the graduate level noted that in such settings the “contact between instructors and students should be frequent and intense, debate and dialogue should play a greater role (than in undergraduate courses)”. Therein lies the challenge for the use of computer-mediated conferencing in HE as all too often the technology is only used to transmit information in the form of a lecture (Anderson and Garrison, 1998; Laurillard, 2002 and 2012). Anderson and Garrison (Ibid) note that distance education (DE) was built on a transmission model and yet many question the appropriateness of this approach in HE. Laurillard (2012, p.40) states “that is why it takes more than telling to teach. Language alone is not enough.” Others such as, Mayes and de Freitas (2005, p. 4), are of the view that “there are

really no models of e-learning per se – only e-enhancements of models of learning.” They argue that there is no online or e-learning pedagogy per se and instead we need to look at the pedagogical frameworks and assumptions about learning. Furthermore they elaborate that “for good pedagogical design, there is simply no escaping the need to adopt a theory of learning” (p. 6). Thus it is how these tools are used in an educational setting and in particular the teacher’s perspective on learning that is key to their effective use (Laurillard, 2010).

3.3. Learning Theories

Beetham and Sharpe (2007) state “we should be in the business of locating new technologies within proven practices and models of learning” (p. 3). They make the case to locate tools, such as SCMC, within a pedagogical framework. They note the definition for pedagogy is “to lead or to guide” and they see it as a bridge between teaching and learning. They define it as “guidance to learn: learning in the context of teaching, and teaching that has learning as its goal” (Ibid, p. 2). They make the case that pedagogy is fundamentally a conversation between theory and practice and that we inform our use of digital technologies by referring to established pedagogical models. Mayes and de Freitas (2004), like others such as Biggs and Tang (2011) and Laurillard (2012), suggest that we should design our learning experiences around the learner by “placing the learning and teaching activities (TLAs) at the heart of the process” (p. 6).

Within education there appears to be two dominant yet divergent types of learning environments – traditional and constructivist (Rovai, 2004 and Leland, 2002). The traditional learning environment tends to be teacher dominated and there is an emphasis on information transmission while the students are passive receivers of knowledge. In the constructivist learning environments the emphasis is on knowledge construction and learners and tutors play an active role in this process. Much of the literature associated with online teaching and learning (Hrastinski, 2009; Gulati, 2008; Garrison and Anderson, 2003) advocates a Constructivist theory of learning where the role of the tutor is to build a community and to encourage learners to collaborate and to co-construct knowledge.

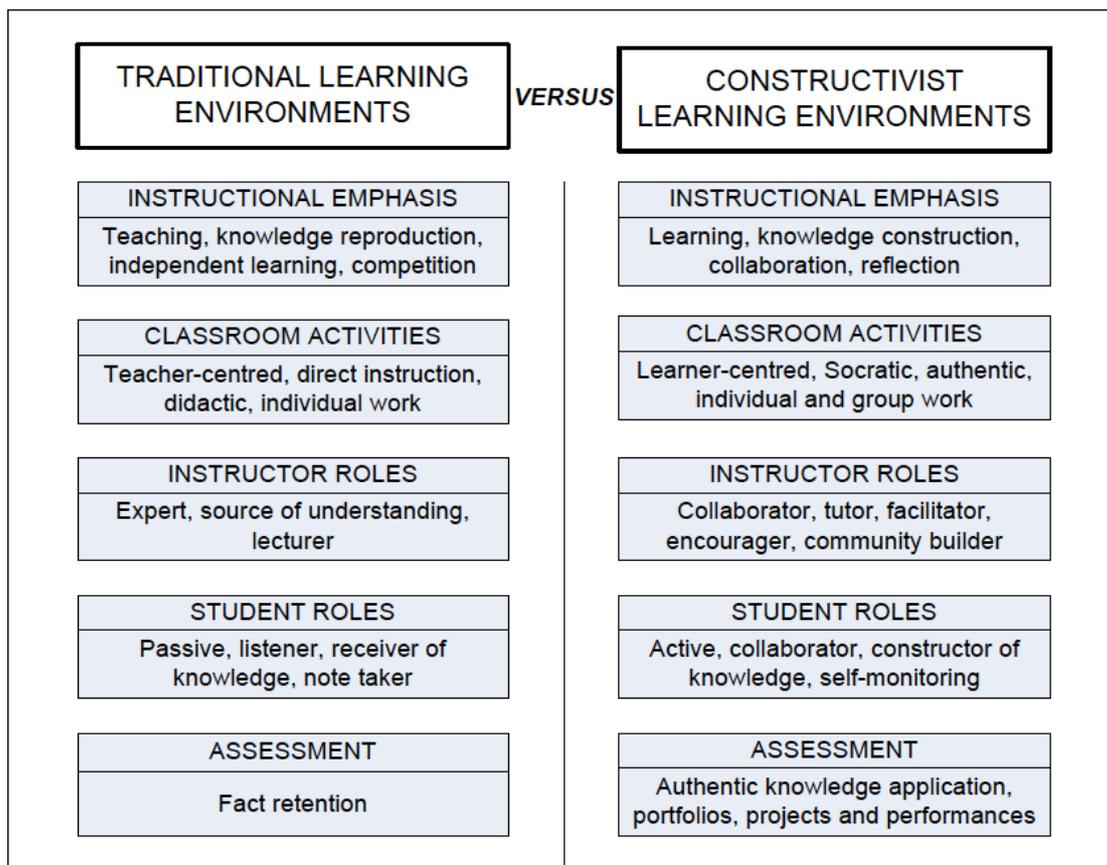


Figure 3.1, Elements of Emphasis in Higher Education (Traditional versus Constructivist Learning Environments), by Rovai (2004)

Rovai has defined Constructivism as follows:

Constructivism is a philosophy based on the premise that knowledge is constructed by the individual through his or her interactions with the environment. It has roots in the constructivist movement of cognitive psychology, which holds that individuals gradually build their own understanding of the world through experience, maturation, and interaction with the environment, to include other individuals. Thus, from the constructivist viewpoint, the learner is an active processor of information. This is in sharp contrast with behaviourism, for example, in which the learner is a passive recipient of information.

(Rovai, 2004, p. 80)

Others, such as Laurillard (2002; p. 67), have noted “that constructivism is a broad church, encompassing all educators who reject the ‘transmission’ model of teaching or anything that sounds non-cognitive.” Mayes and de Freitas (2004) suggest that within this broad church there are two main aspects to activities designed for constructing understanding. These are:

- Interaction with material systems and concepts
- Interactions in which learners discuss their developing understanding and competence

(Ibid, p. 16)

The notion of interaction and discussion are central to this study and I will elaborate on this in the following sections.

3.4. Discussion as a Teaching Theory

The idea that people can learn through listening to lectures most clearly expresses the fact that teaching is a rhetorical activity, seeking to persuade students of an alternative way of looking at the world they already know through experience.

(Laurillard, 2002, p. 43)

Laurillard (2002, 2010 and 2012) views the role of the teacher as mediating learning on behalf of the learner. She quotes Ramsden as stating that “the aim of teaching is simple: it is to make student learning possible” (1992, p. 5 in Laurillard, 2002, p.11) and she argues that teachers play a critical role in designing quality learning experiences for their learners (Ibid, 2012). She states “the role of the teacher is to mediate the person-world relationship and ensure that it can change over time in the direction of the desired learning outcome” (2002, p. 75). She makes the case that in the academic world teachers construct knowledge for their learners through language and in particular through the analogies they create. The students, for their part, are very much “acting on the world of descriptions” (Ibid, p. 55) which has been created for them by their teacher. Laurillard has constructed an entire theory around the use of dialogue in academic settings, her Conversational Framework (2002). This framework captures the exchange of ideas and dialogue between the teacher and student in this teacher created environment. The critical point here is that it is a dialogue, a two-way exchange, where students are provided with feedback in order to take action. It is hoped that eventually this iterative process will result in the learners deepening their knowledge as a result of engaging in this process.

Others, such as Wallace (2003) and Garrison and Cleveland-Innes (2005), also highlight the key role of the teacher in mediating education for students in HE. Wallace describes the teacher as the “knowledgeable other” while Garrison and Cleveland-Innes note that “interaction [between student and teacher] does not necessarily translate into critical discourse and the integration of ideas into

meaningful constructs” (p. 144). Like Laurillard, they too place a high value on the leadership role of the teacher in “triggering” discussion and in providing the “structure (design) and leadership (facilitation and leadership)” required to achieve cognitive success on the part of the learner (Ibid, p. 144). Therefore it seems essential that teachers possess the knowledge and skill to design learning environments and activities so that their learners can achieve cognitive success. In settings such as SCMC, it appears they need to be particularly knowledgeable of the key constructs of interaction and discussion. Having reviewed the literature associated with these constructs I will return again to review the role of the teacher and students in the specific context of SCMC.

3.4.1. *Interaction and Discussion*

High levels of interaction may be reflective of group cohesion, meaningful learning and understanding. Interaction directed to cognitive outcomes is characterised more by the qualitative nature of the interaction and less by quantitative measures.

(Garrison and Cleveland-Innes, 2005, p. 135)

Abrami et al. (2011) are of the view that “the DE literature is largely univocal about the importance of interaction” (p. 1246). The online teaching and learning literature has long recognised the central importance of interaction and it has been the focus of a large number of studies over the past twenty years. Moore (1989) first defined the notion of interaction in an online setting in 1989. He defined three main types of interaction that occur online or in DE and they are *learner-instructor*, *learner-content*, and *learner-learner*. Though others have built on these initial categories (Anderson and Garrison, 1998; Soo and Bonk, 1999; Hirumi, 2002) these remain the cornerstone of all subsequent constructs of interaction “for the purpose of inquiry” (Garrison and Cleveland-Innes, 2005). Much of the study of interaction in online and DE contexts has to date primarily focused on asynchronous communication, such as forums (written discussions) (Gunawardena et al., 1997; Vrasidas, and McIsaac, 1999; Heejung et al., 2009; Abrami et al., 2011; Bain, 2011; Blanchette, 2011 and Zheng and Spires, 2011) with relatively little study conducted on the synchronous oral discussions.

Undoubtedly interaction is a key construct but in and of itself it is not enough.

Hirumi (2002; p. 156) citing Northrup (2001) stated, “educators must keep in mind

that frequency does not equal quality.” Thus interaction online needs to be viewed in the context of teaching and learning and in particular how it affects deep learning on the part of the learner. Therefore much of the research around this concept has focused on asynchronous online discussions but interaction can also occur in real-time, specifically through oral or active discussion. Mason (2001; p. 73) reflecting on the work of the OU noted that “active discussion has long been one of the aspects that is difficult to provide in DE, with tutorials and summer schools being the usual means of achieving this.” Yet recent technological advancements seem to have overcome these challenges and now institutions can carry out two-way live communication in real-time.

It is interesting to note how Bannan-Ritland defines interaction within an online learning context as a:

two-way communication among two or more people within a learning context, with the purposes either task/instructional completion or social relationship-building, that includes a means for teacher and learner to receive feedback and for adaptation to occur based upon information and activities with which the participants are engaged.

(Bannan-Ritland, 2002, p. 6)

Such interactions for the purpose of inquiry appear to rely heavily on the skill and competence of the tutor to design quality academic discussions (Blanchette, 2011) that allow teacher and learner to interact in a deep and iterative way. Therefore knowledge of how to construct and lead academic discussion appears to be critical for tutors using SCMC technologies.

3.4.2. Discussion as a form of Teaching

Taking discussion seriously moves the centre of power away from the teacher and displaces it in continuously shifting ways among group members. It parallels how we think a democratic system should work in the wider society. In this sense, classroom discussions always have a democratic dimension.

(Brookfield and Preskill, 2005, p. xvii-xviii)

In this section I will primarily review the writings of Diana Laurillard (2002, 2010 and 2012) and of Stephen Brookfield and Stephen Preskill (2005) who have written extensively on the construct of discussion within a teaching and learning context. I will endeavour, where appropriate, to augment their ideas with references to literature from the field of online learning. Laurillard (2002; 168) has defined “teaching as a

sort of conversation” while Brookfield and Preskill titled their book, *“Discussion as a way of Teaching”* (2005) and all see discussion as a critical pedagogy.

Laurillard (2002) observes that there are different types of discussions, depending on the context of where we are in academy. She uses the example of how a discussion in a refectory differs from that of a tutorial. Thus in this context we are very much focusing on the later context and on what Brookfield and Preskill describe as critical discussion, “when participants take a critical stance ... are committed to questioning and exploring even the most widely accepted ideas and beliefs” (2005; p. 7). They note that teachers often struggle to justify the use of discussion as a pedagogical approach and revert all too easily to lecturing as they can claim that the content has been “aired” and they have done their job. Students also appear to struggle with discussion and see it as “busy work, designed to fill up time or give the teacher a break” (Ibid, x). Therefore there appears to be a tension for the teacher in using this approach and they even note that they too have had issues with students who wanted more lectures and less discussion. Yet they clearly see the value of discussion and have developed a sophisticated process for its use in educational settings.

Discussion is disciplined when participants stay focused on the topic, offer evidence to support their point of view (or explain the basis for that view), recall and summarise some of the multiple viewpoints that have been shared, attempt to identify connections between contributions already made and show how the discussion has changed their thinking or added to their knowledge.

(Brookfield and Preskill, 2005, p. 238)

They have identified the following nine dispositions that teachers need to develop in order to design and maintain critical discussions with their learners. These are presented on the next page in Table 3.1.

Table 3.1
Nine Discussion Dispositions

Disposition	Brief Description
<i>Hospitality</i>	The tutor creates an atmosphere where learners feel welcome and secure and one where there is humour.
<i>Participation</i>	This denotes the idea of a democratic classroom where everyone is encouraged to participate and where it is acceptable to remain silent, if so desired. Tutor's role is to manage the discussion and draw students in.
<i>Mindfulness</i>	This is to "lose ourselves to become completely absorbed in hearing out what someone else has to say" (Ibid; p. 11). It involves learning to listen and to hear others. May even involve tutors modelling this behaviour for learners.
<i>Humility</i>	This is "the willingness to admit that one's knowledge and experience are limited and incomplete and to act accordingly" (Ibid, p. 12).
<i>Mutuality</i>	This notion that our flourishing is contingent on the flourishing of others and this commitment to helping others and working with others leads to trust. It is designed to create a safe place where learners can be open.
<i>Deliberation</i>	This refers "to the willingness of participants to discuss issues as fully as possible by offering arguments and counterarguments that are supported by evidence, data, and logic and by holding strongly to these unless there are good reasons to do so" (Ibid, p. 13). This allows all to engage in robust debate where all views are valued. They note such a disposition takes a long time to create.
<i>Appreciation</i>	They note "few of us take enough opportunities in everyday life to express appreciation to one another for a thoughtful comment, a powerful insight, or a wise observation" (Ibid, p. 15). They see such a disposition bringing people together.
<i>Hope</i>	It "provides us with a sense that all of the time, effort, and work will benefit us in the long run, even if only in a small way" (Ibid, 16). They note that both increasing understanding and resolving conflict are underlying principles of this pedagogy of discussion.
<i>Autonomy</i>	That "if democratic classrooms seek to promote individual and collective growth, then people who retain the courage, strength, and resolve to hold on to an opinion not widely shared by others should be given their due" (Ibid, p. 17). They see this as a temporary state – "this is what I believe in and stand for at this particular time (Barber, 1994 in Ibid, p. 17).

Brookfield and Preskill believe that by developing such dispositions teachers will be able to engage in the “intense, debate and dialogue” of the kind Harasim (1987) referred of at the outset of this chapter. However, both they and Laurillard (2002) note that all too often it is too easy for teachers to slip back into transmission and fill the “air” with their own voices. Yet if the goal of a graduate education is to engage in critical discussion then teachers should surely design learning activities that develop such dispositions. Therefore, reverting back to the work of Mayes and de Freitas (2004 and 2007), it seems logical that teachers should adopt pedagogical perspectives designed to support critical discussions.

So what does the literature have to say on the roles and responsibilities tutors and learners should exhibit in environments designed to support active discussion? Though this notion may be relatively new in the context of synchronous online discussion it is well established in the literature associated with asynchronous discussion.

3.5. Tutor and Learner Roles

There is a responsibility on the tutor to create an ‘atmosphere’ that allows learners to share. Some will be very experienced while others will be shy so there is a need to create a sharing environment where they can learn from each other.

(Stavredes, 2011, p. 132)

In considering the role of the tutor and the learner in critical online discussions I want to initially revisit the work of Mayes and de Freitas (2005 and 2007) and locate this discussion within their cognitive and situative perspectives. Reflecting on Rovai’s earlier table (Figure 3.1) the role of the tutor in such settings is critical in structuring and in “scaffolding” such discussions (Rovai, 2004; Tanner and Jones 2002 in Nisbet, 2004). The notion of scaffolding is very much associated with the work of Vygotsky (1978) and with a social constructivist view of learning. To be effective in such a role the tutors:

must be sufficiently expert in their domains to judge individual learning needs, and sufficiently skilled as teachers to adjust dynamically, continuously to switch between the novice’s and the expert’s perspectives.

(Mayes and de Freitas, 2007, p. 19)

Such a role demands a high level of expertise on the part of the tutor and in addition they have to beware of a potential power relationship with their students. In such a role Brookfield and Preskill (2005) urge tutors to “promote student growth” by giving students an opportunity to share their views and to engage in discussions. They note that it is all too easy for tutors to slip back into using didactic transmission but instead they should resort to strategies such as “questioning, criticism, discussion and deliberation” (Ibid, 195). Interestingly they note that it is appropriate for tutors to lecture but that such activity needs to be carefully monitored and should appear briefly either at the outset or the close of a learning activity. This view appears to be at variance with the views of Laurillard who is distinctly against the prevalence of this strategy in HE. However, she notes that online institutions have developed alternatives to this approach as evidenced by the work of the OU.

Alternatives to the predominance of the lecture method at university level have been practised successfully for years in distance-learning universities, such as the Open University ... a combination of media-based learning, occasional tutorials, and individualised support from tutors via mail, telephone and now email.

(Laurillard, 2002; p. 94)

Thus the responsibility appears to lie with the tutor to create democratic and challenging environments where they and their learners can engage in deep knowledge construction (Balaji and Chakrabarti, 2010). They, as tutor and instructional leader, must inevitably cultivate a presence in such spaces (Mahesh and McIsaac, 1999; Stavredes, 2011) and their own teaching beliefs and perspectives will undoubtedly influence this. Thus the tutor has a key role to play in orchestrating the types of interactions that take place online.

The success [of CMC] is totally dependent on a good moderator, however, and this is likely to be as time-consuming as any other form of face-to-face tutoring.

(Laurillard, 2002, p. 151)

Yet the learner too has a key role to play in such settings. Anderson and Garrison (1998) stress the need for learners to take responsibility for their own learning and to engage constructively with the tutor and their peers. Brookfield and Preskill (2005) note that learners can sometimes become frustrated with discussion and that teachers may need to establish clear ground rules as to what is expected. Learners too have beliefs and, as noted previously, they may view discussion as a waste of their time.

During such activities some learners may not be visible. Salmon (2000) has described such learner behaviour as a “lurker” while others such as Beaudoin (2002, in Gulati, 2004) has described them as learners having “low” or “no visibility”. Such behaviour may result in ‘silence’ online, particularly in synchronous discussions when students are not actively participating. Gulati notes that:

In some formal online learning discussion, the choice of safety through silence may not be an option. The formality of online practices that aim to promote openness and democratic learning seemed to have ignored the need to feel, free, confident and secure to choose to participate openly or learn silently.

(Gulati, 2004, p. 8)

Thus tutors need to be aware that student silence may be an indication of other feelings such as a lack of confidence or trust to share a view or an opinion. It is at times like this that tutors need to consider how they can create the correct disposition to allow such learners to participate fully in their education.

3.6. Conclusion

At the graduate level there is a requirement for students and teachers to deliberate and engage in critical discussion and this is as relevant online as it is in f2f settings (Harasim, 1987). Until recently, DE has struggled to facilitate live oral discussion but recent improvements in broadband and in SCMC technologies now offers the potential to facilitate such interaction. However, the literature has highlighted the challenges tutors face in facilitating online discussions and in ensuring students actively participate. I will return to the notions of critical discussion, the role of the tutor and the student within the MATL tutorials in the Discussion Chapter. I will attempt to find evidence of Brookfield and Preskill’s nine dispositions in the observed tutorials. In addition I will use the literature associated with the role of the tutor and student online to discuss the action captured in the MATL tutorials. In this way I will attempt to provide a “valuable starting point for reflection and cross-disciplinary discussions of pedagogy and practice” (Oliver and Conole, 2002, p. 64) within the programme.

4. Methodology Chapter

4.1. Introduction

This chapter will initially present my research questions and a justification for the use of a case study design. I will then provide an overview of the theoretical constructs associated with the study and how it is proposed to gather data in relation to them. I will then outline the methods chosen for the study and my rationale for selecting them. Finally I will outline the research process and how I propose to collect and analyse my data before concluding with a discussion of the ethical considerations associated with the study.

4.2. Research Question

The literature review has established that gaps exist in relation to how online tutors interact with students using SCMC technologies. It further established that much of the academic research in the area of online teaching has focused on the use of asynchronous technologies and that there is a limited literature on the use of synchronous technologies. The purpose of conducting the study was:

- To develop a reliable and valid method for capturing the nature of interactions that occurred during MATL online tutorials.
- To document the challenges tutors encountered when attempting to engage learners during a synchronous tutorial.
- To identify the knowledge teachers required when teaching effectively in live tutorial sessions.
- To contribute to the growing body of knowledge in relation to teaching and learning online and to do this from the perspective of the tutor.

These goals were distilled into the following question:

What professionalism do teachers require in order to interact effectively with their graduate students during online synchronous tutorials?

This question was then further expanded into the following sub-questions that collectively would answer the main question above.

- What is the nature of the *teaching-learning interactions* that have taken place in these synchronous tutorials?
- What *knowledge* do teachers require to effectively teach in synchronous tutorials?
- What are the *consistent models of practice* that we should expect across synchronous tutorials in the MATL?
- What *support* and *training* do teachers and students require in order to orchestrate more effective teaching-learning interactions?

Thus the study was dominated by ‘what’ questions as it was designed to be exploratory in nature and illuminate what takes place in online tutorials.

4.3. Research Design

4.3.1. Case Study

Robert Yin (2009) and others, such as Gillham (2000), have noted that case study design is particularly suited to exploratory type studies and to research questions that ask ‘what’ questions. Gillham also noted that case study “enables you to understand the meaning of what is going on” and it allows you to go “under the skin” to “see the perspectives of those involved” (Ibid, p. 11). Furthermore case study allows the researcher to study “human phenomena and what it means to be human in the real world” (Ibid, p. 2). Thus it allows the researcher to study a phenomenon in-depth, in this case to observe and discuss what took place during a series of online tutorials.

Gomm, Hammersley and Foster (2000) compared the case study approach to that of survey and experimental design. They noted that case study investigation typically involves a small number of cases and often only one. They also noted that it gathers and analyses information “about a large number of features of each case” (p. 4) and that much of this data tend to be qualitative rather than quantitative. Ultimately case studies are concerned with understanding “the case studied in itself with no interest in theoretical inference or empirical generalisation” (Ibid, p.9). In addition they noted that case studies tend to gather multiple sources of evidence in relation to the case under investigation. Therefore a case study design was chosen to explore in depth the nature of the interactions that took place within the tutorials. By selecting such an

approach I was able to gather evidence from multiple sources in an attempt to answer my research questions.

The following definition by Schramm (1971 in Yin, 2009, p. 17) appears to be very appropriate for this study.

The essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a *decision* or set of decisions: why they were taken, how they were implemented, and with what result. [emphasis added by Yin]

In this study I wanted to illuminate the decisions tutors made in relation to how they structured their tutorials, why they structured them as they did and what impact these decisions had on the subsequent interactions with their students. Therefore I wanted to observe at first hand how tutors interacted with their students and to discuss with them the consequences of these decisions. Yin (2009, p. 11) stated that case study facilitated “direct observation of the events being studied and interviews of the persons involved in the events” in his critique of the approach. Thus it seemed ideally suited to this study because so little was known about the interactions that took place during the tutorials and the case study strategy appeared to provide the flexibility necessary to study what took place.

In considering the case study strategy I took cognisance of some of the main criticisms of this particular approach in particular that it lacked rigour, that it was not possible to generalise from one or more cases and that it often takes too long and generates too much data (Ibid). In designing the study these criticisms were considered and a series of tactics were developed in an attempt to avoid such issues. In particular, a number of steps were taken to ensure that the study was valid and reliable and that it was completed in a timely fashion by only collecting relevant data.

4.4. Validity and Reliability

There are typically four tests associated with the quality of any empirical social research and they are as follows:

Construct validity: identifying correct operational measures for the concepts being studied.

Internal validity (for explanatory or causal studies only and not for descriptive or exploratory studies): seeking to establish a causal

relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from spurious relationships.

External validity: defining the domain to which a study's findings can be generalised.

Reliability: demonstrating that the operations of a study - such as the data collection procedures - can be repeated, with the same results.

(Yin, 2009, p. 40)

Construct validity is concerned with the notion that “‘subjective’ judgements are used to collect data”. Thus in this study the decisions around which data to collect were influenced by the literature associated with online teaching and the theoretical frameworks associated with the concept of teacher knowledge. Furthermore, the study decided to collect multiple sources of evidence, such as observations of teacher-student interaction and discussions with the tutors over a number of tutorials. Thirdly, a ‘chain of evidence’ or an ‘audit trail’ was kept in relation to how the study was implemented with the creation of a case study database. This electronic database consisted of a series of digital documents such as interview schedules, contact summary sheets, analysis frameworks and periodic reflections. Finally, a key informant, in this case my supervisor, reviewed my data collection and analysis reports periodically during the study.

Internal validity in this case typically applied to the issue of making inferences, particularly in relation to any changes in tutor-student interactions that occurred after conversations with tutors that took place at the midway point in the investigation. The study proposed to design a professional development intervention with the tutors at week five and to interview them again at the end of ten weeks. If increased student interaction was observed then it could be inferred that this was a result of the intervention. I was aware in advance that such inferences might be made and thus planned to use alternative methods, such as interviews, to confirm this was the case. Thus a strategy of using multiple sources of data was adopted where possible.

External validity addresses the issue of “knowing whether a study’s findings are generalizable beyond the immediate case study” (Ibid, p. 43). In case study research the researcher relies on analytic generalisation and not statistical generalisation, where one generalises from a sample to the universe. “In analytic generalisation, the investigator is striving to generalise a particular set of results to some broader theory” (Ibid, p. 43). Thus my job was to gather the facts (evidence) and to try and explain

them using relevant theories. In this case the results were generalised to two theories, one in relation to interaction and the other related to teacher knowledge. Both theoretical constructs will be further expanded in the next section of this chapter.

Reliability should allow an “investigator [who] followed the same procedures as described by an earlier investigator and conducted the same study all over again, ... [to] arrive at the same findings and conclusions” (Ibid, p. 45). Yin adds that this does not mean that the later investigator will achieve the same results. However, the goal here is to minimise errors and bias in the study. Therefore a paper trail was created that outlined all the procedures followed as “if someone was always looking over [my] shoulder” (Ibid, p. 45). Thus a number of strategies were employed at various stages during the study to ensure that it was valid and reliable and these will be discussed in greater detail later in the following sections.

4.4.1. The Role of the Researcher in Case Study

The researcher is “the (human) research instrument” (Gillham, 2000, p. 27) in case study research. In such settings the researcher has to keep an open mind and to try and avoid or at least minimise the issue of bias. I made a deliberate attempt not to bring my own pre-conceptions about what I thought took place in the tutorials, to both the data collection and analysis phases. Gillham (2000) describes the researcher in such settings as a “naturalistic researcher” who “acknowledges (and looks for) their role in what they discover” (p. 6). I adopted the role of a non-participant observer in the study and tried at all times to accurately collect the evidence from the tutorials and to analyse it with an open mind. However, I was also very much aware of my role as both an investigator and course leader with my colleagues and I will address this issue later under the heading of ethical considerations.

4.5. Underlying Theoretical Constructs

There were two key constructs in this study – that of online interaction and tutor knowledge. Both of these constructs will be discussed in this section and in particular how they were applied in the collection and analysis of the data. The theory associated with online interaction and teacher knowledge was discussed earlier but here I want to focus on how they were operationalised in this study. I will present

these concepts in a chronological order starting with interaction analysis as this approach was conducted initially in all cases.

4.5.1. *Interaction Analysis*

The notion of ‘interaction’ and in particular “teaching-learning interactions” where students and academics engage together (Ashwin, 2009) was central to this study. I wanted to explore how tutors and learners interacted online and to identify a framework or an approach to observe and analyse these events.

Interaction analysis was chosen as an appropriate method for the analysis of the interactions that took place as it has been defined as “a label that refers to any technique for studying the chain of classroom events in such a fashion that each event is taken into consideration” (Flanders, 1970, p.5). Interaction analysis has a long established use in the field of education particularly in analysing and appraising teaching behaviour in f2f classroom settings (Bales, 1950; Flanders, 1961 and Galton et al., 1999; Sahlberg, 2012). A number of frameworks or systems have been developed to analyse the interactions that typically take place in classroom settings between teacher and students. Two of the better-known of these frameworks, Bales’ Interaction Process Analysis (IPA) and Flanders Interaction Analysis Categories (FIAC), were designed to classify observed behaviours in f2f settings and are well regarded within social science research. Yet I could find no evidence of their use in relation to online teaching.

One of the most important instructional elements of contemporary distance education is interaction. It is widely held that a high level of interaction is desirable and positively affects the effectiveness of any distance education course.

(Kearsley, 1995, p. 366)

The online teaching and learning literature recognises the central importance of interaction and it has been the focus of a large number of studies over the past twenty years. Moore (1989; Anderson, 2003) first defined the notion of interaction in an online setting in 1989. He defined three main types of interaction that occur online or in DE as follows: *learner-instructor*, *learner-content*, and *learner-learner*. Though others have built on these initial three interaction categories (Anderson and Garrison, 1998; Soo and Bonk, 1999) these still remain the cornerstone of any definition of online interaction. The study of interaction in online and DE contexts has, until now,

primarily focused on asynchronous communication, such as forums (Gunawardena et al., 1997; Vrasidas, and McIsaac, 1999; Heejung et al., 2009; Abrami et al., 2011; Bain, 2011; Blanchette, 2011 and Zheng and Spires, 2011). Thus interaction analysis is not a new concept within online education but as yet its use in SCMC has been limited.

4.5.2. *Interaction Analysis Frameworks*

A number of frameworks for analysing online interaction were considered and these included Henri's Content Analysis (1991 in Sing and Khine, 2006), Garrison (1991 in Marra, Moore and Klimczak, 2004), and Gunawardena et al. (1997). These frameworks tended to focus on the quality of the online postings and sought to identify evidence of knowledge construction and deep learning. However, these frameworks are more appropriate to studies focused on making judgements about the quality of learning and knowledge construction that took place within such settings. They appeared less suitable for capturing interaction patterns occurring during tutorials.

Social Network Analysis or SNA was also considered. SNA "is a tool developed in social sciences to describe accurately the patterns of interaction between people making up a group or organisation" (Duensing et al., 2006, p. 4). Duensing et al. noted that this approach had been used to depict interactions that took place in an asynchronous CMC setting (Reffay and Chanier, 2002 in Duensing et al., 2006) and they subsequently applied it to synchronous modern language tutorials. Using this approach they were able to pictorially depict patterns of interaction, (similar to those in Figure 4.1), that occurred between tutor and learners and between learners and learners.

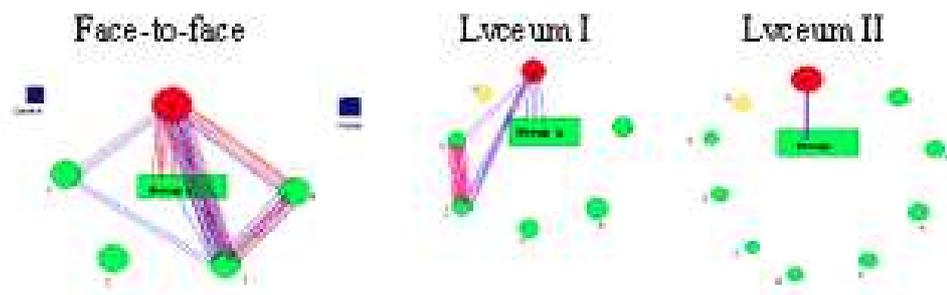


Figure 4.1: Example of the number of interactions that took place (Duensing et al., 2006)

However, from reviewing a selection of studies that utilised SNA (Lowe et al., 2007; Duensing et al., 2006) it was determined that the process was quite complex and the data it generated were quite “thin”, as they did not capture the context within which the interactions occurred. The data were predominantly numeric and the maps illustrated the relationships between a series of nodes.

Having trialled a number of interaction analysis tools it was decided to use a structured observation framework that would capture the types of interactions observed, rather than their contents. Secondly, it was decided to select a tool that was tried and tested in analysing verbal behaviour. Thirdly, it was decided to select an instrument that enabled tutors to analyse their own teaching behaviour and thus provide them with evidence of how they interacted with students. Thus having reviewed a number of frameworks and approaches it appeared that the Flanders Interaction Analysis Categories (FIAC) was best suited for this purpose.

4.5.3. Research Framework for Tutor Knowledge

In addition, a theoretical or conceptual framework was also required to analyse the concept of teacher knowledge in relation to online teaching. A number of e-learning frameworks, such as Collins’ and Berge’s Framework (1996), Gilly Salmon’s 5 Stage Model (2000, 2008 and 2011) and Pam Moule’s e-learning Ladder (Moule, 2007), were reviewed initially. The Salmon Five-Stage model is probably the best known of these and it was originally constructed for use with online discussions facilitated by asynchronous technologies. It was designed around the stages a learner typically passed through when learning online (Gunn, 2001) using a CMC tool. A key feature of Salmon’s model was the role of an ‘e-moderator’, someone who is not a subject matter expert but has expertise in moderation. However, the notion of an ‘e-moderator’ has attracted some criticism (Vlachopoulos and Cowan, 2010) while others have also challenged the applicability of the model to areas beyond CMC (Moule, 2007). Moule believed that the model was context specific and found it did not always map well when applied to other digital technologies.

Thus it was decided to select a theoretical model that was more closely aligned with the knowledge tutors require when teaching with a range of digital technologies. Keating and Evans (2001) introduced the concept of “technological pedagogical content knowledge” TPCK. They noted a disconnection between the level of comfort

student teachers had when using technology in their personal and professional lives and they labelled this TPCK. TPCK was linked to Shulman's earlier concept of pedagogical content knowledge (PCK), the knowledge teachers require to transform their subject matter for their teaching context. Though Keating and Evans introduced the concept, others have added to our theoretical understandings in relation to teacher knowledge and technology (Pierson, 2001 and Zhao, 2003 in Koehler and Mishra, 2008, p. 24). Ultimately it was decided to use the TPACK framework developed by Mishra and Koehler (2006), as is now recognised as an important theoretical model (Wu, 2013).

4.5.4. *TPACK Conceptual Framework*

Mishra and Koehler stated that their framework emphasized “the connections, interactions, affordances, and constraints between and among content (C), pedagogy (P), and technology (T) [that] is central for developing good teaching” (2006, p. 1025). They saw their framework as a tool to help teachers, at all levels, think about the notion of ‘teacher knowledge’ and to inform discussions around what they know and what they may need to know. In addition they stated that what set their approach apart was the:

specificity of our articulation of these relationships between content, pedagogy, and technology. In practical terms, this means that apart from looking at each of these components in isolation, we also need to look at them in pairs: pedagogical content knowledge (PCK), technological content knowledge (TCK), technological pedagogical knowledge (TPK), and all three taken together as technological pedagogical content knowledge (TPCK).

(Mishra and Koehler, 2006, p.1026).

They illustrated their framework through the following graphic that illustrates the seven constructs of knowledge that make-up TPACK. These are as follows:

- Content Knowledge (CK);
- Pedagogical Knowledge (PK);
- Technological Knowledge (TK);
- Pedagogical Content Knowledge (PCK);
- Technological Pedagogical Knowledge (TPK);
- Technological Content Knowledge (TCK); and
- Technological Pedagogical and Content Knowledge (TPACK).

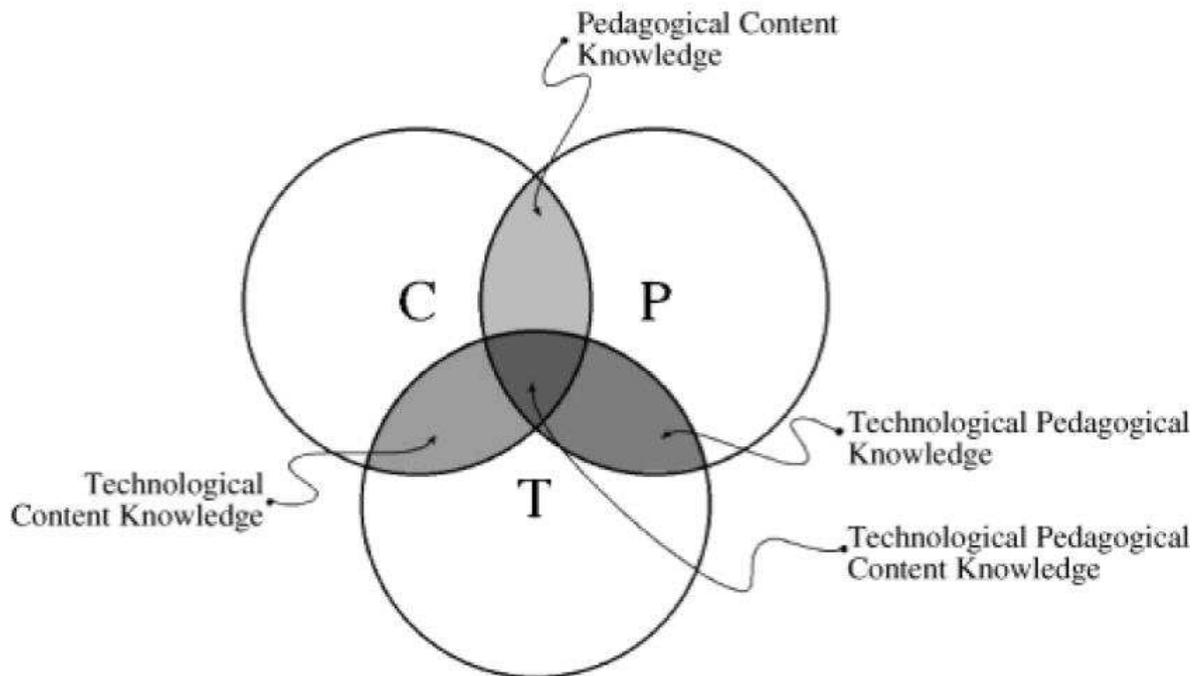


Figure 4.2, TPACK model

In this study the TPACK framework was used during the analysis phase. Prior to embarking on this analysis each of the seven TPACK constructs were reviewed and restated for the purpose of this study as presented in Appendix 1. This review was informed by the TPACK literature and the following section defines each construct using their original definitions (Mishra and Koehler, 2006) and also contains an explanation of how they were used in this study.

Content Knowledge (CK) is “the knowledge about the actual subject matter that is to be learned or taught” (Ibid, p. 1026). This is the level of knowledge tutors have of their subject matter and in this study they were all subject matter experts.

Technology knowledge (TK) is “knowledge about standard technologies, such as books, chalk and blackboard, and more advanced technologies, such as the Internet and digital video” (Ibid, p. 1027). In this study TK was confined to discussions around digital technologies such as the use of online learning platforms, email, word-processing, Skype, Web 2.0 etc.

Pedagogical knowledge (PK) is “deep knowledge about the processes and practices or methods of teaching and learning and how it encompasses, among other things, overall educational purposes, values, and aims” (Ibid, p. 1026). In this study it refers

to general pedagogical activities such as strategies: to motivate students; to communicate with students; to present information to students and to enhance classroom management. In addition it also included discussions around specific teaching and learning strategies such discovery learning, co-operative learning and problem-based learning.

Pedagogical Content Knowledge (PCK) is “knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching” (Ibid, p. 1027). Here it referred to how content was represented and the teaching and learning activities used to engage students in particular, pedagogical strategies that helped learners to better understand the content.

Technological Pedagogical Knowledge (TPK) is “knowledge of the existence, and capabilities of various technologies as they are used in teaching and learning settings, and conversely, knowing how teaching might change as the result of using particular technologies” (Ibid, p. 1028). In this study it refers to statements that discuss the process of teaching online and the general pedagogical activities tutors used in these sessions. This was the most developed of the seven constructs for this study and was heavily influenced by Roslin Brennan’s (2003) earlier work, *One size doesn’t fit all, Pedagogy in the online environment*. Drawing on the work of Brennan it identified at least twelve topic areas that could be categorised as TPK (see Appendix 1). In addition it included discussions around the “the affordances and constraints of the technologies in use” (Cox, 2008, p. 76). The term affordance was not used in this study but discussions around how the technology enabled tutors to interact with the students were coded TPK.

Technological content knowledge (TCK) “is knowledge about the manner in which technology and content are reciprocally related” (Ibid, p. 1028). In this study it refers to statements that discussed how certain topics could be transformed using digital technology, such as the use of Excel to explore statistical concepts within a research methods module.

Technological Pedagogical and Content Knowledge (TPACK) as defined above is the “knowledge of the existence, components, and capabilities of various technologies as they are used in teaching and learning settings, and conversely, knowing how teaching might change as the result of using particular technologies”

(Ibid, p. 1028). In this study TPACK is used in its expansive form to code statements that discuss matters associated with content, pedagogy and technology.

4.5.5. *Recognised Limitations*

Mishra and Koehler acknowledged that the relationship between content, pedagogy and technology in TPACK is complex and nuanced (2006) but they viewed it as essentially good teaching with technology. As noted earlier there have been challenges to TPACK (for example Cox and Graham, 2009 and Graham, 2011) and whether it is possible to clearly identify each of the seven constructs. In addition they have also questioned whether TPACK is in fact a singular entity or a composition of all seven constructs. Though TPACK is an emerging conceptual framework it was used to categorise the issues tutors discussed during their semi-structured interviews and not to measure the level of knowledge tutors possessed in relation to each of the constructs. While recognising the framework has obvious limitations it was hoped to add to theory in this area by testing the suitability of the framework, particularly in the context of synchronous online tutorials.

4.6. **Methods**

The study sought to collect data on the types of interactions that took place and to articulate the knowledge tutors had in relation to teaching in such settings. Thus the two main methods chosen to gather this data were structured observations and semi-structured interviews.

4.6.1. *The Flanders Interaction Analysis Categories (FIAC)*

The Flanders Interaction Analysis Categories is a structured observation instrument (Phellas, Blocher and Seale, 2012) that has a long history of use in the field of education. It was designed initially to enable an observer to sit in the corner of a classroom and code interactions as they occurred between teacher and student. However in this study it was used to code the interactions that took place in an online classroom.

Flanders and his colleagues viewed teaching as a series of linked events and designed the system to enhance the study of teaching behaviour. He viewed the system in “a practical engineering sense” (p.3) that could be used to assist teachers analyse their own teaching “by using the fewest number of concepts that the task requires”.

Flanders believed that the system had to be practical and simple to use so teachers could apply it in their own classrooms to get a better understanding of how they interacted with their students. He viewed the FIAC primarily as a tool to improve teaching behaviour and believed that one day such systems might be the foundation of teacher preparation programmes. However, there is an ontological assumption here that assumes teaching is a nomothetic activity, one that is law abiding and predictable (Jones and Sherman, 1980). Yet this concept of a teacher-centred tutorial appears to be at variance with much of the research on the role of the teacher online, as discussed in the previous chapter.

FIAC has two main categories - teacher talk and pupil talk. Teacher talk is divided in two: direct and indirect teacher talk.

Indirect talk is then sub-divided into the following more specific categories:

- (Code 1) Accepting feeling
- (Code 2) Praising or encouraging
- (Code 3) Accepting ideas
- (Code 4) Asking questions.

Direct talk is divided into three categories:

- (Code 5) Lecturing
- (Code 6) Giving directions and
- (Code 7) Criticising or justifying authority.

Pupil talk is divided into two categories:

- (Code 8) Responding to teacher and
- (Code 9) Initiatory talk.

Code 10 is usually referred to as silence or confusion.

Therefore seven of the ten categories apply to the teacher and only two to the student and it appears to have been very much constructed from the perspective of the teacher and not the student. It should also be noted that Flanders viewed interaction analysis as “a tool of action” that allowed teachers to continue developing their knowledge about teaching, something that he saw as having no “particular stopping point”

(Flanders, 1970, p. 20). The idea that the FIAC could be used in this way to help teachers improve their practice was of particular interest in this study.

4.6.2. How it should be used

Flanders (1970) provided significant detail on what constituted each of the original ten categories and outlined the process observers should follow in coding teacher behaviour. The observer codes at intervals of three seconds and thus approximately 1,000 responses are coded in a 45-minute period (Jones and Sherman, 1980). In addition to reviewing and articulating the original ten codes I also consulted a set of videos that explained how the framework should be applied (Nova Southeastern University, 2013). These resources and others (Stones and Morris, 1981; Wray and Kumpulainen, 2010) were consulted to improve the validity and reliability of FIAC in this study. A copy of the framework has been included in Appendix 2.

4.6.3. Problems with Operationalising FIAC

Despite its widespread use in education FIAC has attracted some criticism. FIAC was designed at a time when teacher-centred pedagogies were popular and thus appears to work best in teacher-directed settings. It appears that the framework works less well in student-centred settings that are not teacher dominated (Dowling and Brown, 2010). In addition, some researchers found that the ten categories were too narrow and thus they expanded it to provide greater discrimination (Bondi, 1970). Hopkins (2008) found that a lot of information, particularly non-verbal communication cues, was lost when using FIAC.

Despite these criticisms FIAC was designed to analyse verbal behaviour and it appeared to work best in teacher-directed and highly structured settings. Jones and Sherman (1980) compared it to a net cast “over teacher-student discourse” that “permits calculation of frequencies of certain behaviours” (p. 557). Firstly, in this study the tutorial recordings consisted entirely of recorded verbal behaviour. Secondly, it was felt that the restricted number of variables being observed made it easier for the observer to put the schedule into practice and to generate a detailed picture of what took place (Dowling and Brown, 2010). In addition, working with recorded audio meant the observer was not required to code in a live setting, which it

was felt would have improved coding reliability. Thirdly, the system was designed to allow teachers to reflect on their teaching behaviour and it could enable them to improve their practice. Finally, a modified digital coding system was used, discussed below, which included richer social context data to enhance the numerical pattern data. For these reasons it was selected as the interaction analysis framework. However, being aware of its limitations, it was anticipated that it might require future refinement.

4.6.4. *Semi-structured Interviews*

Interviews are, “a conversation with a purpose” (Robson, 2002, p.228) where data tends to occur naturally and the conversation can be treated as an analyzable text (Silverman, 2000). There are three main interview formats: fully structured, semi-structured and unstructured. Gillham (2000) states that a semi-structured interview “is the most important form of interviewing in case study research” (p. 61). Semi-structured interviews were selected as the most appropriate interview method as they provide the interviewer with a shopping list of questions and provide greater freedom (Robson, 2002) and flexibility (Gillham, 2000) in the sequencing and wording of questions. Such a method allows the researcher to develop different question lists across a range of interviews and it facilitates the probing of interviewee answers. Furthermore it is recognised to work well in case study, particularly if one is working with a small number of people who are accessible and if the questions are open and allow for extended response (Gillham, 2000). Though a clear structure is critical the interviewer does need to be ‘flexible’ when interviewing participants.

In this case the interview schedule (see sample in Appendix 3) contained twelve questions based on issues identified in the literature review. For example, in designing the instrument the following question was formulated from reviewing the literature:

What kind of learning and by extension what type of interaction would you like to see in your tutorials (Soo and Bong, 1998)?

The questions were re-structured as follows in the interview schedule

Discuss what type of learning behaviour or activities she would like to witness during the tutorials.

This question was designed to answer the research question that asked “what was the nature of the teaching-learning interactions that took place during the tutorials”, as outlined at the start of this chapter. Later on, prior to the analysis phase, these questions were then mapped to my set of pre-defined TPACK descriptors (Appendix 1) and it was found that the questions mapped to the TPACK codes as articulated in Appendix 4.

Thus the interviews focused on the pedagogical approaches tutors employed when using the SCMC software. In contrast only one question dealt with the use of technology (TK) while there were no direct questions pertaining to constructs such as CK, PK, PCK or TCK. It might seem strange that none of the questions pertained to PCK but as tutors had no choice but to use technology to teach the focus was therefore on TPACK or TPK. Furthermore PCK is often associated with the knowledge a tutor requires to teach a particular domain and in this study it applies in a general sense to the MATL and not any specific domain, such as Research Methods or Technology Enhanced Learning.

In advance of developing the semi-structured interview schedule a number of instruments used in previous TPACK studies (Archambault and Crippen, 2009; Schmidt et al, 2009; and Hofer et al., 2011) were reviewed. The majority were self-reporting surveys that contained a series of statements associated with each of the seven constructs. For example here is a typical statement from a survey:

I can teach lessons that appropriately combine literacy,
technologies and teaching approaches.

(Schmidt et al., 2009, page 6)

It was decided not to use such structured instruments as they were primarily designed for a pre-service setting and were not contextually appropriate for SCMC. Thus it was decided to create a more flexible semi-structured interview schedule that was informed by the literature associated with online teaching.

4.7. Research Process

4.7.1. Participant Selection

In Section 1.4 I provided a high level overview of the MATL and stated that the programme consisted of fourteen taught modules and a thesis. Ten tutors tutored on

these fourteen modules with two tutors tutoring on more than one module. I initially briefed all ten tutors about the study at a f2f team meeting in August 2011 at which all verbally agreed to participate. I involved seven tutors, see Table 4.1, in the study and this decision was dictated by the timing of my data collection. The Doctoral School approved my research proposal and ethical approval in November 2011 and I immediately began piloting my research instruments at that time. Three tutors (T5, T6 and T7 as described in Table 4.1) were tutoring on their respective modules at this time and I sought their permission to review one of their tutorials using FIAC and to interview them about their experiences during that particular tutorial. This activity was designed to pilot my research instruments, as described in 4.7.2. These three modules concluded in January 2012 and I then collected data from four additional tutors (T1, T2, T3 and T4 in Table 4.1) between February and June. I analysed two tutorials using FIAC, the first tutorial and tenth tutorial, and I subsequently interviewed each tutor on the action I observed. Thus T1, T2, T3 and T4 were interviewed twice, once during the module and again when it was completed and this data is presented in Table 4.1.

4.7.2. Piloting of Research Instruments

Having spoken to the tutors I then wrote to each one seeking their written informed consent (see sample letter in Appendix 5). In addition I created a Participant Information Sheet (Appendix 6) that outlined the purpose of the study and provided background information to the research project. Once these forms were completed I then piloted my instruments with tutors T5, T6 and T7.

The FIAC framework was applied retrospectively to tutorial one in their respective modules. This analysis worked well and an Excel spread sheet was designed to capture the code tallies and additional comments on what was observed (sample in Appendix 7). The coding form was designed to allow the observer to check that the codes corresponded to the correct audio segment by including the timings in minutes and seconds. Typically at the end of each sixty-second block I checked that I was coding the correct segment of audio.

Timing	Time in Seconds	Time in Minutes and Seconds	Code	Comments
1	3	0 Minute	5	
2	6	3	5	
3	9	6	5	
4	12	9	5	
5	15	12	5	
6	18	15	5	
7	21	18	5	
8	24	21	5	
9	27	24	5	
10	30	27	6	Tells them she is putting up a Word document with their team on it
11	33	30	4	Then says they should see the document (app sharing)
12	36	33	5	
13	39	36	5	
14	42	39	4	Asks if they can give her a thumbs up if they can see it?
15	45	42	4	
16	48	45	5	
17	51	48	5	I have thumbs up from almost everybody
18	54	51	5	
19	57	54	5	This is talk but it is not lecturing - we don't have a code for talking
20	60	57	5	

Figure 4.3, Sample of FIAC Coding Form including rich comments

Furthermore a FIAC Tutorial Report (FTR) was created for each tutorial. This narrative document contained a rich description of the tutorial interactions and further enhanced the comments captured during the FIAC. This document provided a thick description of what took place and an extract is included in Appendix 8.

In advance of each interview I analysed a segment of a previously recorded tutorial using the FIAC framework and I typically discussed some of these events during the interview, using a strategy known as interview plus (Kane et al., 2004; Mayes, 2006). For instance I may have observed that the tutor commented that “I am doing all the talking here” and I probed why this had been the case. Thus the FIAC analysis was used to highlight events of interest from each tutorial and these were discussed in the interviews. The semi-structured interviews lasted between forty and sixty minutes and were based on the interview schedule outlined above (Appendix 3). The interviews were conducted online using the MATL course conferencing system, AT&T Connect. My initial pilot interview was recorded using a digital tape-recorder but there were issues with sound quality and in arranging a suitable time for both the tutor and myself to meet. As a result all future interviews were recorded online and this removed the necessity for the tutor and me to be present in the same room. This approach resembled that of telephone interviews, as I had no visual contact with my interviewees. However, this was not an issue, as I knew them well as they were colleagues. At the outset of each interview I outlined the context for our discussion and then followed the semi-structured schedule in conducting the interviews. The quality of data gathered during this phase was of a very high quality and it was later decided to include it in the study for that reason.

4.7.3. Formal Data Collection Phase

Having successfully piloted the interview schedule and the FIAC coding system the study continued and worked with four new tutors. The tutors were again briefed as to the purpose of the study and were supplied with the participant information sheet and asked to provide their written informed consent. This was provided in all cases.

In advance of the study two online meetings were held with the tutors where they discussed how they had previously interacted with students during MATL tutorials. These online meetings enabled the tutors to share their professional practice and to also share their experiences and confidence in using technology in teaching and learning settings. This high level data was captured and is presented for each tutor in the next chapter. The meetings took the form of learning conversations that have been described as “a planned and systematic approach to professional dialogue that supports teachers to reflect on their practice” (GTC, 2004). For example during one of these sessions a tutor shared a collaborative learning approach she had used previously and a number of her colleagues subsequently tried this strategy in their tutorials. These learning conversations typically lasted no more than 45 minutes and were designed for tutors to share and develop their practice. Unfortunately due to time pressures only two such events were held at the outset of the study.

Each participant’s first tutorial was analysed using FIAC and they were interviewed within ten days of this event having occurred. Again all interviews were recorded using AT&T Connect and they followed the same structure as in the pilot phase. The interview plus strategy was again used to highlight and discuss events of interest. Each tutor was interviewed again on the conclusion of his or her module and the same interview schedule was again used. In advance of the interview I again reviewed the audio recordings for any interesting events and these were discussed during the interviews.

4.8. Validity and Reliability

A detailed ‘audit trail’ was maintained in relation to each FIAC analysis and its corresponding interview. The FIAC analysis contained both numerical and contextual data and this was later used, in conjunction with the recording, to create a FTR. Similarly a separate interview schedule document was prepared for each tutor

interview and this was informed by the FIAC analysis and the FTR. Finally a contact summary sheet was also created for each interview that captured the key information gathered during the interview and any additional questions I should have asked in the second interview.

Thus the data corpus for the study comprised the following elements.

Table 4.1
Data Set Overview

Tutor Name	Data Collected	Comment
Tutor 1 (T1)	Pre- and post- interview data FIAC Analysis on 2 tutorials	Tutorial 1 = 90 minutes Tutorial 2= 90 minutes
Tutor 2 (T2)	Pre- and post- interview data FIAC Analysis on 2 tutorials	Tutorial 1 = 60 minutes Tutorial 2 = 60 minutes
Tutor 3 (T3)	Pre- and post- interview data FIAC Analysis on 2 tutorials	Tutorial 1 = 60 minutes Tutorial 2 = 60 minutes
Tutor 4 (T4)	Pre- and post- interview data FIAC Analysis on 2 tutorials	Tutorial 1 = 60 minutes Tutorial 2 = 60 minutes
Tutor 5 (T5)	1 interview FIAC Analysis on 1 tutorial	Tutorial 1 = 60 minutes Tutorial 2 = 60 minutes
Tutor 6 (T6)	1 interview FIAC Analysis on 1 tutorial	Tutorial 1 = 60 minutes Tutorial 2 = 60 minutes
Tutor 7 (T7)	1 interview FIAC Analysis on 1 tutorial	Tutorial 1 = 60 minutes Tutorial 2 = 60 minutes

Though the focus of the study was on capturing the views of the tutors, student voice was captured in the FIAC data and through the words of the tutors in the semi-structured interviews.

4.9. Data Analysis

The data analysis occurred in three chronological phases as outlined below.

4.9.1. FIAC Analysis

Two computers were used to analyse each recorded tutorial; I listened to the audio on one computer while I coded the interaction on the other at three-second intervals. As each tutorial was approximately sixty minutes long there were between 1,000 and 1,400 codes associated with each recording.

Having applied the codes I subsequently went back and re-listened to each recording to create the FTR at a later date. During this phase all the initial FIAC codes were reviewed and reconsidered. For example during the pilot phase silence was initially coded as a 10, however on further reflection some of these were re-coded as 8s, *pupil-talk response*. The reason for this recoding was to reflect the fact that students were discussing a teacher-posed question and though this was not captured on the audio recording it was assumed students were in discussion. Thus each recording was reviewed at least twice and a rich narrative was created to accompany the FIAC analysis. Having conducted the FIAC analysis I then moved on to the interview transcripts.

4.9.2. TPACK Analysis

Each interview was transcribed and was subsequently analysed using the pre-defined TPACK descriptors (Appendix 1) using NVivo 9. The descriptors were applied to chunks of text that discussed TPACK constructs and they were applied in a holistic rather than a narrow way. The interviews were imported into Nvivo and then coded using the TPACK codes, which were also preloaded. For instance the following chunk of text was coded Technological Pedagogical Knowledge (TPK) because the tutor spoke about generating a good debate using AT&T Connect.

I got some reasonable interaction, I got different people to raise their hand and give their opinion on stuff ... The other would be if we had a good debate about their particular research projects

In predefining this code I had stated that TPK would apply to the following types of statements:

I will be looking for statements where tutors discuss general pedagogical activities that a tutor can or does engage in using digital technologies. I will be looking for statements that apply generally to learning and not specifically to their module content.

Thus in the example above the tutor discussed the strategies she or he used to interact with students and therefore it was coded as TPK. It proved difficult on occasion to differentiate between TPK and TPACK and this appears to support the concerns of others (Cox and Graham, 2009 and Graham, 2011) as to the validity and reliability of the individual constructs. However the TPACK framework did allow me to code the discussions that took place with the tutors using the descriptors developed in Appendix 1.

Having coded the interviews using the TPACK framework the next phase was to conduct a thematic analysis (Braun and Clarke, 2006). This was undertaken to capture the issues that tutors discussed during the interviews. Thematic analysis “is a method for identifying, analyzing and reporting patterns (themes) within data” (Ibid, 2006, p. 79). The themes that emerged were initiated using the semi-structured interview schedule and often corresponded to issues featured in the online teaching literature. These included issues such as the level of discussion that took place with students and the challenges tutors faced in engaging students.

4.10. Ethical Considerations

This study adhered to the British Educational Research Association’s Revised Ethical Guidelines for Educational Research (2004). As the study was located within my own institution I was cast in the role of an insider-researcher, that of an insider within the College and that of an investigator conducting my doctoral thesis.

In conducting this study I received permission to obtain access to two types of data to answer my research question. Firstly, I required permission to access the previously recorded synchronous tutorials on the College virtual learning environment. These data already existed but I sought permission to use them for a new purpose, to review the interactions with a view to identifying gaps in tutor knowledge. To acquire permission I wrote to the Vice President of Academic Affairs and to the individual tutors outlining my request to access their tutorial recordings. In addition permission was sought from the tutors to gather primary source data through the use of semi-structured interviews. All tutors completed a Voluntary Consent Form (Appendix 6), which stated they were willing participants in the study. As noted previously the TPACK framework is normally associated with a particular domain of knowledge,

e.g. Research Methods, however for ethical reasons it was not possible to identify the content domains in this study. If this had occurred it would have been relatively easy to identify individual tutors and this would impinge on their anonymity.

In this study I was an 'insider' and thus my study has been undertaken from the perspective of an insider researcher.

By insider research, we mean research by complete members of organizational systems and communities in and on their own organizations, in contrast to organizational research that is conducted by researchers who temporarily join the organization for the purposes and duration of the research.

(Adler & Adler, 1987 in Brannick and Coghlan, 2007, p.59)

I was cognisant of my dual role in this study, that of researcher or 'investigator' and that of director of the programme, or 'employer' (Ibid, 2007). Thus I was mindful at all times that I was not evaluating or judging my colleagues but rather attempting to help them develop as professionals in this new teaching context.

4.11. Conclusion

In this chapter I have presented my research question and the theoretical constructs that underpinned this study. I have also outlined the research design and the methods employed to collect and analyse my data. Finally I have described the research process and the ethical issues that were considered and addressed in conducting this study. The following chapter will present the empirical data gathered during the study.

5. Empirical Chapter

5.1. Introduction

This chapter will present the data captured using the FIAC and TPACK analysis for the seven tutors who participated in this study. Detailed analysis will be presented for tutors 1 to 4 as a full set of data (two observed tutorials and two semi-structured interviews) was collected on these individuals. In addition selected elements will be presented from the partial data collected on Tutors 5 to 7 (observed tutorial and one semi-structured interview). Each Tutor is numbered, for instance Tutor 1, who for brevity will be referred to as T1. Each case will be introduced by a brief background to the tutor, followed by their FIAC analysis and the analysis of their semi-structured interviews. Selected evidence will be presented for each tutor to illustrate certain key observations.

5.2. Tutor One (T1)

T1 is an experienced tutor who has experience of teaching part-time at the graduate level in a number of teacher education institutions and universities in Ireland. He has excellent general IT skills and uses technologies, such as computers, conferencing software and email, as an integral part of his daily work. This individual is not a full-time lecturer and works as an academic consultant across a number of higher education institutions. Though experienced in teaching in higher education he was a novice to tutoring online. He had designed his own multimedia lecture content and a colleague assisted him during Tutorial 1.

5.2.1. Tutorial 1

Table 5.1 presents the coding picture for the initial tutorial in this module and it illustrates that 32% of all interactions were coded as *Lecturing* (Code 5), while 21% were coded as *Accepts or uses ideas of pupils* (Code 3). The *Code 5s* indicate that the tutor was lecturing or re-presenting information presented in the lesson while the *Code 3s* occurred when he responded to questions or statements posed by the students. T1 spoke for 64% of the tutorial time and this consisted of presenting new lesson material, accepting and responding to student ideas. These data can also be interpreted as the students spending 64% of their time listening to the tutor.

In contrast 30% of the tutorial was coded as *Pupil-talk-response* (Code 8) while there were no interactions coded as *Pupil-talk-initiation* (Code 9). A significant number of the Code 8s were associated with a fifteen-minute task where students were paired off to discuss an assigned reading. Interestingly 7% of the total interactions were coded as *Silence* (Code 10) and this manifested itself as tutor pauses or short silences. There was no evidence of Code 1 (*Accepts feeling*) and Code 7 (*Criticises or justifies authority*) interactions, a pattern that was repeated across all eleven FIAC analyses. The coding patterns indicated that the majority of the interactions were tutor initiated and that students were relatively passive during this tutorial. The analysis also shows that T1 asked relatively few questions (Code 4, *Asks Questions*), only 4%, while only 7% of all interactions were coded as *Giving Directions* (Code 6).

Table 5.1
T1 FIAC Tally Marks Tutorial 1

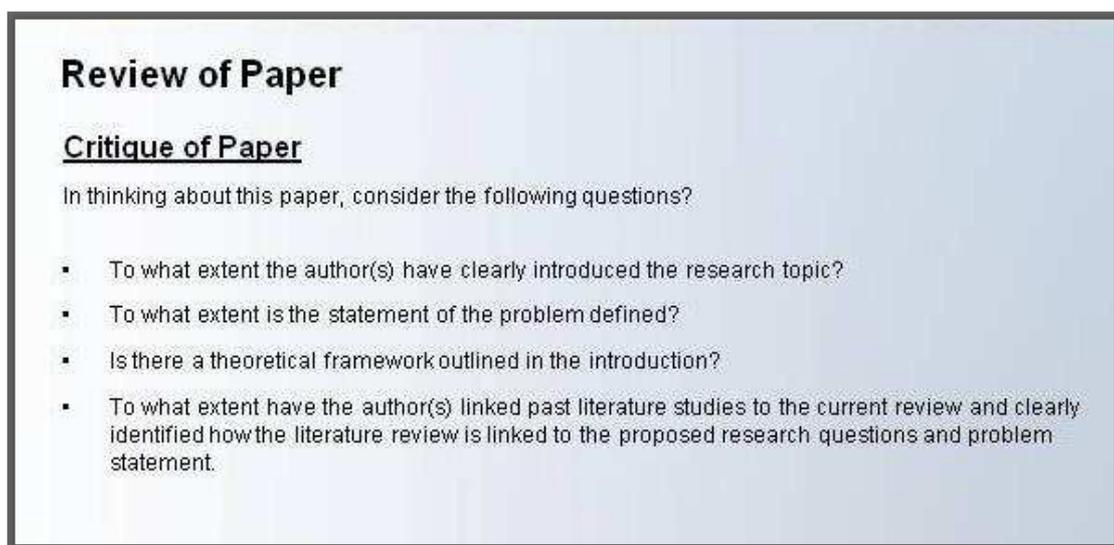
Category		Tally Marks by Category	Percent
	1		
	2	7	0
	3	354	21
Teacher	4	58	4
	5	526	32
	6	109	7
	7		
Pupils	8	499	30
	9	0	0
Silence	10	99	6
<i>Total Number of codes</i>			<i>1,652</i>

There were 1,652 interactions coded during Tutorial 1. As outlined earlier the FTR narrative document contained a detailed account of all tutorial interactions. From reviewing the FTR it appeared that some of talk coded as *Lecturing* (Code 5) was administrative talk on topics such as where to locate readings etc. T1 relied on PowerPoint slides to structure his tutorial and spent almost fifteen minutes speaking to his first three slides.

- Slide 1 = 6 minutes
- Slide 2 = 3 minutes
- Slide 3 = 4 minutes

Much of the opening period was coded *Lecturing* and occasionally T1 asked “*Any questions, put the hands up on any of this stuff?*” However there was limited reaction from students to his question and the first student question arrived after twenty minutes. The interaction with this student lasted almost fourteen minutes and it pertained to two issues – one a question related to a class text and the second to the student’s own research question. This prolonged interaction had an impact on the tutor as he referred to this issue in his subsequent interview.

During the tutorial T1 introduced a group activity where he asked students to critique an academic paper. He posted the task on a PowerPoint slide and it consisted of four questions (Figure 5.1).



Review of Paper

Critique of Paper

In thinking about this paper, consider the following questions?

- To what extent the author(s) have clearly introduced the research topic?
- To what extent is the statement of the problem defined?
- Is there a theoretical framework outlined in the introduction?
- To what extent have the author(s) linked past literature studies to the current review and clearly identified how the literature review is linked to the proposed research questions and problem statement.

Figure 5.1, Sample tutorial task

He introduced the task by announcing “*Just divide into groups for about 10 minutes*” but students appeared confused. His assistant tutor noted this confusion and assigned students to teams. T1 then stated, “*Maybe we could spend 10-15 minutes at that ...*”. Students were given 15 minutes to discuss the question and this was coded as *pupil-talk response* (Code 8).

One other interesting feature of this tutorial was the use of a YouTube video at the end of the tutorial. This video lasted five minutes and was coded as *Lecturing*. Interestingly there was no discussion task associated with this video and the tutorial ended once the video concluded.

5.2.2. Tutorial 10

During Tutorial 10 T1 was unaccompanied and he designed and tutored the session on his own. Table 5.2 presents the FIAC analysis for the tutorial and it shows that 46% of the interactions were coded as *Lecturing* (Code 5) and 28% were coded as *Accepts or uses ideas of pupils* (Code 3). In total T1 spoke for 74% of the time an increase of 10% on Tutorial 1. Interestingly *Pupil-talk-response* (Code 8) accounted for only 9% and this represented a drop of 21% from Tutorial 1. The amount of time coded as *Silence or Confusion* (Code 10) was 14% an increase of 8% on Tutorial 1 while there was a slight decrease, 4% down to 2%, in the percentage of interactions coded as *Asks Questions* (Code 4).

Table 5.2
T1 FIAC Tally Marks Tutorial 10

Category		Tally Marks by Category	Percent
	1		
	2		
	3	371	28
Teacher	4	21	2
	5	615	46
	6	24	2
	7		
Pupils	8	124	9
	9		
Silence	10	186	14
<i>Total Number of codes</i>			<i>1,341</i>

The FTR showed the majority of the *Code 5s* represented lecturing and that the tutor spent most of the tutorial speaking to the students. For example, an analysis of the first forty-one minutes shows that the session was dominated by five main interactions. T1 played a YouTube video and this lasted for six minutes, this was followed by a PowerPoint slide that was unconnected to the video content. The video content was not discussed or analysed by the tutor or by the students and the two interactions were unconnected. After ten minutes a student asked a question unrelated to the tutorial content and the interaction lasted thirteen minutes. The tutor continued lecturing and at 36:03 he announced, “*I have a question*”. He seemed

relieved that a student had interrupted his flow and the interaction lasted eight minutes. The FTR noted the discussion could have ended sooner, after four and a half minutes, however the tutor seemed keen to prolong the interaction.

**Table 5.3
Tutorial Interaction Flow**

<i>Type of Interaction</i>	<i>Length of Time</i>
YouTube Video	6 minutes
Slide 1, A series of Guided Questions on how to conduct a literature review	4 minutes
Discussion with one student	13 minutes
Lecturing	10 minutes
Discussion with one student	8 minutes
<i>Total Time</i>	<i>41 minutes</i>

Students did not engage in any form of group work during this tutorial and T1 dominated the entire tutorial. Rather than assigning group tasks he adopted a whole group questioning strategy and frequently asked, “*Anyone got a question, anyone?*” Further analysis revealed that the typical pattern of interaction consisted of the tutor talking, followed by silence before he asked some questions and eventually a student responded (Figure 5.2).

*Series of 5s (Lecturing)- Series of 10s (Silence or Confusion)-
Series of 4s (Questions) – Series of 8s (Pupil-talk-response)*

Figure 5.2, Interaction Pattern

The subsequent semi-structured interviews indicated that T1 found it challenging to engage the students. He felt as if he was doing all the work and was aware of the limited student engagement.

5.2.3. Semi-structured Interviews

The semi-structured interviews focused primarily on issues associated to TPACK and TPK as outlined in the previous chapter. An analysis of T1’s two interviews showed that both constructs accounted for 60% of all codes in Interview 1 while they accounted for 46% of Interview 2. Thus the majority of the interview transcripts

were coded for references to TPACK and TPK related issues. This was to be expected in light of the way the interviews were designed.

Table 5.4
T1 TPACK Coverage Percentages

Code	Percentage Coverage Tutorial 1	Percentage Coverage Tutorial 10
TPK	50	18
TPACK	10	28
TK	4	0.00
PCK	4	0.00
TCK	3	12
CK	2	4
PK	0	0
Total	71	62

5.2.4. *TPACK Codes*

In an attempt to understand the knowledge tutors require to lead an online tutorial this study endeavoured to identify the issues that tutors encountered in such settings. Using TPACK as a lens to analyse these interviews it emerged that five themes, listed below, appear to have dominated the discussions.

1. The Challenges encountered
2. The Instructional Strategies employed
3. Structure of the Tutorial
4. The Purpose of the Tutorial
5. Issues related to Professional Practice

However, it should be noted that although some of these themes were found in other cases they are unique to T1.

5.2.5. *The Challenges T1 Encountered*

T1 encountered a number of challenges in conducting his online tutorials and chief among these was the engagement of learners. His tutorials were dominated by tutor talk and he believed the lesson content was challenging and that this contributed to the low level of interaction.

I suppose the big challenge and still the big challenge today is how to get them engaged online, how to get them talking? I think a lot of the students were a little uncomfortable with the subject matter because it is a tricky concept ...

He declared that he failed to engender any “healthy” discussion around the topics covered in the lessons. He wondered if this was down to his skill as a teacher because despite his best efforts there was little or no deliberation.

*Maybe it is to do with the skill of the tutor ... to foster an online debate ... we have **not** fostered enough healthy debate or even heated discussion around some of the research topics we could have done.*

He spoke at length of the challenge to engage students and even commented “*some students don’t say anything at all*”. This lack of interaction often led to periods of silence as captured in the FIAC analysis, though he stated he had become comfortable with this over time.

Doing the live tutorials ... I certainly felt more comfortable this time around. And more comfortable with the silence, if you get the little bit of silence and being able to take it in a different direction and go with the flow

T1 made a number of references to the challenge of tutoring online and the lack of visual cues. In addition he was concerned with students overly dominating a discussion and felt it was easier to deal with such issues in the f2f classroom.

There is always a fear, a fear of monopoly, a student has a particular research question and they are coming back and you are engaging and all of a sudden everyone else is silent and it is very difficult to bring them in on the online situation and say “Max what do you think of that?” In a classroom environment you can actually do that. You can say “hold that for a moment Max” and bring the person in or bring the group in [he pauses to think] it is just different from a f2f environment that way, that facilitates that kind of [thing], broader interaction and you are right there in front of them, some of them you can see where some of them potentially have ‘the blank face’, the blank stare on the face [chuckles] or the vacant look, where they may be struggling with some of the technical research questions or issues. Whereas in the online stuff you don’t get any sense of that – you don’t get any sense of engagement with the other students

The majority of T1’s tutorials lasted 90 minutes and he found they required significant preparation. His preparation appeared to entail having sufficient “material” to enable him to “cover” during the event.

I find a big difference between an hour and an hour and a half in terms of your preparation, how you think about how you are going to run the tutorial, how you think about, I suppose it is if it goes in a direction you don't want it to go or you feel you haven't covered the material you want to cover.

This is further established in the following quote where he linked performance on the assignment with student understanding of the core concepts. He indicated that he needed to be better prepared for the online tutorial and this meant having sufficient material. The “eventuality” that he appeared to fear the most was that of silence so the tutor had to have sufficient material to talk about for 90 minutes.

I have done much more preparation for the tutorial in the online environment because you just have to prepare for the eventualities that no one will engage with you, so you just out of necessity need to keep going.

This reaction to silence or non-engagement appears at odds with his earlier comment that he is now comfortable with silence. In this case silence seems to denote lack of interaction and this is not a comfortable tutor feeling.

5.2.6. Instructional Strategies

T1 stated that he structured the tutorial in fifteen-minute segments so as to engage his students. In addition he also noted that the natural tendency for the tutor is to talk and for students to sit back and listen.

You need to have a bunch of activities you need to have a video, show them a five-minute video of whatever, some guy discussing mixed methods, talk about that, ask them what they think of the video, what is working in the video, what is not working in the video, get them to read some papers, take fifteen minutes discuss a paper, that kind of stuff is the kind of strategies you end up trying to use to actually get them engaged because the tendency is actually to ... keep talking, particularly if they want to listen because they will consume this stuff because you know what, it is easy and it gets them off the hook.

T1 recognised that he did not use student tasks to the same degree in Tutorial 10 as in Tutorial 1 and yet he acknowledged this strategy had worked well previously. On this occasion he adopted a transmission perspective where he did most of the talking.

[In previous tutorials] we did much more tasks, I didn't do enough of that this time. That would be my big learning – last year we got them to Skype each other with a particular task and break [them] into two [groups] to discuss something, comeback and give feedback to the group. I didn't use that particular tactic in this particular [set of] tutorials that was a

mistake. That is a very good strategy that I used last year that I didn't use this time.

Although he stated this was not a lecture his FIAC analysis indicated that tutor-talk dominated these events and he struggled to give students voice.

Because the other thing to remember is, and this is the hard bit as well, this is not a lecture right [small laugh] it is a tutorial so it's about them getting a handle on stuff not you reiterating the hour lecture that you have already recorded and given.

Ultimately he found that tutor talk was his “default mode” and when there was silence he reverted to filling the air with his voice.

If you are struggling or whatever you go back to teaching mode or if you don't feel prepared or whatever you just you are getting silence you go back to default mode, which is to talk because you know the material better than anyone else in the room. What do you do? You talk.

However, he felt that students did ask questions when it came to terminal assessments.

I felt I was the one who had to keep initiating the questions unless it was about the assignment. And I felt I had to draw it out of them much more than them volunteering.

When he reflected on his most recent set of tutorials he felt they were “absolute torture” and that the students were uninterested.

So I found in this particular session, these six tutorials, absolute torture because they had no interest engaging with the material, they had no interest in asking questions ... I just don't think they had any interest.

5.2.7. Structure

T1 referred to time and structure regularly during the interviews. He was conscious of the medium, of being “on air”, and of how he could engage learners during his fifteen minute blocks.

You know an hour and a half is a lot it is six fifteen [minute blocks of time] ... it is a lot of time to be on air and speaking so you need to engage them and you need to try and make it relevant. ... and the other thing is you are also conscious of the fact that most of those students may have taught all day as well so there is a level of fatigue as well, so you have got to try and balance that and make it interesting and interactive or at least mix it up so that you are not just talking at them the whole time.

T1 viewed his PowerPoint slides as essential in guiding the flow of his tutorials and he stated you can't just "rock up to an online tutorial". In his view he needed to ensure he had sufficient material to cover the allocated time, as the alternative was "too stressful".

The other reason for structure or scaffolding is that you can't ad lib this stuff. You can't rock up to an online tutorial having done zero preparation you might get away with that in a f2f class. You could put up a few questions on the board ... I don't think you can do it with this stuff, you need a signpost for yourself, it is just too hard, it is too stressful is my honest view of that.

5.2.8. *Developing Professional Practice*

T1 was of the view that tutors had to experience online tutoring themselves and no amount of preparation could prepare them for the event. Thus experiential learning was essential in his view to developing one's practice.

*... You actually have to go through it and learn it and do it and make a mess of some of the stuff and then go I get what you were saying now ... and you go "oh my God" but you had said **that** to me [with emphasis] so it wasn't as if you were lying to me, you told me that is what you need to do [nervous laughter in his voice]. I thought I had done it correctly but you have to learn that ... and you figure it out.*

He found the opportunity to co-tutor with a colleague extremely beneficial and he felt this strategy improved his practice.

... I think you were co-pilot on some of the technology and that was very helpful and how you actually ask questions, take a break, get them to do stuff, check that they can hear you, you know simple stuff that you just wouldn't think about ... you having done it before and me there watching you do it and actually doing it together was very helpful.

Furthermore he felt that the College could collate examples of tutor practice and allow tutors to review these with a view to improving their own practice. This archive could then be made available to tutors.

... there must be a ... examples of good [tutoring from] across the last number of years some really good, bad and ugly [examples]. And it probably would be no harm to sit in and listen to a very good one and maybe you could model your own stuff on it ... Just so you get a sense of what it is like, what worked and what strategies the tutor was employing to engage with the students.

Interestingly he found tutoring a very private and personal experience – one devoid of collegiality. This lack of teamwork and discussion raises deeper issues in relation to how tutors can share their practice if they feel so alone.

I think it is non-existent there is no collegiality among the tutors ... because that is the way it is set-up. I do my five weeks ... I interact with you [as Course Director] but you know that is okay that is good but maybe I should be talking to Tutor X and I should be talking to Tutor Y.

He observed that when tutors had shared strategies during the previous year that this community of practice activity had worked well. He wondered if it had occurred again this year would he have obtained a strategy to engage this particular cohort.

That was one of the good learnings ... when you said, “You know what we have tried this thing with Skype and the tasks and that actually worked”. And you were right it did work whereas there may have been something else that other tutors had worked with this particular group and said “you know I found that this actually worked really well with this group”.

5.2.9. Signature Pedagogy

On reflection he was not happy with the way he designed and hosted his most recent tutorials, yet the assessment results were fine which he found reassuring. However, he believed he needed to rethink how he approached such events.

I suppose to be honest I wasn't happy with it. I am not sure they got a whole lot out of it if you are really being honest until I read the essays and I said they got a good bit of this. So they did listen and they picked up some of the subtleties I tried to get across.

Having concluded his set of tutorials and having participated in the research study he began to question how the tutorials were structured and their purpose. He suggested a more student-centred pedagogy rather than the teacher-dominated approach evidenced in the FIAC.

But I do think we need to have a serious think at how we [structure the course] and do we need to do tutorials at all? Absolutely I think we do, I think it is really important but I think there needs to be different thinking about the scaffolding, so everyone feels that this is worthwhile. The material in this [module] is challenging enough and you [the learner] have to have some support. You just can't listen to the lecture and think you have it because there is more subtlety there.

He would welcome a shared pedagogical approach where all tutors agreed to a particular approach, where there were shared expectations and ground-rules.

I do think a standard approach that we all try and use as tutors to put some consistency and standardisation would be very beneficial or at a very least we should sit down and have a discussion about it. I would be very interested to hear how other tutors actually approach this stuff as well, it can only make us better tutors ... because there is a different skill as a tutor online as compared to f2f.

The establishment of such rules would also extend to students who sometimes were constructively invisible online.

I sometimes find that the student stuff, they don't have mikes (microphones) or anything as well, there is a bit of messing on the other side as well, which doesn't help either.

5.3. Tutor Two (T2)

T2 is an experienced tutor who has worked in education for over twenty years and has extensive experience of working with teachers in a professional development role. Her IT skills are good but she would not consider herself an advanced user and was a little apprehensive about her technological knowledge. Though an experienced teacher in f2f settings, she was a novice online and had tutored one set of ten tutorials the previous year.

5.3.1. Tutorial 1 Analysis

Table 5.5 presents the FIAC analysis for Tutorial 1 and there is a good spread of codes across all categories. Fourteen per cent of all interactions were coded as *Lecturing* (Code 5) while 18% of the time was coded as *Giving Directions* (Code 6) and 8% as *Asking Questions* (Code 4). There was also evidence that T2 actively praised students, *Praises or encourages* 5% (Code 2), and accepted their ideas, *Accepts or uses ideas of student* 6% (Code 3).

Table 5.5
T2 FIAC Tally Marks Tutorial 1

Category		Total Tallies	Percent
	1		
	2	53	5
	3	63	6
Teacher	4	90	8
	5	164	14
	6	205	18
	7		
Students	8	539	47
	9		
Silence	10	31	3
<i>Total Number of codes</i>			<i>1,114</i>

Conversely *Student-talk-response* (Code 8) accounted for 47% of the all interactions with *Silence or Confusion* (Code 10) only accounting for 3%.

Though 14% of the time was coded as *Lecturing*, the FTR showed that much of this talk pertained to administrative matters and in particular to establishing the ground rules for the tutorials. T2 made limited use of pre-submitted PowerPoint slides and instead shared slides and Word documents via the Application Sharing feature within AT&T. She was one of only two tutors to use this feature.

Her tutorials were carefully designed in advance. There is evidence that she had prepared her questions in advance and on one occasion stated, “*So the question I would like you to discuss with your partner ...*”. All student activities were timed and she monitored these closely and asked, “*how is the timing going?*” and on another occasion “*I think I over shot the time*”.

T2 brought her knowledge of co-operative learning in f2f settings online and a pattern emerged in terms of how she interacted with students. She organised the students into Learning Teams and she issued clear instructions on how they were to work together and how they were to report back to the main group. For example the tutor would ask for a response (*Code 4*), a student would respond (*Code 8*), then T3 would praise their contribution (*Code 2*) and then she would affirm and build on their response (*Code 3*). These interactions typically lasted two to three minutes and were

very focused. She praised their contributions and made comments such as, “*I love your questions*” and “*these are such high quality answers*”.

T2’s tutorials were designed using a student-centred philosophy and she placed a strong emphasis on student voice as opposed to teacher voice. Interestingly she asked the students how they found conversing via text, as opposed to using voice, and only one student stated it was strange and a bit awkward. Despite the challenge presented by the technology to converse naturally, as in a f2f conversation, she worked with the technology as best she could.

5.3.2. Tutorial 10

Similar interaction patterns were observed in Tutorial 10 where she focused primarily on encouraging student discussion. The FIAC analysis (Table 10) revealed that *Teacher talk* (Codes 1-7) accounted for 49% of the all interactions while *Pupil talk* (Codes 8 and 9) accounted for 45%. Silence only accounted for 4%.

T2 introduced a new strategy, the *Constructive Controversy Procedure*, in this tutorial and she defined it as a procedure where students had to present and defend their arguments individually before they then composed a “best reasoned argument” from the team.

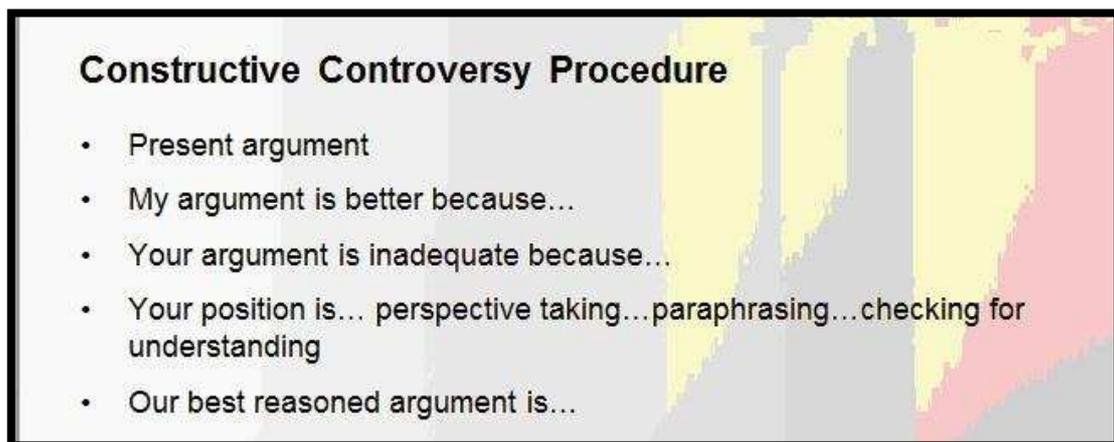


Figure 5.3, Sample activity

The activities associated with this strategy dominated much of Tutorial 10 and accounted for the majority of interactions coded as student talk. Student talk was split almost equally with 25% coded as *Student-talk-response* (Code 8) and 20% as

Student-talk-initiation (Code 9). This particular strategy appeared to work well and T2 was keen to refine it further in future tutorials.

Table 5.6
T2 FIAC Tally Marks Tutorial 10

Category		Total Tallies	Percent
	1		0
	2	27	2
	3	83	7
Teacher	4	76	6
	5	219	18
	6	208	17
	7		
Students	8	302	25
	9	243	20
Silence	10	42	4
<i>Total Number of codes</i>			<i>1,200</i>

In Tutorial 10 time was carefully managed and the tutor observed she had not initially given students sufficient time to respond and then provided an additional two minutes. She regularly accepted student responses and praised the contributors and then built on their responses, as was the case in Tutorial 1. Once again the level of *Lecturing* (18%) and *Direction* (17%) were quite similar to Tutorial 1. On further analysis the *Direction* codes applied to two types of activities. Firstly, when the tutor outlined the ground rules for engaging in the *Constructive Controversy Procedures* and secondly when she gave directions associated with student teamwork.

5.3.3. TPACK Analysis

The TPACK analysis found that issues associated with TPK and TPACK accounted for 36% and 48% of the interview transcripts from Interview 1 and 2. While PK accounted for 7% of interview one and 5% of Interview 2. Thus the discussions were dominated once again by pedagogical matters.

Table 5.7
T2 TPACK Coverage Percentages

Code	Percentage Coverage Interview 1	Percentage Coverage Interview 2
TPK	33	31
PK	7	5
TCK	6	13
TPACK	3	17
TK	0	0
PCK	0	0
CK	0	0
Total	49	66

A number of issues were identified during the thematic analysis and these are elaborated on in this section.

5.3.4. Issues related to Professional Practice

T2 viewed the online tutorials as spaces where you could build relationships and break down learner isolation and not just spaces to “*expand on the lecture*”. She actively built community by modelling a desired behaviour.

I suppose the official purpose of the tutorials is to expand on the lecture and maybe I do see a slightly differently [nervous laughter again] purpose. I didn't intend it but it is what has emerged and I now see they have a huge purpose in breaking down the isolation of the students and building a community of learners. You know helping the students in that community- perspective taking, problem solving, different perspectives ... just seeing different points of view, sharing of ideas.

Central to this notion of breaking down student isolation was the concept of creating a community of learners where tutors and students learned from each other. In addition she too believed that there was a need for the tutors to collaborate and create a shared vision for their online tutorials.

In terms of tutorials I think community is huge, learning from each other. And so that kind of sharing with other tutors, I would say sitting down and creating a shared meaning and a shared vision and a shared structure and not quite shared strategies for the tutorials. So that we all have a shared [vision] so there is an understanding of what a Hibernia online tutorial is about it would be nice to have a sense of community with the tutors and to build that sense of community and to build that sense of team.

Because currently tutors are left to their own devices and they are left to “make of it what you will”, and though she has created her own meaning, she states this is not sufficient and that there is a need for ground rules and guidance.

I kind of feel in a way that I have created my own meaning to the tutorials, hopefully built in part with the students. But you are giving this tutorial now make of it what you will sort of, rather than this is its purpose and its structure.

5.3.5. Instructional Strategies

T2 made a decision not to dominate the tutorials with her voice and was keen to give the students voice because “if it’s the tutor talking, okay they are getting a lot of expertise but they have to do an awful lot of listening.” In order to break down student isolation she used talk, student talk, to build a sense of community.

They are saying being an online college they are very isolated and they just love to break down the isolation and to get know each other, so there ... is a little personal at the beginning – just five minutes where they share something - how their study went during the week or how their work went during the week or something that happened in their personal lives

Many of these strategies T2 had cultivated in f2f classrooms and she found they transferred well online.

I immediately went into building an interactive classroom, like I would do in a traditional classroom and I was very surprised that worked so well build up that sense of team with them because it gives a kind of a warmth and there is this saying that “Real learning comes from the heart not from the head”.

Thus student voice, as opposed to tutor voice, played a central role in her tutorials and she was keen for all students to contribute and teach during the tutorials.

I don’t like the sound of my own voice too much [nervous laughter] so I love to give voice to others and to build up the team and that everybody in the classroom is teaching, like using all the resources in the classroom, that it is not just one teacher but everybody has something to teach and to share and to try and draw that out.

So rather than lecturing she utilised questioning strategies to build a sense of community.

I do it by question rather than by expanding on the lecture and I ask them, I tell them, that I am always teaching them listening skills to model for the

classroom. I try to model for the classroom all the time. So because of that I would say “ask your partner rather than tell your partner”, so they would ask their partner [about] their ideas.

These questions were devised in advance of the tutorial and the students had to provide a team-answer, thus forcing them to deliberate and to compose an agreed response.

The simplest strategy I used was to have a question, you know what I thought would have been a good question on each of the three sections of the lecture and they discussed the question and they came up with a team-answer and then the instruction was that I would ask one of them to feedback on behalf of the team but whoever was asked to feedback it should be the same answer because the huge temptation, even when people discuss, they tend to feedback their own pet little things and the other person then might feel disempowered or it damages the team, so there was very clear instruction.

Ultimately she wanted students to set the agenda for the tutorials by taking ownership of the learning agenda and by identifying the questions or issues they wanted discussed. Instead of the tutor designing his/her questions she wants the students to set the tutorial agenda in the future, by submitting their questions in advance.

Unpacking I agree with but not unpacking the tutors’ ideas of what needs to be unpacked but checking out can I, in any way, elicit [what] the students might need to be unpacked and in fact I think I have a long way to go there because I have already starting saying to them, “these are my questions, could we come up with your questions?” and when my confidence builds I will definitely be moving into that. Like I would love to start with them next and emailing them beforehand, as a result of the lecture “what questions have you got?”

5.3.6. Structure and Planning

T2 constantly stressed the importance of structure within her tutorials. Unlike other tutors she did not equate structure with the creation of slides. Instead she designed her tutorials around the formation of good questions.

I suppose you have to plan, you have to prepare, you have to know generally what you are doing and I feel I would have done that, ... there is no way you would face any group like that without knowing what you were about ... I find it very hard to send in slides a couple of days in advance so I did it for the first few weeks ... so I don’t send in slides beforehand [anymore] and the reason for that is I think that my preparation is more about questions.

She carefully managed tutorial time and mapped out her activities in advance to match the design of the pre-recorded lessons. She constantly monitored the clock and the students to ensure she was on track.

I would time management mine very carefully – but that is part of the co-operative learning training. So if you saw my folder of notes you know the time is written down so if I give them 4 minutes to discuss I write down the time, so I know when I am coming back in. The time for the next task and I do think the hour should be time managed. I think time management is part of management and to get the maximum out of it. ... the lectures or the lessons were divided into 3 sections, it kind of gave a structure and I followed that structure for the tutorials really. So I would pick a question from each section of the lecture that they would discuss.

5.3.7. Challenges tutors encountered

Though an experienced f2f tutor she was absolutely terrified when she went online initially.

Last year was my first year so I was absolutely terrified – it is just this whole new thing, putting on headphones and saying good evening and hoping the laptop won't explode in front of you.

Despite these challenges she worked with the technology and though it had limitations, specifically in not enabling students to converse naturally, she worked around these. She designed a work around so that they could converse

The big limitation is that the students cannot converse with each other ... and in any classroom, even if I have very old fashioned whole-class teaching, the students can converse one on one ... [Here] you can only do teamwork through the writing, where they text each other or they write to each other and that is a huge limitation.

She believed the technology was designed to facilitate a transmission model of education and that it lagged behind our understanding of modern educational instructional strategies. She felt that it was left to the teachers to “drag the technology” and use it effectively with their learners.

I think it was devised with last century's teaching methodologies they are excellent technologists but not teachers. So the concept now of being able to learn according to your learning style, the concept of inclusion, that the technology works for everybody to learn at their speed ... That all of those concepts and the concept of constructing meaning, constructing learning together rather than filling empty vessels, that the technology hasn't moved there. Because we are teachers we are moving there and dragging the technology with us.

Yet despite these challenges she appeared to drag the technology with her.

5.4. Tutor Three (T3)

T3 had extensive experience of teaching at the university level for many years in f2f settings. Though a novice to online tutoring he had created the lesson content for this set of tutorials and he had tutored one set of ten tutorials on the same topic two years previously. He used technology in his daily work but had no experience of using AT&T Connect.

Table 5.8 presents the FIAC Analysis for his first tutorial and it shows that *tutor talk* accounted for 40% of the observed interactions, while *student talk* accounted for 44% with *silence* accounting for 16%. This pattern suggests that the tutorial was dominated by student discussion and that there was some tutor lecturing.

Table 5.8

T3 FIAC Tally Marks Tutorial 1

Category		Tally Marks by Category	Percent
	1		
	2	13	1
	3	36	3
Teacher	4	128	11
	5	263	22
	6	34	3
	7		
Students	8	530	44
	9		
Silence	10	197	16
<i>Total Number of codes</i>			<i>1,201</i>

The FTR showed that T3 was well prepared and had approximately twenty PowerPoint slides to guide his sixty-minute tutorial. At the outset of the tutorial he spent some time speaking and this was coded as *Lecturing* (Code 5), but on reflection it was more administrative talk than the presentation of new material. Figure 5.4 captures T3's density of coding for Code 5 (Lecturing) and it shows that the main concentration of tutor talk appeared in a block at the start of the tutorial and that this

pattern did not continue. For example he spoke for 57 seconds uninterrupted (19 x 3 seconds) and then for 45 seconds (15 x 3 seconds) at the start while later on he spoke for typically 6 seconds (2 x 3 seconds) or 3 seconds (1 x 3 seconds).

Code 5: Lecturing

19, 15, 12, 25, 68, 2, 1, 2, 6, 1, 5, 6, 2, 2, 2, 7, 5, 2, 1, 1, 9, 6, 1, 2, 1, 1, 1, 17, 7, 5, 2, 6, 21

Figure 5.4: Lecturing Pattern for Tutorial One

T3 asked a significant number of questions during his tutorials. He had prepared these in advance and they appeared on his PowerPoint slides. Figure 5.5 illustrates the nature of the questions students were asked to respond to.

Why is he an icon in psychological testing/assessment?

What have you found out about him – interesting, unusual, surprising?

In what way did he oppose the hypothesis on “individual difference” shared by his predecessors and contemporaries?

Has his reputation survived?

Figure 5.5: Sample Set of Questions from Tutorial One

When students reported back he typically commented “thank you for that” and continued to his next question. Figure 5.6 illustrates the pattern of FIAC codes when the tutor asked a question. It is interesting to note that he typically asked the same question in a number of different ways after he encountered initial silence. However, he appeared comfortable with silence and he took his time in rephrasing the questions until he received a response.

4-10s-4s-8s-3-5 [Question-Silence-Repeat Question-Student Response-Tutor Affirmation-Tutor Talk]

Figure 5.6, Typical Tutor Student Question Interaction

The evidence suggests T3 was keen to keep the tutorial moving and to cover his pre-prepared slides. He rarely engaged in a discussion with a student, instead he would thank them for their contribution and move on. Even if students raised a controversial or interesting topic such as the notion of *Nature Versus Nurture* or *What does it mean to be intelligent ?* discussion was not encouraged. The emphasis was on ‘covering the ground’ and in addressing the material on the slides.

5.4.1. Tutorial 10

The FIAC analysis revealed that there was an increase in the number of questions he posed during Tutorial 10, increasing from 11% to 17%. There was also a slight increase in the amount of time spent lecturing, rising from 22% to 26%. In contrast there was a significant decrease in the amount of time coded as *Silence or Confusion*, from 16% to 9%, while *Pupil-Talk-Response* (Code 8) remained almost the same dropping only 1% from 44% to 43%.

Table 5.9
T3 FIAC Tally Marks Tutorial 10

Category		Tally Marks by Category	Percent
	1		
	2	38	3
	3	2	0
Teacher	4	210	17
	5	314	26
	6	18	1
	7		
Pupils	8	526	43
	9		
Silence	10	115	9
<i>Total Number of codes</i>			1,223

The FTR highlighted the use of questioning and the polling feature. T3 commenced the tutorial with twenty questions and the first five appear in Figure 5.7. He used the polling feature to gather student responses and based on their responses made comments such as “well done you are all on that one” or “actually that is a yes because ...”. Again there is limited engagement with students and the emphasis is on progressing to the next slide.

Lesson 9 : Revision Questions

- 1. When companies assess people for a job they tend to assess them against the background of a detailed Job Description and Person Specification. Yes/no
- 2. In the assessment that the same companies carry out they tend to objectively measure general ability; aptitudes; personality; motivation; experience: compare the scores obtained with the Job Description and Person Specification and then make their decision. Yes/no
- 3. The assessment of candidates for roles as Professor of Education; Lecturer in Education and Teacher is not quite as comprehensive. Yes/no
- 4. Using this more comprehensive assessment approach – complemented with background and reference checks – companies are happy with their selection decisions 80-90% of the time Yes/no
- 5. Companies use standardised tests of ability, achievement and personality as a part – albeit an integral part – of their selection programs. Yes/no

Figure 5.7, Sample questions from Tutorial 10

T3 also provided students with an opportunity to present their own slides in response to a task he had set during Tutorial 8. The students were asked to research and respond to a controversial newspaper article. They submitted their slides in advance and presented their views to their peers. This was the tutor's first occasion to use such a strategy and it appeared to work well.

The formula is simple: real change

- o Yates writes a hard-hitting article which makes a large number of suggestions.
- o I agree with much of what he has written. For example:
 - standards are falling and illiteracy is rising.
 - there is certainly overspending in some areas.
 - a starting age of 5 would be more beneficial – especially if there was national high quality ECEC.
 - church and education should be separated.

Figure 5.8, Sample student presentation slide

Though the student presentations presented opportunities for deliberation and interrogation the tutor did not allow time for such discussion.

5.4.2. Semi-structured Interviews

Table 5.10 (overleaf) shows that the majority of T3’s interviews were coded as TPK with 32% coverage in Interview 1 and 51% in Interview 2.

Table 5.10
T3 TPACK Coverage Percentages

Code	Percentage Coverage Interview 1	Percentage Coverage Interview 2
TPK	32	51
PK	0	3
TCK	2	3
TPACK	5	0
TK	4	1
PCK	0	0
CK	2	0
Total	45	58

5.4.3. Purpose of the Tutorials

T3 had given considerable thought to the purpose of the online tutorial. He viewed them primarily as “*sorting out difficulties*” and they provided a space for tutors and students to do this.

The purpose of tutorials in f2f in universities or in 3rd level institutions is to sort out difficulties that students are having with the course content, I think that is the main reason. And if they are not understanding something or if they are falling behind with something or if they are confused, the tutorial is there so that the students come together, they meet the tutor they put their queries and questions and I suppose the objective is to sort out the queries and the questions.

5.4.4. Challenges Tutors Encountered

While T3 felt clear about the purpose of the tutorials he questioned if students understood this and wondered how we could motivate them to attend and to participate.

I think the key to all of this is the students’ attitudes, what do they feel about the tutorials, do they feel they are irrelevant, they’re good, they’re excellent, they could be better, how could they be better? What would influence them in actually saying I am actually looking forward to this tutorial and I am going to make ‘bloody full sure’ that I am in there at six o’clock or seven o’clock to participate in it.

This matter of non-participation concerned T3 and he devised a strategy to involve the students more in their own learning.

I posed a question to myself should the tutorials be more formalised? For example [could] students go off and take a particular element of [a] lesson, do some research on it and then come back and present it to all the others, and the others then can query questions, add more in to it.

In addition to the lack of interaction there was also a lack of deliberation and critical discussion. T3 was very concerned with the lack of critical discussion and the fact that students appeared to accept his view without questioning it.

First of all they don't like asking questions, because they might feel it makes me look stupid because I should be answering this question because it is actually in the course content or it's something I should be discussing myself. But I think last year, and up to now, and we have just done two this year none of them have challenged me and said "this is a load of rubbish [both laugh]" or "I have read elsewhere and here is another point of view", none of them have done this or maybe they believe this is a good sort of learning.

He found the AT&T software a challenge as he had expected it would support two-way video. He equated the system to "the wireless" where the tutor spoke, then remained silent and someone else spoke and he believed this turn-taking was a barrier to interaction and to critical discussion.

I presumed it would be a video rather than an audio medium I think a video medium would be much more effective where students can actually see the tutor and the tutor can see the students it would be more live I suppose ... [it's the] old audio thing, where I speak, I got to shut up, you speak, it's like wireless! I think that is a bit of a barrier ...

The lack of visual cues and transactional distance were noted as two major challenges in trying to interact with learners at a distance. He believed that the upgrading of the system to include video would overcome many of these difficulties.

I would say the main one is the distance. Trying to engage with people you can't see and trying to teach them something ... it is much stranger than doing it visually and in actual fact if Hibernia could afford it [slight laugh] it would be a great idea to do the tutorials through the medium of video rather than audio.

5.4.5. Instructional Strategies

T3 viewed the role of the tutor as that of a “ringmaster” who orchestrated critical discussion while his FIAC data suggests a dominant teacher-centred style of tutoring.

The tutor should be the ringmaster and he should give out tasks to the participants, they go off and they do their research and they talk to each other and they share information and they come back and even if they come up with stuff, that is in disagreement with what's in the classes [the pre-recorded lectures], they should be prepared to say it and be confident to say it and this is going to be to their benefit rather than to their disadvantage.

When students did not respond he typically “clicked in to them” to get a reaction and interestingly he stated he would “go after them” for an answer.

I was doing more of the work, but I was ‘clicking in to them’ much more often. If I was hearing nothing from John, I’d say John what do you think of that? And Michael we haven’t ...? I would actually push the button, and go after them.

However, he recounted that he relied less on this strategy during his most recent set of tutorials. Instead he made more use of the poll feature and he introduced the student presentation idea. This strategy, though it was introduced late on, appeared to work well.

I discussed [with you how] to give the students more ownership of the tutorial and I gave them two topics – one was comments on the education system by Ivan Yates [a former government minister] and the other was DCU’s President on 21st century skills ... Unfortunately I could only do this on the last tutorial [tutorial 10] and unfortunately ... so we had a very poor turnout, three [students] turned up for one of them and two for the other. But the class that did elect to present the slides enjoyed it enormously and I think they got a lot out of it.

5.4.6. Professional Practice Issues

T3 believed that online teaching would only improve when more tutors tried out new teaching and learning strategies and shared their own professional practice knowledge with each other.

I am assuming that the more that tutors get involved in this the more they come up with new approaches and new techniques and new tactics.

He noted that he had found previous interactions with other online tutors extremely helpful and he had borrowed some of these ideas for his own tutorials.

5.5. Tutor Four (T4)

This was T4's first time tutoring on the programme. She and T3 were tutoring the same module and T3 had developed the lesson content. She had experience of using video-conferencing software and Office applications in her daily work but this was her first time tutoring online. Similar to T1 and T3 she did not have a background in teaching, yet she had experience of teaching at the graduate level in f2f settings. Both her tutorials were sixty minutes long; however the recording for tutorial ten was only fifty minutes long, as it appeared some sound was lost.

Table 5.11
T4 FIAC Tally Marks Tutorial 1

Category		Tally Marks by Category	Percent
	1		
	2	9	1
	3	8	1
Teacher	4	28	2
	5	689	60
	6	41	4
	7		
Pupils	8	111	10
	9		
Silence	10	255	22
<i>Total Number of codes</i>			<i>1,141</i>

Two numbers dominate the FIAC analysis in Table 5.11, *Lecturing* (Code 5) 60% and *Silence/Confusion* (Code 10) 22%. T4 had prepared sixteen slides and she covered all this material in her tutorial. This may account for the high level of *Code 5s*. However, as was the case with the other tutors, much of her early talk was more administrative and functional. During the opening twenty minutes of the tutorial T4 spoke continuously and during this period there was only one interaction with a student via text.

Unfortunately the recording for Tutorial 1 was incomplete as the sound dropped on a number of occasions while T4 was speaking. As there was no evidence of what occurred during these interactions this time was coded as *Silence/Confusion*, yet it is reasonable to assume that much of the interaction was *tutor talk* (Code 5). Although

this was T4's first tutorial she paired students off to interact on a discussion task and used the texting feature to facilitate discussion. This seemed to work well and accounted for 10% of the overall interactions (Code 8).

The issue of time management was an issue during Tutorial 1 and T4 stated "*I haven't managed the time so well*". This statement was made at the close of the tutorial when she presented a series of slides that contained a significant amount of text (*For an example see Figure 5.9*).

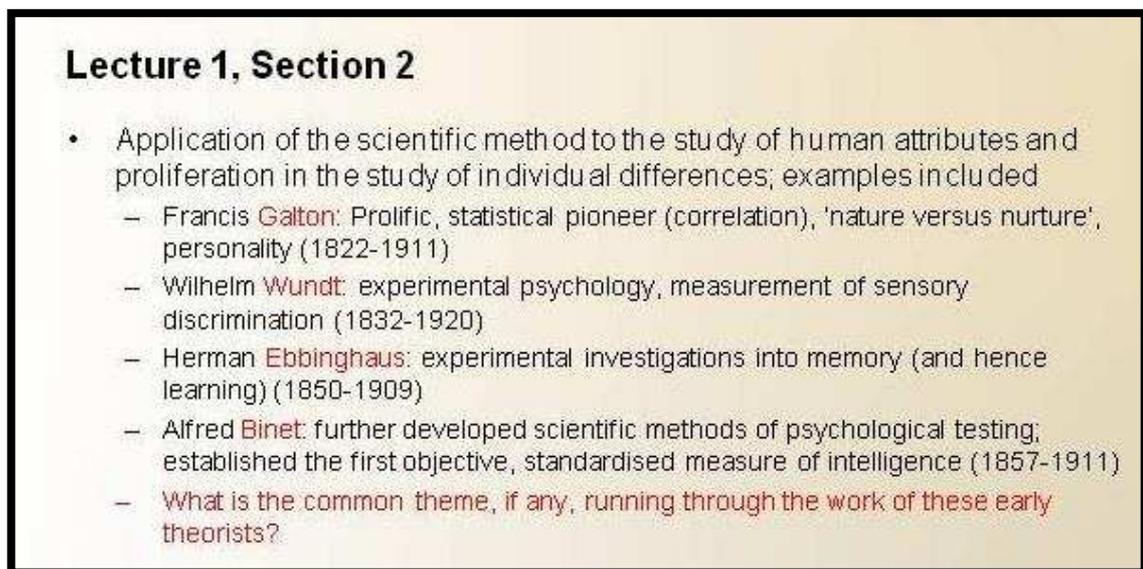


Figure 5.9, Example of the slide content from Tutorial 1

Although there were additional slides to cover, T4 stated "*I am not going to push you because we are short of time*" and she read the slides without asking for student feedback.

5.5.1. Tutorial 10

The most dominant type of interaction coded in Tutorial 10 was again *Lecturing* (Code 5) which accounted for 67% of the total interactions, while 20% of the interactions were coded as *Pupil-talk-response* (Code 8). Two activities dominated this final tutorial. In the first twenty minutes T4 presented new content and in the

final twenty minutes she designed an interactive task around the Programme for International Student Assessment (PISA) test⁵.

Table 5.12
T4 FIAC Tally Marks Tutorial 10

Category		Tally Marks by Category	Percent
	1		
	2	5	0
	3	45	4
Teacher	4	40	4
	5	674	67
	6	29	3
	7		
Pupils	8	36	20
	9		
Silence	10	14	1
<i>Total Number of codes</i>			<i>1,003</i>

The tutorial began in a whirlwind fashion where T4 presented a series of slides that contained new content, similar to that contained in *Figure 5.10*. These slides contained a significant amount of content that T4 read aloud.

⁵ PISA is an international assessment administered by the Organisation for Economic Co-operation and Development (OECD) to school going children at age 15. It is administered every three years across 32 countries in the domains of reading literacy, mathematical literacy, and scientific literacy. This is done through a set of common international tests.

Review of Lesson 9

- The test should be **age appropriate** and the tasks **authentic**
- **Item format** is an extremely important consideration. In PISA 2009:
 - 50% of print questions were multiple choice, and the remainder required a written response. In all, 34% of questions required an extended written response
 - 62% of electronic questions were multiple choice, and the remainder required an extended written response
- Questions were **pre-piloted** using a variety of techniques (e.g. cognitive labs) and **reviewed and rated** by each country according to authenticity, relevance, cultural fairness etc.
- All questions were trialled in a **field trial** in all countries before selecting the final set on the basis of **country reviews, psychometric properties, fit to the framework, and timing of the test**
- Development of a national standardised test is broadly similar, with less emphasis on review and piloting of items

Figure 5.10, Example of the content on slide 4 from Tutorial 10

While the material was presented she spoke quickly, barely taking a breath, as evidenced by the interaction pattern in Figure 5.11.

[Code 5 (179)- Code 4 (1)- Code 10 (1)- Code 5 (169)- Code 4 (1)- Code 10 (1)]

Figure 5.11, T4 interaction pattern from Tutorial 10

In the second activity T4 presented sample test questions from the international PISA assessment and asked students, individually, to answer them. She then provided the answers to the entire group using a whole-class teaching strategy. However, time was once again an issue and she had to rush this task in the end.

5.5.2. Semi-structured Interviews

TPACK and TPK issues again accounted for the majority of semi-structured interview discussions, 57% and 47% respectively, in both interviews.

Table 5.13
T4 TPACK Coverage Percentages

Code	Percentage Coverage Interview 1	Percentage Coverage Interview 2
TPK	41	45
PK	0	1
TCK	3	8
TPACK	16	2
TK	3	0
PCK	2	0
CK	0	6
Total	65	62

5.5.3. Challenges

While T4 was comfortable with technology she found several challenges in tutoring online and she discussed these in her interviews. Two issues in particular proved challenging, the non-facilitation by AT&T Connect of f2f communication and the need to multi-task during tutorials.

Well the two main differences between the Hibernian based software and the Cisco based software is that with the Cisco you have the f2f level of interaction, which helps greatly if you are explaining a point and you get a couple of faces looking off into the distance and one nodding their head, you know you need to reiterate your point or clarify it. Whereas you don't have that visual feedback with the Hibernia software. The second difference I would notice is the multi-tasking aspect to the Hibernia software, which is great, but it does present challenges as well.

Interestingly T4, similar to T3, also questioned the lack of deliberation and she equated the tutorial to a radio show where she was the presenter.

I would expect them to be, again with that background knowledge, to be unafraid to voice their opinion, get into a discussion, question a bit deeper, and I have to say that there is couple of times when I was giving the lesson and it did kind of feel like ... it did kind of feel like 'a radio show' whereas I was almost fielding callers in and when I got that feeling this is the way I want this to be, this is good, this is engaging.

She equated a good tutorial to a good talk show that engaged you even though you are participating at a distance and she also noted that it is different because you can contribute to the tutorial at any time, something that is not always possible with radio.

Oh I think we all know what a good radio talk-show feels like you're kind of listening to it, you are not on the edge of your seat, but you can feel yourself getting engaged and mentally agreeing or disagreeing or going that is interesting. So when I get that type of feeling with these tutorials I feel like they are going well so there are a lot of parallels. But it is different as well because it is a much more open thing as well because of course you can participate at any time, so it is like an interactive radio show or something of the like.

She felt that the main role of the tutor was to “cover content” and to “explore it”. She also acknowledged that performing this role online was more challenging because of the lack of visual cues.

The role, I really see the role as mainly covering the content of the lesson and getting them to tease apart ... What I hope the role would be is to take

the information, to play with it isn't quite the word, but explore it. And I think the techniques one might use to do that in a virtual environment are quite different, well they are the same, but they are different because you lack the visual cues and the immediate visual feedback.

T4 made multiple statements in relation to the management of time online and noted it was difficult to pace the tutorials – particularly in terms of how much time to give students to discuss a particular topic. She found she underestimated the time it took to discuss these complex issues.

Sometimes it can be difficult to predict how long an exercise is going to take to go through because when I got students to do that exercise [say] the characteristics of standardised tests, the feedback they gave took a lot longer than I had predicted. That is why I ran out of time.

T4 made multiple references to the “real classroom” and appeared to suggest that teaching in a f2f setting is more spontaneous and natural than tutoring online.

I can't really think of any hindrances ... if you are in a real classroom you could go “okay that's a really interesting question and you know you could go to the blackboard that sounds a bit old fashioned [and] you could say “let's do this” or regroup students physically. You don't have the physical space to be flexible like that or off the cuff and I think if the whiteboard function worked better or if there was more functionality for that sort of brainstorming stuff that would help with that.

She felt that online tutorials were “overly polite” when contrasted to f2f classroom interaction. Online there was a routine - students requested permission to speak, the tutor assigned speaking rights, the student spoke and then the speaking rights were removed when they were finished.

I think if you are in a classroom situation, like a real classroom, you can just nod your head not in an aggressive way obviously but point to somebody for a response or even if you can see someone's keen to speak and you can just give them eye contact and that is sufficient to keep the thing going. But with the online, maybe at the risk of being overly polite, or to not come across as being too aggressive I'd [say] “Mary are you there?” “Would you like to add something?” There is a kind of a nicety I find myself doing or etiquette that I wouldn't do in a real situation. And I think that formality, almost, might make the students themselves feel that it is a bit more formal.

This issue of structure and pacing appeared to have been a challenge across all her tutorials. Time management was an issue for T4 from the outset and she appeared to suggest that by restructuring the tutorials she could have achieved her learning goals.

I don't think the students had enough time, it isn't that the lesson content was problematic at all, I am not saying that but if I had structured the tutorials better I would have basically showed them the PISA items or the other test items and gone back to them at different levels. Because you can workshop test items for a full day and still get more out of them.

She raised an interesting dilemma for tutors online, particularly those who do not create their own lesson content. In addition to the challenge of teaching someone else's material, she also noted that clarity of expression online is critical, an observation shared by others such as T1.

I would see myself both as a teacher and a facilitator with the content being already laid down ... I think in contrast to f2f there is more of an onus on an online tutor to communicate quite clearly the first time round ... because you don't have that confused face feedback face, "what I meant to say was this" ... you must be quite clear on what you are trying to get across ... even the way I would interact with people I wouldn't be cracking jokes or being so light in the language I use online, as I would in person.

In addition to not creating the lesson content she also had to learn how to use the system, so she felt this was a steep learning curve for a new tutor. Once again she felt the College could have provided greater clarity around her role and the level of freedom she had could have exercised during the tutorials.

I was almost doubly challenged, because I was familiarising myself with the lesson content and the lesson structure because the lesson structure I think is dictated by the way the lecturer thinks as well. So I had the challenge of getting familiar with that in a short space of time and also the mechanics of the software and the strategies by which to engage students and I think I was a little unclear at the beginning as to how free or at liberty I was to bring in my own stuff, maybe own material, own ideas because I didn't want to, [little hesitancy in voice] compromise the lesson content in any way. The unfamiliarity with the lesson content probably was the biggest challenge.

5.5.4. Instructional Strategies

Although she had paired the students in Tutorial 1 it appeared that this strategy was subsequently discontinued as she felt the medium of communication, via texting, did not allow the students to engage in critical discussion. This conclusion was arrived at indirectly with feedback from students.

I didn't use [the teamwork approach] that frequently ... but when I did use it my impression from the feedback was, well students weren't Skyping, as far as I am aware and my impression and this is only indirect was that the texting function just didn't allow students to get into maybe the depth or

the space to get into the nitty gritty of the issue or the topic in the time they had.

Interestingly T4 commented that she felt that she had not structured the tutorials sufficiently at the outset but that her knowledge had deepened by the end of Tutorial 10. This is interesting and it supports this idea of experiential learning on the job that T1 spoke of earlier.

I just don't think I structured the tutorials sufficiently to give them enough of that kind of thing but I think I might have had slightly more of those skills towards the end of the module tutorials to get into that kind of thing.

5.6. Tutor Five (T5)

T5 had recorded the lesson content for her tutorials and was a returning tutor. There had been a gap of twelve months between tutorials and on this occasion she was working with three tutorial groups. The FIAC analysis was conducted on her opening tutorial with one of these groups.

In reviewing the FIAC analysis, her interview transcripts and her FTR I identified two themes – the predominance of tutor talk and a lack of confidence in the technology.

The FIAC analysis in Table 5.14 shows that 85% of the interactions that took place were teacher initiated and 12% involved the students. On further analysis 62% were coded as *Lecturing* (Code 5), which indicated that tutor talk dominated the tutorial.

Table 5.14
T5 FIAC Tally Marks Tutorial 1

Category		Tally Marks by Category	Percent
	1		
	2	14	1
	3	192	16
Teacher	4	46	4
	5	746	62
	6	20	2
	7		
Pupils	8	143	12
	9		
Silence	10	52	4
<i>Total Number of codes</i>			<i>1,213</i>

The FIAC analysis indicated that the majority of tutor-talk occurred at the outset of the tutorial and there were two further peaks at the half way and three-quarter marks of the tutorial. These peaks typically occurred when the tutor was presenting and talking to her slides. Note the concentration of tutor talk below where in one case she spoke for 11.65 minutes (233 x 3 seconds) without any verbal interaction with students.

5, 1, 233, 8, 3, 3, 48, 28, 124, 6, 1, 1, 7, 127, 39, 9, 7, 1, 21, 8, 49, 17

Figure 5.12, T5 Code Pattern for Lecturing

Typically these slides contained quite an amount of text that the tutor read and expanded upon during the tutorial.

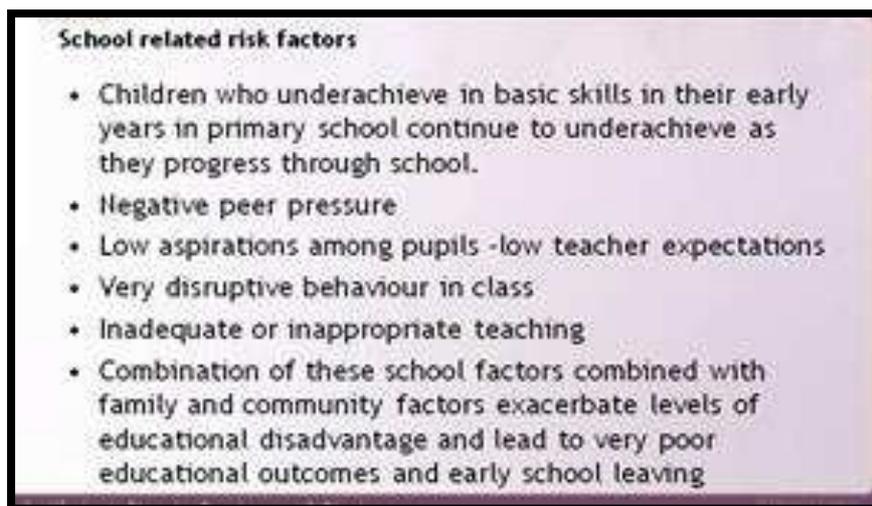


Figure 5.13, Sample of text on T5's slides

T5 was aware she spoke a lot during tutorials and had the following to say midway through Tutorial 1 *"I want to stop myself talking and see if any of you have comments to make on these major risk factors?"* and on another occasion she nervously asked if there were *"any talkers?"* When a student did respond she said, *"Oh this is brilliant, [student Y] I see your hand up and I will come to you in a moment"*, and appeared almost relieved that someone had contributed. T5, like other tutors, appeared to engage in self-monitoring of her practice during tutorials. In this case T5 was aware she was talking too much yet she appeared to struggle to change this behaviour.

5.6.1. Semi-structured interviews

Her interview was coded primarily as TPK (39%) and there were some comments associated with TCK.

5.6.2. Challenges

It is clear that T5 was conscious that she was inclined to speak for long periods of time and that occasionally she was delighted when a student contributed. She appeared at times to lack confidence in how to manage her students. This excerpt shows the dilemma for the tutor of having students contribute but also there is fear that they will overly dominate.

I have on a number of occasions been conscious of the fact that yes one person had been speaking for quite a long time, I am somewhat conscious of that at times ... [at] that particular instance I was just delighted to have somebody [speak] it was the first tutorial and they were rather quiet, and I was delighted to have a contributor on-line, and to hear from the students ... There have been a few times when I think that I have been a little bit

uneasy, because maybe I felt I should be cutting this a little short this student has been on for quite a bit and maybe not giving other students a chance but however it hasn't been a major problem. It did strike me a few times that there is an issue or a danger maybe of one or two students dominating a discussion again this would happen in a f2f discussion as well.

However, this issue of confidence surfaced on a number of occasions and she proposed an interesting idea to test out the strategy of getting students to work in small groups. She suggested having a trial group with whom she could try things out in a safe environment.

I would like to have a set of guinea pigs of some kind where I could try out this idea of splitting the group into smaller groups, or giving them an opportunity to discuss something in groups and come back with a bit of feedback from that discussion.

Again she was extremely honest in her appraisal of her tutorials and noted that she was not good at providing “wait time”, so that students could contribute to the discussions. She was also aware that only a small portion of Tutorial 1 contained student interaction (from the analysis 12%).

I tried to sort of bring the students in ... I'm not very good at sitting in that silent space, which you do need to provide and I felt that I ended up doing far too much talking and maybe I should have come in earlier, and commented and there were a few things I could have said, and could have done, with the benefit of hindsight now that might have encouraged a little more contribution

T5 was extremely diligent in her preparation for tutorials and was eager to learn at all times yet the technology presented her with real challenges. She appeared not to trust the technology and was aware of her shortcomings in relation to matters such as her typing speed. To compensate for these perceived shortcomings she focused on delivering her content and on using the features with AT&T with which she was comfortable.

Speaking very personally I think maybe other tutors who are sort of more relaxed and at ease with say the technology and maybe a little bit speedier on keyboards and so on, might find that aspect of it a little bit less challenging than I would, I suppose my focus tends to be the content, engaging with the students and then I kind of say, “Oh well I'll do the bits that I am easy with, technology wise”.

She was eager to learn how she could deepen her own knowledge of the technology and of the strategies she and others could use online. She also suggested that tutors should meet more frequently to share their practices and to learn from each other.

5.7. Tutor Six (T6)

T6 has been involved with the programme the longest and has the most experience of any tutor in leading online tutorials and in addition he also recorded his own lesson content. He had extensive experience of teaching and tutoring in both f2f and online settings yet he was not overly confident in using technology online.

The FIAC analysis revealed there was a good balance between teacher and pupil interactions. Interestingly T6 did not use PowerPoint slides and he presented no new lesson content during his tutorials. Though 14% of the interactions were coded as *Lecturing* (Code 5), these could have been more appropriately coded as administrative talk. I will return this point in the Discussion Chapter as it has featured in almost all cases.

Table 5.15
T6 FIAC Tally Marks Tutorial 1

Category		Marks by Category	Percent
	1		
	2	44	4
	3	62	5
Teacher	4	90	8
	5	167	14
	6	205	18
	7		
Pupils	8	559	48
	9		
Silence	10	29	3
<i>Total Number of codes</i>			<i>1,156</i>

He adopted a conversational style in his tutorials and ensured that all students had an opportunity to speak and he was interested in their contributions and he engaged them in a conversation. A typical pattern of interaction is outlined in Figure 5.14.

<p><i>4 (Tutor Question)- 10 (Silence) – 8 (Student Response) – 10 (Silence) – 4 (Question)- 8 (Student Response)</i></p>

Figure 5.14, Sample interaction pattern

The TPACK analysis supported this evidence as T6 stated he deliberately structured his tutorials so that he could speak to all students and he was interested in hearing their experiences. Though he used limited features within the technology, mainly the speaking and texting functions, he managed to interact effectively with his students.

5.7.1. Semi-structured Interviews

The majority of his interview was coded as TPK (26%) though there were also some references to TCK (6%).

5.7.2. Purpose of the Tutorials

T6 saw the purpose of the tutorial and of the AT&T software as being to allow students express themselves and so they could get to know their colleagues. He hoped that by week ten they would move beyond just interacting with him and would have developed relationships with their fellow students.

It should allow for enough conversation, should allow the student to express their own personality over a period of time, so they become known by the others and say they were being interviewed say “I agree with Jim” or “Yeah that was very interesting what Marie said”. Yeah I think that is an important element that they to begin to take experience outside from tutor - student to student ...

When asked who these conversations were typically between T6 noted that they were initially between him and a student but that later it developed into a conversation between the students. He seems to have suggested that though the students are speaking to him he acts like a conduit for their conversations with their peers.

Now who is it between? That is interesting because initially it is a conversation between me and that student, at the time, and I would personalise it if I knew something about somebody or what they are doing in a word or two. But it becomes then, I think later in the tutorial, it often then becomes much more student-student because they pick up what

others have said and they also say well that reminds me of an incident or I have had this kind of experience like Maria had or something like that.

5.7.3. Instructional Strategy

One strategy that he used a lot to initiate conversation was “Clicking In” where he asked students to make a contribution and he noted that it worked quite well even though there were a number of shy students in the cohort.

Yes I have been surprised by that, if you did that in an ordinary lecture hall you would have resistance and rebellion perhaps [laughter]. I have found the opposite actually and I know there are one or two shy people who don't find it easy to talk out.

During these students' conversations he was careful not be judgemental of their views.

I am rather careful not to put a judgment on the validity of their opinions unless of course they are way off the wall, which they rarely are. You know I accept them, thank them for it and say that's according to their experience and that is most interesting.

5.7.4. Challenge

T6 is aware that many students may not wish to be present at a tutorial and he endeavours to make them feel welcome while they are present.

But the quality of the engagement or the rapport somehow I suppose you need to get them to understand that they may not be welcoming the tutorial with a hundred per cent enthusiasm, having to do it as it may be recognised as a chore.

T6 achieved high levels of interaction by using the AT&T software in a limited yet effective way. He primarily used it to connect with students and to get them to speak about their experiences in school and he related this to the lesson content.

I have a feeling that it is a tool that hasn't been exploited by me in any sophisticated way ... I use it to make contact with the students who turn up and get them all to say something but it doesn't move much beyond that.

5.8. Tutor Seven (T7)

T7 worked in partnership with T6 on the same module. T7 had not written the content but worked with T6 previously in f2f settings. He described himself as being a competent user of IT who was comfortable in engaging in basic computer

maintenance tasks. However, this was his first experience of tutoring online and he had a challenging experience during his first tutorial.

There were technical issues in relation to Tutor 7's microphone during his first tutorial and as a result only 37 minutes 50 seconds of the tutorial were recorded. The other 22 minutes and 10 seconds were lost and there was no interaction between the tutor and his students during that time.

Table 5.16
T7 FIAC Tally Marks Tutorial 1

Category		Complete Tally Marks	Percent
	1		
	2	24	3
	3	68	9
Teacher	4	76	10
	5	289	38
	6		
	7		
Pupils	8	255	34
	9		
Silence	10	46	6
<i>Total Number of codes</i>			758

Despite these challenges he managed to complete the tutorial and there was a good balance between tutor and student talk. Much of his talk was in fact administrative and he did not present any new material during the tutorial. However, the most interesting aspect of this tutorial was how he reacted to losing his connection. Though a technology user his confidence in the system seemed dented as the comments below (*Figure 5.15*) indicated.

"Earth calling Sara"
"Oh thanks be to God you are there"
"Yes I can see my luck has changed"
"You have been very patient and very kind with a total beginner"

Figure 5.15, Sample tutor remarks during tutorial 1

5.8.1. Semi-structured Interviews

On reviewing his interview transcript 15% of the content was coded TPK and 8% PK. These were the most popular codes in the transcript and he made some interesting observations in relation to the development of a signature pedagogy for the MATL tutorials.

5.8.2. Challenges

He found students were almost terrified to speak and that there was a need for clear ground rules that students would be visible and would be expected to contribute.

And if I said is that school policy do you think that's right yourself? That you wouldn't say "Oh Jesus! I didn't think you were going to ask me that now". Or are we having a mere chat here or what? That there has to be some level or even like you may be asked to clarify or to comment further.

Unlike other tutors he did not favour the "pounce on them method", similar to Shulman's notion that students should always be ready and on their toes to contribute (2005).

... I think there's probably a way around that rather than the 'pounce on them method' like a doctor at the end of the bed and say "ok your opinion on this is?", and "you think that is right do you ok?"

He returned on numerous occasions to the fact that students are operating in an online environment where there are no visual cues. They are novices in the environment and to the content and thus they are mindful not to show their peers that they are stupid. Hence they don't speak.

I don't know is the fact that when you see someone opposite you and you see they are new-comers to a course and these new-comers not only to the learning, but to the environment and to the content! I suppose you know yourself when you're on a taught module you don't want to be shown up as being the dunce or thick and you're kind of watching what you say.

5.8.3. Signature Pedagogy

Much of the interview conversation focused on how to improve student interaction and here T7 proposed some ground-rules to help students become more engaged in the tutorials.

But I'm wondering about the tutorials that maybe there could be some protocol established, possibly by the tutor in the first session to say "look you're here to learn, you can sit and you can do the stir-fry [reference to doing the cooking while online] if you want, if you won't respond to any of the polls at all, basically you've logged on and gone off, or what you can do

you is make the best of it yourself! And give them [the students] some kind of a template let's say the tutor would work through for the first fifteen minutes, session one, that says look, "you won't be kept a tally of but you would be expected to raise your hand in every session, and have something to say" because you're paying your money you want to learn, and that's the way we will think you will learn.

T7 believed that there was a need to provide students with explicit ground rules, similar to those provided on academic writing because this is something new to them.

I just think if it's the case that they need some direction as to how to respond I think it nearly equates to when they come into college on a Master's programme they need some direction on how to write and what the Harvard Conventions are and that kind of thing and they need it uniformly.

In this way students and tutors would have a clearer understanding of what was expected of them.

5.9. Conclusion

This chapter has presented both quantitative data from the FIAC analysis and qualitative data from the semi-structured interviews. The data have captured the interactions that took place during the tutorials and the views of the tutors in relation to what occurred. The next chapter will discuss these findings in the context of the literature reviewed earlier in Chapters Two and Three.

6. Discussion Chapter

6.1. Introduction

In this chapter I will interpret my findings by revisiting a number of key theoretical concepts that were presented earlier in Chapters Two and Three. I will firstly discuss the actual tutor practice that was observed during the course of this study in the context of the literature and in particular I will focus on the dominance of tutor talk in the tutorials. In Chapter Three I suggested that critical discussion should be considered as the signature pedagogy for the MATL tutorials and I will discuss the actual practice against this normative practice. I will then propose that an adapted version of FIAC, along with the FIAC Tutor Record (FTR) and the Critical Discussion mapping tools could constitute a professional development toolkit designed to support tutor professional judgement in future MATL tutorials. The toolkit can then be used as part of a process to assist online tutors capture, codify and analyse their practice with a view to improving student learning.

6.2. Summary of the Study

This study set out to establish “*what was going on*” in the MATL online tutorials and in particular how tutors and students interacted during these sessions. My interest in studying the action that took place in these settings was triggered by the data presented in Table 1.1, where it became apparent that students were unclear of the ground rules for such events. Using a number of tools, such as the FIAC, the FTR and tutor semi-structured interviews, a picture has emerged in relation to the pattern of verbal interactions that took place between tutors and students. These data have shown that the majority of tutors found it challenging to teach in such settings and that they and their students experienced a lack of clear ground rules. Though tutors had some initial training on how to use the SCMC software this did not completely prepare them to tutor at a distance. Yet despite these challenges almost all tutors found the tutorials a valuable component of the MATL programme. Thus this begs the question what actually went on in these tutorials and in particular how tutors can enhance their practice in the future.

6.3. Discussion

At the outset of this study I posed the following question:

What is the nature of the teaching-learning interactions that have taken place in these synchronous tutorials?

The reviewed data set shows that there was quite a degree of variation in terms of how tutors and students interacted during these events as evidenced in Table 6.1. The FIAC data captured a different pattern of interactions for each of the eleven tutorials. When the FIAC data are combined with the FTR and the semi-structured interviews we can create unique signature pedagogies for each of the seven tutors. Thus there were a variety of approaches and interactions displayed by tutors during these events as evidenced in Table 6.1. I will use the term signature pedagogy in two distinct ways in this chapter. Firstly I will apply it to describe the unique tutoring approach of the individual tutors but later I will apply it in a normative way to describe the ideal MATL signature pedagogy. Though the term is typically applied as a ‘signature’ behaviour for a profession each profession consists of individuals who practice. As this is an emerging field of teaching I was keen to document the practices these individuals exhibited, their signature practices. So let us firstly establish what occurred in the tutorials by discussing the nature of the observed interactions.

Table 6.1
FIAC Codes across the 7 Tutors

Category		Tutor 1		Tutor 2		Tutor 3		Tutor 4		Tutor 5	Tutor 6	Tutor 7
	Code	T1	T10	T1	T10	T1	T10	T1	T10	T1	T1	T1
	1											
	2	0	0	5	2	1	3	1	0	1	4	3
	3	21	28	6	7	3	0	1	4	16	5	9
Teacher	4	4	2	8	6	11	17	2	4	4	8	10
	5	32	46	14	18	22	26	60	67	62	14	38
	6	7	2	18	17	3	1	4	3	2	18	0
	7											
Pupils	8	30	9	47	25	44	43	10	20	12	48	34
	9	0	0	0	20	0	0	0	0	0	0	0
Silence	10	6	14	3	4	16	9	22	1	4	3	6

6.3.1. The dominance of Tutor Talk

The FIAC codes from one to seven capture the various types of verbal interactions initiated by the teacher, while codes eight and nine apply to student talk and code ten denotes silence or confusion. Table 6.2 has removed the data for student talk and silence and just presents the proportion of tutor talk coded across all eleven tutorials. It shows that at a minimum tutor talk accounted for 40% of all verbal interaction and that it reached levels as high as 85% in one particular tutorial. On average tutor talk accounted for 61% of all verbal interactions across all tutorials while in contrast student talk on average only accounted for 31% of all interactions, with silence accounting for the balance. Therefore these data show that tutor talk played a prominent role within the MATL online tutorials and it is an important feature of such events. This is not surprising and Flanders stated (1970, p.13) that “teachers talk more than students in their classrooms and this is true from kindergarten to graduate school”. He went on to state that it is not the quantity of the discussion that is at issue but the quality and we will return to this idea below.

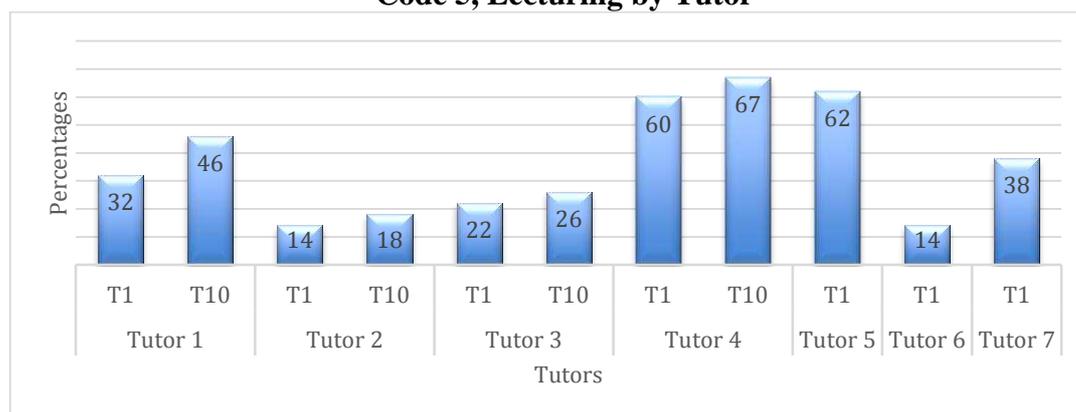
Table 6.2
Percentage of Tutor Talk across the 11 Tutorials

Category		Tutor 1		Tutor 2		Tutor 3		Tutor 4		Tutor 5	Tutor 6	Tutor 7
	FIAC Code	T1	T10	T1	T10	T1	T10	T1	T10	T1	T1	T1
	1											
	2	0	0	5	2	1	3	1	0	1	4	3
	3	21	28	6	7	3	0	1	4	16	5	9
Teacher	4	4	2	8	6	11	17	2	4	4	8	10
	5	32	46	14	18	22	26	60	67	62	14	38
	6	7	2	18	17	3	1	4	3	2	18	0
Tutor Talk		64	78	51	50	40	47	68	78	85	49	60

The FIAC data showed that there were significant differences in tutor signature pedagogies in respect to tutor talk. For example the tutorials led by T1, T4, T5 and T7 had levels of tutor talk all above 60%, while T2, T3 and T6 had levels under 50%. This shows that tutor talk was relatively high in all tutorials but FIAC on its own does not provide evidence as to the type and quality of talk in which tutors and students engaged. Thus this is why the traditional FIAC numerical codes were enhanced with qualitative commentary to capture a richer picture of the action observed.

Though evidence was found for six of the seven codes associated with tutor talk, *Code 5 Lecturing*, was most dominant. Further analysis, as captured in Table 6.3, shows that all tutors engaged in lecturing and that the levels varied considerably across tutors. For example T1, T4 and T5 had high levels of lecturing while T2 and T7 had relatively low levels.

Table 6.3
Code 5, Lecturing by Tutor

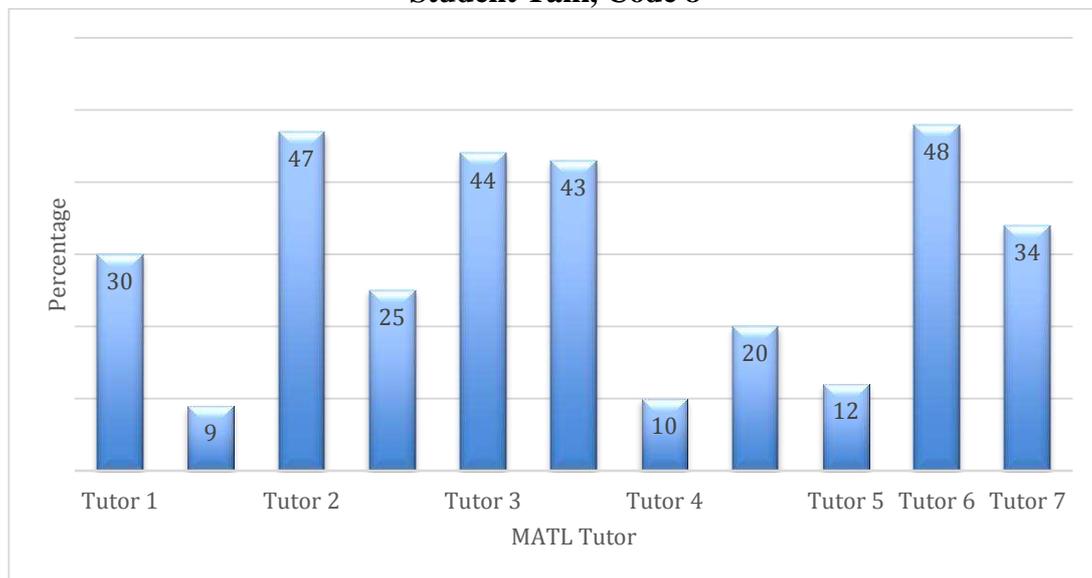


Yet much of the literature associated with online teaching suggests that learning should be collaborative (Stavredes, 2011; Palloff and Pratt, 1999) and “identified with constructivist rather than instructionalist orientations” (Rourke et al., 1999, p. 51). However, my data initially suggest that much of the interactions that took place in these tutorials were teacher-led and teacher-initiated and that there was limited “two-way communication among two or more people within a learning context” (Bannan-Ritland, 2002). Thus if we just review the FIAC data they do not give us the full picture in terms of why lecturing levels were so high. Numerous academics (Flanders, 1970; Bannan-Ritland and Northrup in Hirumi, 2002) have noted that it is the quality of verbal interactions that is important rather than the quantity. However, when the FIAC data are combined with the interview data it is apparent that tutors did not set out to lecture but in fact strove to perform in the role of a facilitator (T1), a ringmaster (T3) or a good radio show host (T4). The FIAC data suggest that they did not always succeed in carrying out such mediation roles. The tutors spoke of their desire to create more democratic classrooms where they engaged in critical conversation with their students but this proved difficult, as students were often reluctant to speak. In some cases, as in the case of T4, the tutor felt it was important to introduce new content as she had not created the original lessons and this could

only occur during the tutorial. Therefore the context in which tutors operated needs to be considered when reviewing the level of so-called lecturing within online tutorials.

Table 4 captures the levels of *Student-Talk Response (Code 8)* coded across the tutorials and again there is quite a degree of variance. These interactions arose as the result of teacher-initiated activities such as questions or discussion tasks. T2, T3 and T6 appeared to have provided students with the greatest number of opportunities to speak and to contribute during the tutorials with levels over 40%.

Table 6.4
Student Talk, Code 8



However, when we look more closely at the nature of these interactions we find that T2 provided students with more opportunities to develop social relationships and to engage in critical discussion. Though T3's FIAC patterns inferred that students spoke regularly these interactions were typically short and the quality of conversation was quite low. Much of the talk was associated with students providing short answers to a set of pre-designed questions. The interaction pattern was almost behaviourist in nature with students presented with a series of questions and afforded the opportunity to respond in a multiple-choice format with a yes or no answer. T6 on the other hand sought to stimulate conversation during his tutorials through asking questions. Here there was evidence of students sharing experiences but it was not as structured as that evidenced by T2. Thus all three tutors facilitated relatively high

levels of student talk but each achieved this in a very different way and the quality of discussion also varied.

6.3.2. *Role of the Tutor*

The literature notes that the tutor plays a key role in mediating online interactions (Laurillard, 2002; Garrison and Cleveland-Innes, 2005; Beetham and Sharpe, 2007) particularly discussion. Furthermore some view teaching as a type of conversation, where tutors and learners engage in deep discussion (Laurillard, 2002; Brookfield and Preskill 2005). Both Laurillard along with Brookfield and Preskill note that in such settings it is important that tutors restrict their verbal contributions and avoid filling every moment of a class or tutorial. They note that achieving this is often difficult as tutors “think they’re supposed to [do so because] it’s what the institution expects, it’s what their colleagues do, and it’s what the students demand” (Brookfield and Preskill, 2005, p. 197). Brookfield and Preskill note that it can be extremely difficult for tutors to remain silent and to provide opportunities for students to interact with each other in order for them to learn. T1, in particular, appeared to support this view when he stated, “the tendency is to keep talking, particularly if they want to listen because they will consume this stuff.” He went on to say that it is easy for the tutor to keep talking because you know the material very well.

However, this study suggests that tutors engaged in quite high levels of lecturing, as defined by the FIAC. This raises the question: what do we mean by lecturing and are tutors in reality lecturing to the levels indicated by FIAC? Lecturing has a long tradition within higher education and is most often associated with a didactic teaching perspective where teachers “deliver” a lecture (Laurillard, 2002). The FIAC, as currently constituted, only allows us to code tutor-initiated talk as lecturing. Luke et al. (2005 in Kogut and Silver, June 2009, p. 8) list a range of types of teacher talk and these are reproduced verbatim overleaf.

Table 6.5
Types of Teacher Talk

Curriculum-related	Any talk about the actual content or skills to be taught
Organizational	Talk to organize activities and participation patterns, to frame activities, provide general instructions, to set up, to move bodies; to manage time & space, to tell students what is coming next, to manage transitions, etc.
Regulatory	Disciplining, behavior management, class and student control by teacher. Generally with a negative connotation (cf. organizational).
Test-strategy	Explicit reference to testing, exams or test requirements; it might include advice on how to take tests.
Informal	Digressive whole class talk with teacher, e.g., teacher talks about the weather when it has no bearing on the topic taught or calls for time-out and chats with students; it does not include a group of students chatting in the classroom.
Uncodable talk	Talk that does not fall into any category defined above or if the utterance or the context of the utterance is not clear.

Many, if not all, of the types of talk described by Luke et al. were present in the MATL tutorials, yet the FIAC could only code them as lecturing. Thus it did not accurately capture the kind of talk tutors engaged in with their students. Therefore there is room to enhance the FIAC so that it better captures the types of verbal interactions occurring in online tutorials. To conclude, there was clear evidence of lecturing by tutors T1, T4, and T5 but the levels across all tutorials were misleading because of the limitations of FIAC.

Furthermore the tutors found that the technology almost encouraged them to ‘lecture’ and some described the medium as being like “the wireless” (T3), or an “interactive radio” (T4). T2 went so far as to state that it was designed more for filling vessels than enabling learners and tutors to construct knowledge. Interestingly Anderson and Garrison (1999) observed that distance learning has been traditionally built on a transmission model where institutions developed correspondence courses to enable

learners learn at a distance. However, they argued that the arrival of the Internet and in particular communication technology has forced institutions to rethink this model. Others, such as Bernard et al. (2011) have claimed that, “media-synchronous and blended DE contains natural conditions for interaction, especially between the student and the teacher and among students” (p. 1247). Yet the data suggest that there is still a high level of transmission taking place in online tutorials and that SCMC technologies do not inherently contain the conditions that enable interaction to take place. Ultimately it is the tutors who play the key role in designing and mediating such events.

The data also appear to suggest that tutors performed a range of roles during the online tutorials and engaged in a range of teaching practices, of which lecturing was an important element. Brookfield and Preskill (2005) noted in the context of a f2f classroom that there is a place for lecturing but that it should be kept to a minimum, either at the start or at the end of a tutorial. Others have questioned the value of lectures (Laurillard 2002) and have stated they are of limited value in higher education while others, such as Daniel Pratt (2002), argue that good teachers use a wide variety of teaching strategies including lecturing. The data showed that MATL tutors engaged in different types of talk such as providing instructions, exposition of new material and questioning during tutorials. Luke et al. (2005 in Silver and Kogut 2009, p. 2), contend that such interactions typically feature prominently in “teacher-fronted interaction in which, teacher talk dominates”. Thus teacher talk was to the fore, even if the levels of lecturing are over-inflated in some cases, and the tutorials were dominated by teacher-fronted interaction.

Furthermore the observed tutor practice appeared to be at odds with the emerging normative practice within online education that learners and tutors predominantly engage in knowledge-construction activities (Rovai, 2008; Palloff and Pratt; 2011 and Stavredes, 2011) where tutors are typically cast in the role of ‘facilitators’ (Laurillard, 2012; Garrison and Cleveland-Innes, 2005; and Salmon, 2000). This study found that though such activity exists it is not as prevalent as one might have expected and tutors often found it challenging to perform in the role of a facilitator. Brookfield and Preskill (overleaf) have also identified the key role tutors can play in facilitating discussion.

The tutor must mediate the process of successive focused iterations in which the student attempts to capture experience of the world in descriptions, or forms of presentation.

(Brookfield and Preskill, 2005, p. 77)

Much of the literature suggests that tutors should play a facilitation role; however the question remains how this might be achieved and what knowledge do they require? The literature claims that effective facilitators “must be sufficiently expert in their domains to judge individual learning needs, and sufficiently skilled as tutors to adjust dynamically, continuously to switch between the novice’s and expert’s perspectives” (Mayes and de Freitas, 2007, p. 19). In addition there appears to be another challenge online, that tutors need to be knowledgeable and confident in tutoring using the particular SCMC platform selected by their institution. It seems that for some tutors at least, the medium presented another layer of challenge in facilitating discussion. Palloff and Pratt noted “instructors who are new to the online environment may struggle with the transition from the central figure in the learning process to a facilitator or guide of that process” (2011, p. 10). All seven tutors commented that they found the transition to becoming an online tutor quite challenging and some noted their level of competence and confidence was still low (T1, T3, T5 and T7). A number suggested that it would have been beneficial had they had the chance to view elements of ‘good practice’ from their colleagues prior to going online. They noted they had opportunities to view examples of ‘good’ multi-media lesson content in advance of creating their own pre-recorded lessons. Yet such examples were not available in advance of commencing the online tutorials. Some, such as T1 and T5, felt they would have benefited from reviewing such examples at various intervals during their ten-week module so they could reflect on their own practice in comparison to that of their peers. I will return to this idea of sharing practice later in the chapter.

This study also found that on occasion tutor teaching practices differed from what they had intended or espoused during their interviews. For example T1 spoke about his role and how he required “a bunch of activities”, such as a YouTube video, to engage learners in discussion. Yet his actual practice was slightly different in that he presented a video for six minutes (Table 5.3) and then moved on to a slideshow on how to conduct a literature review. Learners were not presented with an opportunity

or an activity designed to critically discuss the video content, instead they watched the video and then the tutor moved on to his next activity. Others, such as T4, viewed the tutorials as opportunities to “play with ... and explore” the lesson content but again there was limited evidence of this in the tutorials observed. Instead there was a high level of tutor talk and exposition of new content. Thus for some tutors their espoused theory was very different from their theory in action. Argyris and Schön (1974 in Anderson, 1994) have studied such a phenomenon in depth and they suggest that:

... people hold maps in their heads about how to plan, implement and review their actions. They further assert that few people are aware that the maps they use to take action are not the theories they explicitly espouse.

In this case tutors espoused that they wanted to perform in the role of a ringmaster or a facilitator where they encouraged students to discuss and to explore lesson content, however their theory-in-use was often at odds with what I observed in practice. It seems that they found it challenging to transfer their espoused theory, that of a knowledge-constructor, into the online tutorials.

6.3.3. Towards a Signature Pedagogy for MATL Tutorials

Each of the seven tutors displayed their own unique signature pedagogy and the data revealed that there was no overarching signature pedagogy for the programme. There was no one pedagogical approach that was consistent and evident across all eleven tutorials. At the close of Chapter Three I proposed critical discussion as the appropriate signature pedagogy for the MATL programme. Therefore I will now attempt to map Brookfield and Preskill’s nine dispositions to the data collected for each tutor. Specifically I will map the dispositions to the data gathered on T2 to illustrate how such an approach might apply to all tutors. In this way tutors can compare their actual behaviour against the normative or signature pedagogy for the programme. By using the emerging toolkit of observational frameworks tutors can engage in conversations around their practice. They can begin to discuss what it is and what it ought to be and ultimately how they might change it so that is more in line with the signature pedagogy for the programme. I have included an example of the *full mapping document for T2 in Appendix 9*.

6.3.4. Mapping the 9 Dispositions

Hospitality is where the tutor creates an atmosphere in which people feel invited to participate” (Brookfield and Preskill, 2005, p. 8 & 9). T2’s data contained multiple examples of this disposition as she warmly welcomed students and called on them by name. In her FTR I noted that she created a “very positive atmosphere during Tutorial 1” and this continued into Tutorial 10.

Participation is denoted by the idea of a democratic classroom where everyone is encouraged to participate and where it is alright to remain silent if so desired. The FIAC data showed equal participation (50:50) by tutor and students across both tutorials. It found that T2 lectured for 14% of Tutorial 1 and even then much of this talk was related to providing instructions, specifically the establishment of clear ground rules. Lecturing again accounted for only 18% of Tutorial 10 where again significant time was associated with providing instructions on how to engage in the Constructive Controversy Procedure. In addition, the FIAC data showed that students engaged in high levels of interaction during both tutorials. In Tutorial 1 *Student-talk-response* (Code 8) accounted for 47% of all interactions while in Tutorial 2, *Student-talk-response* (Code 8) accounted for 25% and *Student-talk-initiation* (Code 9) accounted for 20%. T2 viewed the central purpose of these tutorials as breaking down student isolation and to giving learners a voice. She noted that “real learning comes from the heart and not the head” and she designed tutorials so that students could actively participate by hearing the voices and ideas of other students. Finally there was strong evidence of *Efficacy* as she made students feel their ideas were important by comments such as; “such a high quality answer”, “I love your questions”, “and that is perfect”.

Mindfulness is “to lose ourselves, and to become completely absorbed in hearing out what someone else has to say” (Ibid, 11). T2 modelled this disposition by showing her learners how to listen and by designing team discussion activities where members were required to listen and to report back with joint responses. Others, such as Stavredes (2011), have also noted that active listening on the part of the tutor is essential online and T2 reflected “I am always teaching them listening”. In addition she used questioning to probe student responses and this again required her to listen and to create follow-on questions. She carried out these activities in a very respectful and gentle manner.

Humility is related to mindfulness and “is the willingness to admit that one’s knowledge and experience are limited and incomplete and to act accordingly” (Ibid, 12). T2 openly acknowledged that she was not an expert on using technology and she did not pretend that she was. She was also more interested in “giving the students voice” rather than dominating the “air waves” with her voice.

Mutuality “means that it is in the interest of all to care as much about each other’s self-development as one’s own” (Ibid, 12). Mutuality was very evident in T2’s tutorials and she constructed activities that allowed students to learn from one another. She ultimately wanted the students to set the agenda as she viewed the tutorials as spaces where the tutor and her students set the learning agenda and learnt from one another. At one point she stated “these are my questions, could we come up with your questions?” In addition she stated she felt isolated herself as a tutor and would have welcomed the chance to learn from her fellow tutors in an environment that supported mutuality. This idea is again associated with the earlier notion of sharing professional practice and I will return to it in the concluding section of this chapter.

Deliberation “refers to the willingness of participants to discuss issues as fully as possible by offering arguments and counterarguments that are supported by evidence, data, and logic and by holding strongly to these unless there are good reasons not to do so” (Ibid, 13). Brookfield and Preskill noted that deliberation was difficult to cultivate and it took time to establish. In her final tutorial T2 introduced the *Constructive Controversy Procedure* that was designed to facilitate student deliberations. Though there were very low levels of deliberation evident across all eleven tutorials T2 believed this strategy had potential and was one she intended refining in future tutorials.

Appreciation “inclines us to express our gratitude openly and honestly” (Ibid, 15). The FIAC analysis captured a typical interaction pattern for T2 when interacting with a student.

8s (student speaks) – 2 (tutor thanks them) – 3 (tutor picks up on some of the ideas) – 2 (thanks them again)

T2 constantly acknowledged student contributions and stated that she always “accepts and uses their ideas”.

Hope “provides us with a sense that all of the time, effort, and work will benefit us in the long run, even if only in a small way” (Ibid, 16). Though it is difficult to find specific examples of hope in the data, it is clear that T2’s disposition is one of hope. Despite challenges in using the technology she has found a way to make it work and she looked forward to developing her approaches even more in the future.

So yes it was just this confidence [about using the technology] but now that it works ... I feel I would prepare them even more and it is not even putting in more work but I would vary my methodologies even more.

Autonomy is associated with the notion that “if democratic classrooms seek to promote individual and collective growth, then people who retain the courage, strength, and resolve to hold on to an opinion not widely shared by others should be given their due” (Ibid, 17). T2 designed her tutorials so that learners could be autonomous by bringing their ideas and views to the tutorial, but there was an expectation that these views could evolve over time. She designed her tutorials so that learners worked in pairs and they were required to construct a team answer when reporting back to the main group. This strategy required students to present their own views and to reach consensus.

6.4. Implications for the MATL

Having carried out a similar process across all seven tutors it emerged that Brookfield and Preskill’s nine dispositions can be applied to the existing data set. However, it emerged that the level of evidence to support each disposition varied across tutors and therefore it was decided to create a traffic light system to accompany the disposition mapping. As with other toolkits the “weightings are indicative rather than absolute, and are based on the user’s characterisation of their teaching practice” (Oliver and Conole, 2002, p. 65) rather than a measurement of teaching quality. They are not intended to measure the level of each disposition but to assist tutors engage in a conversation around their own practice. Thus in this way the FIAC analysis, the FTR and the Disposition Mapping analysis could form a toolkit designed to assist

tutors capture and codify their practice so that they could contrast it with the ideal programme signature pedagogy, in this case critical discussion.

Having applied the Disposition Mapping framework across all eleven tutorials I have expanded the original dispositions to ten by extending participation to include *Tutor Participation (Participation-T)* and *Student Participation (Participation-S)*, as captured in Figure 6.1. Both dispositions are unique and are extremely important online and it was difficult to capture both elements while they remained part of the same category.

Dispositions*	T1	T2	T3	T4	T5	T6	T7
<i>Hospitality</i>	Red	Green	Orange	Green	Green	Green	Green
<i>Participation – T</i>	Green	Orange	Green	Green	Green	Orange	Orange
<i>Participation – S</i>	Red	Orange	Red	Red	Red	Orange	Orange
<i>Mindfulness</i>	Red	Green	Red	Red	Red	Orange	Red
<i>Humility</i>	Red	Green	Red	Green	Green	Green	Red
<i>Mutuality</i>	Red	Green	Red	Red	Red	Red	Red
<i>Deliberation</i>	Red	Orange	Red	Red	Red	Red	Red
<i>Appreciation</i>	Red	Green	Red	Green	Green	Green	Green
<i>Hope</i>	Red	Orange	Red	Red	Red	Red	Red
<i>Autonomy</i>	Red	Orange	Red	Red	Red	Red	Red
<i>Perspective displayed by data</i>	<i>Instructor</i>	<i>Co-constructor</i>	<i>Instructor</i>	<i>Instructor</i>	<i>Instructor</i>	<i>Co-Construction</i>	<i>Construction</i>

Figure 6.1 Critical Discussion Analysis across the MATL Tutors

*In this figure red denotes that a particular disposition was absent during a tutorial, while orange indicates there was some evidence but it was quite low. In contrast green shows the disposition was very visible during the tutorial and there is evidence to support its presence.

In addition to identifying the levels of each of the ten dispositions the reflection process can identify the dominant teaching perspective displayed within a tutorial. For example using Watkins et al.’s (2002) patterns in teaching activities, tutors can identify their underlying views of learning. This mapping process can enable tutors to reflect on their practice and to see if their espoused theories are reflected in their theory-in-action. The process is not designed to be judgemental or to be part of a peer-review process, rather it is designed to assist tutors and their colleagues engage in professional practice conversations.

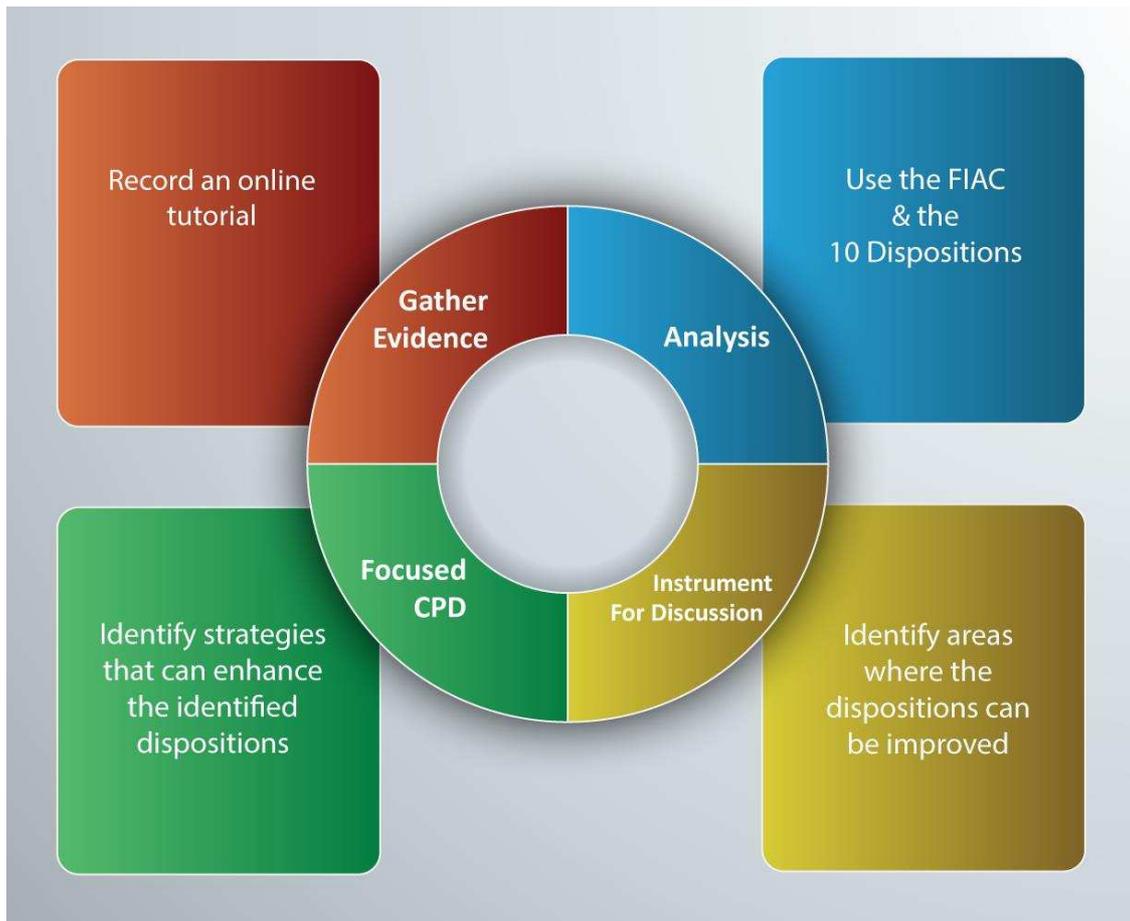


Figure 6.2 Professional Practice Process

In this way tutors can record their tutorial practice and using the toolkit they can analyse the verbal interactions that took place. The output from this analysis can be represented in pictorial form, as in Figure 6.1, for each tutor and this document then becomes an instrument for discussion where tutors can engage in a review of their practice (Papert and Harel, 1991). Tutors can conduct such a review on their own or in a conversation with a colleague or colleagues.

This systematic approach [interaction analysis] to self-development is more likely to flourish within the mutual support of a partnership or small action team with work scheduled throughout the year on a regular basis.

(Flanders, 1970; p. 10)

The outcome of this review should identify areas where the tutor may require additional professional development with a view of enhancing student learning. In this way the toolkit can capture, codify and analyse existing professional practice with a view to using it as an object for discussion and action. Ultimately, as with all signature pedagogies, this action should lead to improved learner outcomes.

Signature pedagogy is ultimately associated with the performance of the students. If they are not doing well then the signature pedagogy isn't appropriate." [emphasis added]

(Shulman, 2005, p.56)

6.4.1. *Adapted Flanders Interactive Analysis Framework*

This study has shown that the original FIAC framework worked well in coding the observed verbal interactions. However, in and of itself it provided a limited picture of the action that took place. One of the main advantages of FIAC is its simplicity and the fact it only codes for ten types of verbal behaviour. In this study I found consistent evidence for eight of these codes: the two codes where no evidence was found were (*Code 1*) *Accepts Feeling* and (*Code 7*) *Criticising or Justifying Authority*. Flanders noted that it was rare to find evidence for Code 1 while Code 7 is very much associated with an authoritarian view of education where it was acceptable for the teacher "to bawl out a student" (Flanders, 1970). The main limitation of FIAC was an inability to capture the variety of tutor-talk observed during the study. Therefore additional adaptations to the framework should reflect this while also attempting to retain its simplicity.

The successful application of FIAC appears to support Flanders' contention that interaction "refers to the chain of events which occur one after the other, each only occupying a small segment of time" (Flanders, 1970, p.3). Interestingly two tutors, T3 and T4, spoke about the almost linear nature of the interactions that took place during their tutorials. T4 in particular spoke about how "overly polite" the interactions were with one person speaking and others raising their hands, in a virtual sense, seeking 'permission' to contribute. FIAC worked well in capturing the linear nature of these interactions, as evidenced in Table 6.1, and it has supported Flanders' contention that "classroom interaction analysis can be useful whenever it is necessary to record the presence or absence of particular behaviour patterns" (1970, p. 30). In this study it has been used to assist tutors reflect on their current practice and to use "these inferences to make informed, professional decisions about whether certain changes would be appropriate" (Conole et al., 2004, p. 22) in their future practice.

6.5. **Conclusion**

At present the majority of interactions in MATL tutorials are teacher-fronted and there is heavy emphasis on teacher-directed activities and discussion. Such

interactions are at odds with a critical discussion signature pedagogy where tutors and students actively engage in knowledge construction. This chapter has put forward a toolkit and a process that will enable tutors to reflect on how their tutorials map to the ideal enabling them to take action to change their tutoring approach. In this way they can codify and share their practice thus assisting the profession to improve how tutors and students interact using SCMC software.

7. Conclusion Chapter

7.1. Introduction

In this chapter I will firstly outline a number of areas where this study can make a contribution to the field of online teaching and learning. The majority of tutorials were teacher dominated and this suggests there is a need for tutors and institutions to monitor the quantity and quality of the interactions that occur during online tutorials. In so doing tutors can reflect on their practice with a view to improving their knowledge and expertise in such settings. Online tutorials require tutors and institutions to establish and communicate clear ground-rules so that all participants are aware of what is expected of them. I will then outline some limitations in my research before outlining the professional relevance of the study for my work and the wider field of education. Finally, I will suggest a number of research areas that I, and others, might take forward in the future.

7.2. Contributions to the Field

7.2.1. *Teacher Dominated Tutorials*

This study has found that the majority of interaction that took place during the observed MATL tutorials was teacher dominated. This finding is at odds with current thinking in relation to the use of digital technologies within higher education where the focus is now on using technology to enhance learning (JISC, 2009). One way in which ETs, such as SCMC, can enhance learning is to enable knowledge sharing and collaboration across multiple locations and by making learning more active (Ibid). Yet in this case teacher talk dominated the majority of tutorials, with a variety of talk observed during tutorials and lecturing dominant in most. Traditionally online course providers held f2f summer school sessions to provide a space for tutors and learners to meet and to engage in critical discussion activities. However, some (Bernard et al., 2011) suggest that SCMC contain the “natural conditions” for teacher-student interaction while others (Watts, 2003) see such technologies allowing us to take the distance out of education and to connect with learners globally. Yet the data in this study suggest that technologies, such as AT&T Connect, will not in and of themselves facilitate deep discussion and that tutors rather than technology are the

real agents of change (Kirkwood and Price, 2013a). Institutions and programme directors need to specify the types of interactions they want to create in such settings and work with faculty and students to bring them about. To achieve this, institutions will have to articulate what is expected of tutors and learners by establishing clear ground rules. In addition they will need to support tutors with appropriate professional development that goes beyond mere technical training.

This study found that MATL tutors and students were unsure of their roles within the online tutorials. A variety of approaches were observed during tutorials and these included tutors providing a “potted history” of the recorded lesson, others attempting to “explore” or “unpack” the lesson content, while others sought to promote “social interaction” and address the issue of student “isolation” online. There was limited evidence of deep discussion where students and tutors engaged in critical deliberation. In fact some tutors referred to the type of talk they observed within the tutorials as “linked conversations” where one person spoke and another listened and then they spoke when it was their turn. Some tutors found this type of interaction frustrating and noted that such interactions were often “overly polite” and there was “lag time” between one person speaking and another responding. Other tutors remarked that they found the technology quite “clunky” and felt this factor combined with the lack of visual cues impacted negatively on the level of critical discussion. Though the technology may have been “clunky” the study did not set out to investigate the impact of the technology on the quality of discussion and therefore there is no clear evidence to support such a claim. However, all the tutors stated that discussion online was different to discussion in f2f settings and it required them to perform in a different role.

The study did find limited examples of critical discussion and where it did occur the tutors had designed activities to give voice to their learners. Instead of speaking at or to their learners these tutors organised tasks that provided learners with space and time for discussion. They also provided clear instructions and a structure for their learners to engage in such practices. Therefore it does appear possible to facilitate critical discussion online using SCMC technologies but it needs to be mediated and designed by the tutor. The tutor requires the knowledge and expertise to know that online discussion is different and they need to structure it accordingly. If this does not occur there is a danger that tutors will revert to “default mode” and talk at their

students during tutorials. Therefore the role of the tutor appears to be critical in using technology online and secondly that institutions need to move beyond providing them with technical competence in using these tools to helping them reconsider their teaching approaches and how these might work best online. This involves helping tutors to reflect on their practice and specifically on their beliefs around their role as a teacher.

7.2.2. Capturing the quality of our online interactions

There is a need to reduce the amount of tutor talk within the MATL and for tutors to design tutorials where student voice is to the fore. However, this study has shown that it is more than just providing students with opportunities to speak; there must be a focus on the quality of the discussion. Earlier in Chapter Three it was noted that there is a lack of professional practice knowledge associated with tutoring in online tutorials. It was also noted that there is an urgent need to capture, codify and analyse the ‘hot action’ that takes place online. You may recall that this is the term Eraut (1994) used to capture the unpredictable and fast moving nature of the action in teaching. This is particularly relevant when it comes to studying the quality of talk that takes place during online tutorials. For example T3’s FIAC data indicated that 44% of all coded interactions were associated with student talk but this does not tell us about the “content, context, and meaning” (Heritage and Maynard, 2006, p.4) of what was said. In fact the qualitative analysis captured in the FTR and the tutor interview revealed that student contributions were often quite superficial. Therefore there is a need to go beyond the quantity of interactions to explore the quality of these interactions.

In order to engage in such analysis tutors and institutions require a toolkit to capture, codify and analyse what took place. In this study the FIAC framework worked well in capturing the observed action and this supports previous research conducted by McIntyre and Macleod (1978 in Daunt, 1999) who found it applied well to ‘transmission’ type classrooms. However, in and of itself the FIAC is not sufficient to capture the content, context, and meaning of the discussions tutors and students engaged in. Therefore it needs to be supplemented with qualitative data as captured in the FTR. The FIAC was originally designed for use in a live classroom and in such settings there is no time to capture the richer qualitative data but with digital

recordings this is no longer an issue. Using digital tools, such as Excel, it is now easy to add a qualitative narrative alongside the FIAC codes. In this way the FIAC is enhanced with a qualitative commentary that can be expanded later into a narrative document that captures the nature of the discussions that took place. As in this study such a document could capture the content, context and meaning of the interactions. In this way tools such as FIAC, the FTR and the Critical Discussion Mapping tool could enable tutors to reflect on what took place in their tutorials.

Undoubtedly these tools will require additional development but the study has established they are capable of capturing and analysing the interactions that were observed. This is an important finding as the study also found that tutor self-evaluations were not reliable and that there is a need for tutors to use such tools to help them codify and reflect on their own professional practice. Despite some shortcomings this toolkit has the potential to be further developed. There is still a recognised lack of scholarly research around teaching and learning online in higher education (Kirkwood and Price, 2013b) and thus toolkits such as this have the potential to assist professionals address this issue. Currently SCMC technologies could be classified as ETs (Ng'ambi and Bozalek, 2013) where tutors are still experimenting and experiencing failure (Scott, 2013). There is a certain level of 'hype' associated with such technologies (Veletsianos, 2010) that higher education institutions need to be aware of while also identifying the challenges tutors face in using these tools. Otherwise there is a danger that SCMC technologies could become associated with a 'literature of disappointment' (McAvinia 2011 and 2013) around the use of ETs in higher education. In such a scenario institutions might lose faith in the promise of the technology and its potential to support deep learning online. By capturing and sharing professional practice knowledge academics can contribute to a scholarly discussion around teaching and learning and in the process improve the use of ETs, such as SCMC, to support deep student learning.

The existing toolkit will require additional improvement. For example, as noted in the previous chapter, the FIAC requires some refinement to better capture the types of talk in which both tutors and students engage in. Others (Heritage and Maynard, 2006) have highlighted the limitations of quantitative coding schemes, such as FIAC, in f2f settings and this study has found similar limitations. In this study I have found that FIAC does not capture the extensive nature of tutor talk observed during the

MATL tutorials. There is clearly a need to revisit FIAC and rename a number of the tutor talk categories. While the student talk categories (Code 8 and 9) may not work as well in future tutorials if students are afforded more opportunities to speak, they too may need to be expanded. Despite these shortcomings FIAC can still play a critical role in capturing action in online tutorials and I will return to this issue below.

7.2.3. The need for clear ground-rules in online tutorials

I found that all seven tutors had different expectations in terms of the level of interaction that should have occurred during the online tutorials. Tutorials in f2f settings typically have certain established ground-rules and an expectation of “interrogation, whether questioning or discussion, of the work that the student(s) have completed in preparation for the tutorial” (Ashwin, 2009, p. 633). Similarly for online work, I have already made the case that interrogation in the form of critical discussion should become the signature pedagogy for MATL tutorials. It now seems as if educators may require guidance, in the form of a signature pedagogy, when using ETs such as SCMC.

This suggests that use of ETs among educators may require guidelines if they are to transform pedagogical practice, a point which Bates and Sangrá (2011) and Ng'ambi et al (2012) concur after researching technology for transforming teaching and learning in a number of HEIs across Europe and South Africa. Mere use of ETs may not guarantee that the desired impact on student learning experience is necessarily happening.

(Ng'ambi and Bozalek, 2013, p. 532)

My conclusions appear to support Ng'ambi and Bozalek's observation that “mere use of ETs may not guarantee the desired impact on student learning” and therefore there is a need to articulate how the technology can be used through the formation of clear ground-rules. It should be noted that SCMC technologies can be deployed by teachers to support a number of teaching epistemologies, such as instruction, knowledge construction and the co-construction of knowledge (Watkins, 2002) so therefore institutions should provide guidance on their use. Specifically, they should consider how tutors might transform their pedagogical practice and support faculty in achieving this. By engaging in such deliberations institutions can articulate the signature pedagogy that best suits their programme and their learners (Shulman, 2005). Inevitably this will vary according to the context and the content of the programme.

7.3. Study Limitations

My initial plan was to review the tutorial interactions using FIAC and then use this as the basis for my tutor interviews. However, due to timing issues and uncertainty around the relevance of FIAC this strategy was later amended. If I were to repeat the study I would use the amended FIAC, along with the FTR and the Critical Disposition Mapping tools in analysing tutorial interactions from the outset. The analysis of the observed interactions would provide the focus for the faculty semi-structured interviews. Tutors could discuss their performance and elaborate on what took place online so that the interviewer could adopt an interview plus approach (Kane et al., 2004; Mayes, 2006) where tutors could discuss observed action. In so doing the study could focus more deeply on the role of the tutor as an agent of change within the tutorial process by exploring their views and beliefs around teaching online. Though the study captured some of these views it was not articulated as a central focus at the outset.

Secondly, I had hoped to develop a professional development intervention to assist tutors improve their practice over the course of a ten-week module. However, I was unsure as to the content and approach that such an intervention could have taken. Recent research (Kirkwood and Price, 2013b) has highlighted the need for professional development programmes to explore the “why?” and “for what purpose or goal” questions as opposed to the “how to” issues. Having conducted the study I too believe that any intervention should explore these questions and that they should be rooted in the context of a signature pedagogy of critical discussion. Ideally such conversations should take place over a number of sessions during the course of a ten-week MATL module. In this way I could then compare and contrast the types of interactions tutors and students engaged in before and after the intervention and in particular see if there was any change in their beliefs and observed practice. By including a professional development intervention I could then consider the impact it had both on tutor professional practice knowledge and on teacher beliefs.

7.4. Implications for further study

Having conducted this study there are a number of threads that I, and others, might consider following and developing in the near future.

7.4.1. The Learner's perspective on MATL tutorials

This study has focused on the role tutors played during online tutorials and it did not explore the role students adopted during these events. It is a stand-alone case study that has captured the challenges tutors faced in using SCMC technologies effectively, yet it only captures one perspective. Therefore it now seems like a natural next step to explore what type of experience learners have during online tutorials. Ideally it would be good to capture the nature of the interactions that took place, both from the perspective of the tutor and the student, in particular to explore what types of strategies and activities learners find most helpful during tutorials and how engaged they feel with the learning process. In addition there is scope to explore student beliefs in relation to online teaching and to establish how these compare to the views of tutors and to the literature in this field.

7.4.2. Implementation of a Critical Discussion Signature Pedagogy

While this study proposed a critical discussion signature pedagogy, it has not, as yet, been deployed across the MATL tutorials. Therefore I would welcome the opportunity to work with faculty within Hibernia to implement such a signature pedagogy. This would allow the recommendations of this thesis to be tested in practice. The establishment of such a signature pedagogy will also necessitate providing faculty with the tools and opportunities to reflect and build their own practice knowledge. This will require the creation of a professional development programme. A key component should be the establishment of a library of pre-recorded tutorials where tutors could review and contrast their performances with that of their peers. This extension of the current study could provide us with additional knowledge on how tutors develop their professional practice knowledge and their beliefs about teaching.

7.4.3. Tutor Knowledge and Further Developments of TPACK

It has been recognised for some time that there is a need for additional theoretical frameworks within the field of educational technology (Issroff and Scanlon, 2002) and it has been recognised that the TPACK conceptual framework is developing and addressing this limitation within the field (Doering et al., 2009). TPACK “has been recognised as an important theoretical foundation for technology integration research” (Wu, 2013, p. E73) and its usage is flourishing within studies focused on

teachers' use of technology. Though it is widely used within teacher pre-service programmes a number of issues have been highlighted in relation to the validity and reliability of the framework. As outlined in the Methodology and Empirical Chapters other studies (e.g. Cox and Graham, 2009; Archambaut, 2008; and Graham, 2011) had previously found it challenging to discriminate between the codes within TPACK. Yet despite these shortcomings its usage is growing in popularity in recent years (Wu, 2013).

I used TPACK to code semi-structured interviews and though I attempted to define my codes in advance this proved challenging. It also proved challenging to apply these definitions to my qualitative semi-structured interview data and in particular to discriminate between TPK and TPACK. It seems that additional work needs to take place around TPACK and the context of online tutoring so as to develop code descriptors that are applicable to such settings. There are a number of survey tools available to capture TPACK in the context of pre-service education but we require more robust qualitative instruments to analyse tutor talk.

Secondly, SCMC is an emerging technology and one that has obvious potential within higher education. Yet to date there has been limited research on the knowledge tutors require to use such tools to teach effectively online. Therefore there is a need for additional work to capture what this knowledge might look like and to provide examples of practice for other educators. There is a growing body of literature around the use of TPACK in pre-service education and in fields such as Science and Mathematics but there is currently a lack of examples in the field of SCMC. The process of capturing and sharing how tutors use these tools will hopefully contribute to a better understanding of the skills and knowledge required to teach more effectively. This in turn may inform the development of coding instruments specific to the use of SCMC technologies.

Thirdly, I found that tutors who did possess the technical skills to operate the SCMC technologies (e.g. T1, T3 and T4) struggled to mediate critical discussion interactions online. I found that though tutors possessed the technical skills to operate the SCMC software they often lacked the knowledge and skills to design learning situations where learners and tutors deliberated on the lesson content. Thus it seems there is a need to go beyond equipping tutors with technical knowledge so that they have the

pedagogical knowledge to engage learners in critical discussion. When we consider TPACK alongside recent work on teacher beliefs and practices using digital technology it raises the question is the framework sufficiently developed to capture and code such knowledge and beliefs? The fact that TPACK has until now been used predominantly with pre-service teachers may suggest that it requires further development to capture the knowledge and beliefs of more experienced practitioners in the field. Therefore expanding the framework may assist us in better capturing and analysing the knowledge tutors require when using tools, such as SCMC, in higher education settings.

7.5. Further Work within the Profession

In addition my work has signposted the need for additional work in the area of using synchronous technologies to teach online. This has implications for practice within the profession and they are highlighted in the following sections.

7.5.1. Toolkit Development

As outlined earlier in this chapter there is a real requirement to provide tutors with a valid and reliable toolkit so that they can capture and analyse the ‘hot action’ that takes place in online tutorials. There is certainly an opportunity for others to take this toolkit and test it in other online settings and to modify it further so that tutors have a set of tools that enables them to reflect on their practice. By further developing the toolkit, particularly by amending the FIAC, tutors will be better able to codify and share their knowledge. This study has already indicated how FIAC could be further modified and there is scope to apply it in a range of settings beyond the MATL.

7.5.2. Signature Pedagogies and Online tutoring

There is currently limited research on the topic of signature pedagogies and digital technologies. A review of the literature on this topic found a number of citations associated with the use of digital technologies in schools (Larkin et al., 2012 and Walsh, 2013) but none associated with online teaching in higher education. Therefore it appears as if there is a need for additional research on the creation of signature pedagogies for using SCMC technologies across a range of higher education settings. Ng'ambi and Bozaleck (2013, p. 531) in a recent editorial on ETs stated, “access to technology, though ubiquitous, will not necessarily bring about

transformative pedagogical practices". This suggests that we need to engage in additional research around the pedagogical practices associated with using these ETs across higher education. In particular we need to further explore how we provide faculty with guidance, in the form of signature pedagogies, to use these tools effectively. In this way the literature and knowledge base associated with the use of SCMC technology in higher education settings will expand and this in turn can only assist in the further improvement of tutor practice.

The development of signature pedagogies for using SCMC enables us to move away from a technology determinism view that "endorses the notion that using technology for teaching will in and of itself lead to enhanced or transformed educational practices" (Kirkwood, 2009 in Kirkwood and Price, 2013b, p. 333). By identifying appropriate pedagogies for use in 'live' online classrooms there is a chance that both tutors and students will have positive experiences online.

7.5.3. Implications for my role and the wider professional context

In my work as an academic consultant I am constantly working with teachers at all levels of the education system on matters related to the use of digital technology. I have found that many teachers find it very challenging to integrate technology into their teaching practices or to transform their teaching approaches using these tools. In the main the literature suggests that digital technologies should ideally be used in connection with social constructivist teaching approaches. This is particularly the case in the literature associated with online teaching where it is viewed as the ideal approach. The literature suggests that when teachers interact with learners they typically use transmissive teaching strategies or student-centred strategies depending on their own belief systems (Kirkwood and Price, 2013). When they adopt a transmissive perspective they typically view themselves in a dominant role and use technology to primarily transmit information to their learners. If they adopt a student-centred perspective they view themselves as facilitators of knowledge creation. However, this study has found that teacher use of technology is more complex than this and that teachers may use digital tools to support a range of interactions with their learners. Ultimately we need to move beyond such a simplistic binary narrative to focus on bigger issues, such as how are students learning and what role is the teacher playing in the process? This has implications in relation to how we

work with teachers to assist them reflect on and develop their knowledge and beliefs around teaching and learning when using ETs.

At the outset of this study I was aware that students were engaging with their online tutorials at relatively low levels by responding to online polls and by occasionally contributing comments during these events. Initially I was of the view that the SCMC technology was the main reason for this lack of deep engagement and many of my colleagues shared a similar view. However, having conducted this study it is now clear that though there were issues with the capacity of the technology to enable certain types of interaction, this was not the primary issue. Furthermore, while tutors initially found the new technology and the online environment very challenging, ultimately their concerns moved away from the technology to focus on the quality of interaction and engagement online. Having analysed their conversations I noted that they were more concerned with the lack of learner engagement and critical discussion than with the technology. Ultimately the study focused on their practice and on how they were performing and it touched on issues such as their views of teaching with technology. They, and not the technology, were the real agents of change and therefore they required greater support to transform their own practice.

This finding has profound implications for my professional practice as teachers will continue to use emerging digital technologies in their classrooms and my work will be to assist them in utilising them effectively. This study has focused on the quality of teaching and learning that took place across eleven online tutorials. It has found that the quality was mixed and that the tutors, depending on their knowledge and beliefs, performed differently using the technology. Therefore the technology did not determine the nature of the interaction that took place, this was a decision taken by the teachers. They were the ones who designed their tutorials and mediated the interactions that took place online. This seems to concur with the finding of Kirkwood and Price (2013b) when they wrote, "while we value the contribution of technology to supporting student learning, we strongly contend that technology itself is not the agent of change: it is the teacher" [p. 336]. This has implications for how I, and my colleagues, design professional development programmes for teachers, so that we move beyond equipping them with mere technological knowledge. We need to engage them in deeper conversations where they reflect on their own beliefs and values in relation to teaching and get them to ask the 'why' questions rather than

always focus on the ‘how’ questions. Undoubtedly adopting such an approach will be more complex as ultimately there is “a need to educate academics to use ETs and that the focus should be on innovative pedagogies rather than the technologies themselves” (Johnson et al, 2012 in Ng’ambi and Bozaleck, 531). This will require professional service organisations and institutions to develop more thought-provoking professional development programmes for teachers, at all levels. In this way tutors, as professionals, can judge whether the digital tools they are using facilitate deep learning or if they need to amend their teaching strategies to bring this about.

If teachers do not use their professional judgement in relation to how technology should be used there is a danger they will be de-professionalised, as others may ‘tell’ them how to use the technology. Today many institutions are moving online and these decisions are often informed by:

... such things as costs (usually related to growth in student numbers), increased accessibility and flexibility, meeting students' expectations, responding to strategic changes (at national or institutional levels), enhancing learning and transforming learning and teaching.

(Kirkwood and Price, 2013b, p. 334)

Will tutors be consulted to establish how these technologies can transform learning and teaching? Will they have an opportunity to experiment with these ETs and to input into discussions and strategies around how they might be used?

This study has illustrated that it is vital to provide tutors with an opportunity to engage in critical discussions around the use of these tools. This can only take place if tutors have opportunities to use the technology with their learners and to reflect on the quality of learning taking place. Such discussions should not just focus on the technology, though this is an element, but should focus on the quality of teaching and learning that occurs. In this way institutions can make informed decisions around the use of technology, as opposed to selecting technologies because of “hype” (Veletsianos, 2010) or because other institutions are adopting such tools. This study has identified critical discussion as the signature pedagogy for the MATL programme, an approach that dates back to the time of Socrates and has long been sought after within education. The challenge now for Hibernia College is to work with faculty to assist them embed this signature pedagogy across the programme so that students and tutors are clear about what is expected. It is worth re-iterating that

this is the primary challenge, engaging learners in deep learning, and that the choice of technology is secondary.

7.6. Implications for my Professional Practice

There has been limited research on the use of SCMC technologies in education, particularly in higher education. Online colleges and universities have been using such technologies for some time but in recent years many traditional f2f institutions are also considering their use. Therefore the findings of this study should be of interest to those within Hibernia College and the wider academic community.

Firstly I plan to share my findings within Hibernia College. I have already presented my initial findings at the Higher Education Colleges Association Conference in Dublin (Hallissy, 2013b) at the request of Hibernia. In addition they have asked me to present my findings to faculty and senior management later this year. My study is particularly opportune as the programme has just been re-validated and the College management are keen to take my findings on board. Central to this approach will be support to faculty and students in embedding critical discussion into future tutorials with a view to improving the overall quality of the programme.

In recent weeks I have presented my work to faculty in a number of institutions (Hallissy, 2013b; 2013c, 2013e) and this has proved extremely useful both in clarifying my own thinking and in assisting educators from other institutions consider how they might use SCMC technologies. Currently there is a great expectation in relation to the use of SCMC across higher education (Bernard et al., 2009) and in particular to recreate 'live' classroom spaces online. The initial findings from this study, though specific to one case, have implications for other colleges in relation to reviewing how they use SCMC and to consider if they have established clear ground rules for their use. Furthermore it has implications in relation to the toolkit and how tutors and institutions might engage in a process of reflection that is designed to improve tutor practice. Undoubtedly, further work needs to be carried out on developing this process but there is value in sharing this approach with other academics so that they can refine it and ultimately add to the body of knowledge around the use of SCMC technology in higher education. By sharing the findings from this study there should be an opportunity for faculty to improve their practice

and ultimately deliver on the promise SCMC technologies may hold for higher education.

The study also has potential implications for policy makers who are working to expand higher education and who view technology as a key component of such policies. Unquestionably there has been significant growth in online or virtual universities in recent years and figures from organisations, such as the Sloan Consortium, report that 6.1 million students took at least one online class during autumn 2010 in the USA (Allen and Seaman, 2013). While leading universities, such as Harvard University (CIO Council, 2013) also recognise the “significant growth in online education” as a major trend in higher education today others are more cautious. The OECD note that “ICT has not yet revolutionised teaching and learning and represents in most cases an add-on to traditional f2f teaching rather than a substitute or a catalyst for new pedagogies” (CERI, 2009, p. 166) but they see “it gaining ground” within higher education in the future. They attribute this failure to “transform” higher education primarily with the quality of the technological tools available to institutions. Yet this study would indicate that policy makers should also pay attention to the quality of teaching associated with such technologies and focus more on how institutions prepare and support faculty to use these tools. This is a global challenge as undoubtedly technology, and in particular SCMC technologies, has the potential to expand and to transform learning in higher education today and in the future. Policy makers, in addition to focusing on ETs, should also focus on emerging professional practices and their role in expanding quality higher education provision globally. There is recent evidence that organisations, such as the European Commission (2013), recognise the need to focus on ensuring higher education faculty engage in quality professional development to ensure these tools are used appropriately.

Finally, this study has implications for the scholarship of teaching online. Though ETs have the potential to transform learning the evidence of such transformational practice is limited. Therefore there is a need for much greater work around how technology can transform learning online by assisting teachers to design and implement more democratic classrooms that engage in critical discussion. Ultimately SCMC technologies are designed to facilitate conversations and discussions but teachers and students will need guidance and support to enable these to take place.

Significant work (e.g. Light and Cox, 2001; Biggs and Tang, 2011 and Becker and Denicolo, 2013) has already taken place around the scholarship of teaching in f2f classrooms across higher education but it seems that we now need a greater focus on the online classroom. Yet there appears to be a lack of professional practice knowledge and guidance for faculty working online today and there will be a need to address this deficit in the future.

7.7. Conclusion

This study has established that by adopting critical discussion as a signature pedagogy for the MATL, Hibernia College can assist tutors build their own professional practice knowledge with the ultimate goal of enhancing student learning on the programme. The study has found that teachers and not technology are the real agents of change within an educational organisation. Therefore there is a need to support teachers with the knowledge and skills to transform their teaching when using SCMC technologies online. They will require assistance, in the form of toolkits, to help them reflect on their existing practice so that they can engage in a professional development process that will ultimately transform how they teach. Such transformations will be challenging but they are essential if ETs, such as SCMC, are to achieve their potential within the field of higher education. Digital technologies allow teachers and students to interact in new and exciting ways but ultimately they must promote quality learning. Specifically in relation to SCMC technologies there is an opportunity to empower teachers to design quality learning experiences that engage learners and tutors at a distance in live critical discussion. To date such interactions have typically taken place in f2f settings yet we now have the tools to engage in such discussion online. However, the technology will not create such interactions; rather it will be the teachers who use them in their teaching and learning interactions who will achieve this. Therefore it is imperative that institutions support their faculty to engage in deep professional development experiences where teachers ask the 'why' questions in order to transform their practice with a view to improving student learning. Such transformations may be complex but ultimately this is where tutor professional development needs to go if technology is to deliver on its promise of transforming learning in higher education.

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Appendix 1- TPACK operational definitions for this study

CK – knowledge of content that tutors are teaching. It is independent of pedagogical knowledge or how one might represent knowledge.

TK – here I am confining TK to emerging technologies and specifically digital technologies. This is a broad category and includes hard technologies – such as online platforms, email, word-processing, Skype, Web 2.0 etc.

PK – here will refer to statements connected with general pedagogical activities and may include statements on the following:

- Strategies for motivating students
- Communicating with students and parents
- Presenting information to students
- Classroom management
- Discovery learning
- Cooperative learning
- Problem-based learning

PCK – here I will be focusing on statements that combine knowledge of activities and knowledge of representations of content to facilitate student learning. Here tutors are aware of how a particular strategy and/or activities will work with their content – aware of how they can represent or transform their content for their students. It includes an understanding of learners and of appropriate assessment modalities for their course.

TPK – here I will be looking for statements where tutors discuss general pedagogical activities that a tutor can or does engage with using digital technologies. I will be looking for statements that apply generally to learning and not specifically to their module content. I will be looking for examples of knowledge that applies to teaching online. For instance comments related to the following points drawn from Brennan (2003):

- Exploring and valuing students' backgrounds
- Developing knowledge beyond the level of transmission of knowledge
- Promoting Reflective Practice
- Establishing an inclusive learning environment
- Fostering communication among classmates as well as instructors
- Helping students become self-regulated and engaged
- Developing group identity that connects students with their learning (community of practice)
- Discussions around learner-centred settings;
- Discussions around the quality of online materials and the level of engagement with same;
- Notion of interaction online – what is it and how to promote it?
- Notion of tutor presence – how to develop presence
- Notion of transactional distance in online learning
- The need to motivate and engage the online learner

TPK also can include knowledge of the affordances and constraints of the technologies in use (Cox, 2008: p. 76). This is general affordance issues and not specific to the content being covered.

TCK – here I will be looking for statements about how certain topics within a module can be transformed or represented using technology. I will be looking for statements that show that tutors are aware of specific technologies that are appropriate to their module. For instance the use of Excel to explore concepts with Research Methods.

TPACK – I will be using the notion of TPACK in its expansive form. I will be looking for statements that illustrate knowledge of the relationship between technology, pedagogy and content and particularly how all three interact. I will try and identify content-specific instructional strategies and topic-specific representations.

Appendix 2 - Flanders Interaction Analysis Framework

Teacher Talk	Indirect Influence	Code 1, Accepts feeling: accepts and clarifies the feelings of the students in a non-threatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included.
		Code 2, Praises or encourages: praises or encourages student action or behaviour. Jokes that release tension, not at the expense of another individual, nodding head or saying 'uh huh?' or 'go on' are included.
		Code 3, Accepts or uses ideas of student: clarifying, building, or developing ideas or suggestions by a student. As teacher brings more of his own ideas into play, shift to category five.
		Code 4, Asks questions: asking a question about content or procedure with the intent that a student may answer.
	Direct Influence	Code 5, Lectures: giving facts or opinions about content or procedures; expressing his own ideas; asking rhetorical questions.
		Code 6, Gives directions: directions, commands, or orders with which a student is expected to comply.
		Code 7, Criticises or justifies authority: statements, intended to change student behaviour from non-acceptable to acceptable pattern, bawling someone out; stating why the teacher is doing what he is doing, extreme self-reference.
Student Talk	Code 8, Student talk - responses: talk by students in response to teacher. Teacher initiates the contact or solicits student statement.	
	Code 9, Student talk - initiation: talk by students which they initiate. If 'calling on' student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category.	
		Code 10, Silence or confusion: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

Appendix 3 - The Semi-structured Interview Schedule

Number	Question
1	Establish her <u>experience and knowledge</u> in relation to teaching online. Establish how <u>comfortable</u> she is with tutoring online and what are her expectations for these sessions?
2	Also discuss her <u>knowledge</u> in relation to using this technology (i.e. AT&T Connect)? How would she rate her <i>knowledge</i> in relation to using the technology?
3	How would she rate her <i>Knowledge</i> and experience of teaching online and her strategies for teaching online?
4	What does she see as <u>the role of online tutorials – what is their purpose?</u> Are they a worthwhile experience? Do they encourage <u>discussion</u> in her view?
5	Discuss what type of <u>learning behaviour</u> or activities she would like to witness during the tutorials? – What <u>types of interactions</u> would she like to witness during these sessions?
6	Does she believe that AT&T Connect <u>supports her the types of learning behaviour</u> she would like to witness during the tutorial sessions? <u>Discuss the positives and the limitations of the technology.</u> Does she feel she is <u>constrained by the technology</u> and if so how?
7	From her experience does she believe students are prepared to engage in <u>critical discourse</u> during the online tutorials?
8	How does she <u>prepare for her tutorials?</u> What types of activities does she typically plan – again discuss what was observed during tutorial one? How much <u>time would you typically spend preparing</u> for a tutorial? How does this compare to the amount of <u>time</u> devoted to monitoring and contributing to the discussions on the forum?
9	How does she feel the online tutorials should be <u>structured</u> – Should they be highly structured and does she believe it is important to cover all her slides? [This is based on observing tutorial one] - Talk about the use of PowerPoint - Talk about the Tutorial Tasks
10	Strategies to engage learners. What <u>tutoring strategies</u> is she most comfortable in using – ask her to list and describe them? Does she feel the technology restricts how she interacts with learners?
11	How does she <u>evaluate</u> her own <i>performance</i> during tutorials – what constitutes a “successful” or good tutorial for her? What advice would she give new tutors starting out in relation to <i>mediating/tutoring</i> an online tutorial?
12	What professional development would she like to participate in to help her develop as an online tutor in the MATL programme? What areas do you think you would like more help in?

Appendix 4 - Mapping Questions to TPACK

From mapping the questions across to TPACK it is clear that the majority of questions focused on TPACK or TPK. The survey was designed to ascertain what knowledge and experience tutors had of teaching online and in particular their experiences of tutoring on the MATL.

The survey tried to establish what pre-existing knowledge the tutor possessed and what gaps they themselves had identified. It focused particularly on the strategies tutors employed during tutorials to interact with students. Much of this discussion focused on the pedagogical strategies they employed. The purpose of these questions was to ascertain how tutors were interacting with the students and if the technology enabled them to tutor in a way they had intended.

Though a number of the questions spoke about the use of the AT&T conferencing technology these questions were ultimately related to how the technology supported interactive teaching pedagogies. In particular they focused on the level of critical discussion or discourse that took place during these events.

Question	TPACK
Establish her <u>experience and knowledge</u> in relation to teaching online. Establish how <u>comfortable</u> she is with tutoring online and what are her expectations for these sessions?	TPACK
Also discuss her <u>knowledge</u> in relation to using this technology (i.e. AT&T Connect)? How would she rate her <i>knowledge</i> in relation to using the technology?	TK
How would she rate her <i>Knowledge</i> and experience of teaching online and her strategies for teaching online?	TPK
What does she see as <u>the role of online tutorials – what is their purpose?</u> Are they a worthwhile experience? Do they encourage <u>discussion</u> in her view?	TPK or TPACK
Discuss what type of <u>learning behaviour</u> or activities she would like to witness during the tutorials? – What <u>types of interactions</u> would she like to witness during these sessions?	TPK
Does she believe that AT&T Connect <u>supports her the types of learning behaviour</u> she would like to witness during the tutorial sessions? <u>Discuss</u>	TPACK or TPK

<p><u>the positives and the limitations of the technology.</u> Does she feel she is <u>constrained by the technology</u> and if so how?</p>	<p>TK is in here but it is connected with teaching – it is not isolated.</p>
<p>From her experience does she believe students are prepared to engage in <u>critical discourse</u> during the online tutorials?</p>	<p>TPACK or TPK</p>
<p>How does she <u>prepare for her tutorials</u>? What types of activities does she typically plan – again discuss what was observed during tutorial one? How much <u>time would you typically spend preparing</u> for a tutorial? How does this compare to the amount of <u>time</u> devoted to monitoring and contributing to the discussions on the forum?</p>	<p>Question dealing with Time TPACK or TPK</p>
<p>How does she feel the online tutorials should be <u>structured</u> – Should they be highly structured and does she believe it is important to cover all her slides? [This is based on observing tutorial one]</p> <ul style="list-style-type: none"> - Talk about the use of PowerPoint - Talk about the Tutorial Tasks 	<p>TPACK or TPK</p>
<p>Strategies to engage learners.</p> <p>What <u>tutoring strategies</u> is she most comfortable in using – ask her to list and describe them? Does she feel the technology restricts how she interacts with learners?</p>	<p>TPACK or TPK</p>
<p>How does she <u>evaluate</u> her own <i>performance</i> during tutorials – what constitutes a “successful” or good tutorial for her? What advice would she give new tutors starting out in relation to <i>mediating/tutoring</i> an online tutorial?</p>	<p>TPACK</p>
<p>What professional development would she like to participate in to help her develop as an online tutor in the MATL programme? What areas do you think you would like more help in?</p>	<p>TPACK</p>

Appendix 5 - Sample letter to participants

Hibernia College
2 Clare St., Dublin 2.

<Date>

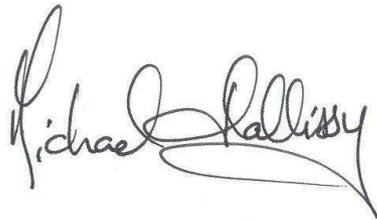
Re: EdD Thesis Study

Dear <Tutor's Name>,

I am now following up on our recent phone conversation where I outlined the purpose and structure of my EdD thesis. I am now writing to you to obtain your written consent to participate in the study. I have included an *Information Sheet* on the study and an *Informed Consent* form, which I would like you to complete. Please retain the Information Sheet as it provides background information on the study and I would be delighted if you would complete the *Informed Consent Form* and return it to me at the above address.

If in completing the form you require additional information please don't hesitate to contact me. Thank you for taking the time to read the attached materials and I look forward to working with you during the course of the study.

Yours truly,

A handwritten signature in black ink that reads "Michael Hallissy". The signature is written in a cursive style with a large, sweeping flourish at the end.

Michael Hallissy

Appendix 6 - Participant Information Sheet and Voluntary Consent Form

Study title

Building teacher professionalism in teaching-learning interactions between online tutors and learners during synchronous tutorials – a case study from Hibernia College

Invitation paragraph

You are being invited to take part in a research study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

What is the purpose of the study?

The purpose of this study is to ascertain what professional practice knowledge tutors require to teach effectively when mediating online synchronous tutorials. There has been significant growth in the use of online teaching technologies across higher education institutions in recent years, yet there is evidence that this new paradigm still presents challenges for many faculty. Using the Teaching, Pedagogy and Content Knowledge (TPACK) theoretical framework this study will endeavour to identify the kinds of knowledge tutors require in order to teach in live 'virtual classrooms'.

The study will run for 9 months between November 2011 and August 2012. Using a case-study approach I propose to work with between six to eight tutors on the MATL programme. There are a number of stages to the research design of the study.

Review Tutor-Learner Interactions

Using a content analysis approach I will review the nature of interactions that occurred during a previously recorded tutorial.

Semi-structured Interview

The interviews will discuss the nature and frequency of the interactions that took place during the analysed tutorial. The purpose of this interview is to establish what, if any, additional supports the tutors believe they require in order for them to teach more effectively in synchronous settings.

Tutor CPD

Tutors will be asked to participate in a recently developed tutor CPD programme. The course consists of four lessons and it is designed to introduce the notion of teaching and learning online to new faculty. This course should take approximately six hours to complete and, as yet, it has not been made available to tutors on the MATL programme. It is hoped that the interview data will further inform the existing

training course, so that it can be enhanced to better meet the needs of faculty across the college.

Review a Second Tutorial

Having participated in the CPD intervention the researcher will review the interactions in a subsequent online tutorial. Using a content analysis approach, similar to stage one, the tutorial will be reviewed to identify if and how the nature of the interactions differ from previously recorded tutorials.

Second Semi-structured Interview

Having completed the tutorial interaction analysis I will once again interview the tutor to discuss the tutorial and the interactions that took place. The interview will also discuss the tutor's experiences of participating in the online training programme and to ascertain what impact, if any, it had on their practice.

Why have I been invited to participate?

You have been invited to participate as you are currently teaching on the MATL programme and you will be tutoring students via live synchronous tutorials.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and you will be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

Will what I say in this study be kept confidential?

All information collected in this study will be kept strictly confidential. The identities of all participants will be kept anonymous at all stages of the study and I will endeavour that no tutor can be identified by contextual information in the thesis or in any associated academic papers.

What should I do if I want to take part?

If you wish to participate in the study you should complete the Voluntary Consent Form (below) and indicate your willingness to 'opt in' to the study.

What will happen to the results of the research study?

The results of this study will be published as part of my EdD thesis, which I am currently completing with the Institute of Education in London. They may also be

used in academic papers and conference presentations associated with my thesis. A copy of the completed thesis will be housed in the IoE library and will be available on request from me.

Who has reviewed the study?

My study has been reviewed by my doctoral supervision team, Dr. Martin Oliver and Dr. Byran Cunningham, and by an internal review team within the Institute of Education, which comprised of Dr. Gwyneth Hughes and Dr. John Potter.

Contact for Further Information

If you have questions in relation to the study please don't hesitate to contact me at anytime. I can be contacted on [_](#) or on my mobile at [_](#).

Thank you

I would like to thank you for taking the time to read this information sheet and I look forward to including you in my study sample.

Date

November 28 2011.

Voluntary Consent Form

PLEASE COMPLETE THE FORM BELOW

Name, position and contact address of Researcher:

Michael Hallissy

MATL Director

Hibernia College

2 Clare St., Dublin 2.

Please initial box

I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.

3. I agree to take part in the above study.

Please tick box

Yes No

4. I agree to the semi-structured interviews being audio recorded

5. I agree to the use of anonymised quotes in publications

Name of Participant

Date

Signature

Name of Researcher

Date

Signature

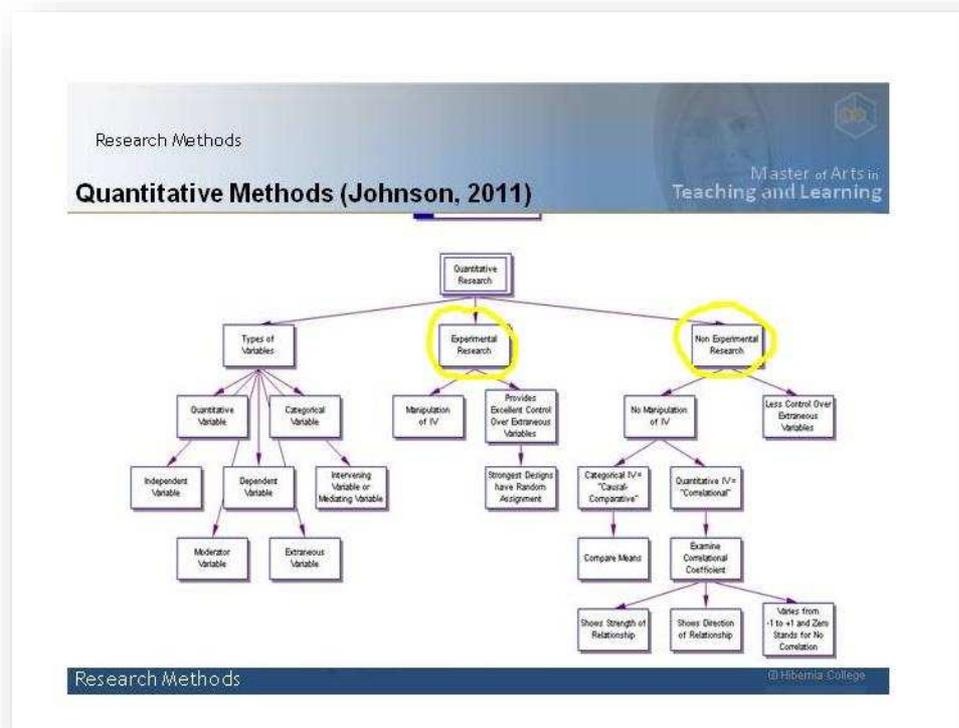
Appendix 7 - Extract from FIAC Excel Coding Sheet

Timing	Time in Seconds	Time in Minutes & Seconds	Code	Comments
1	3	0 Minute	5	This again is admin talk - noting that they are still waiting for a few more students
2	6	3	5	
3	9	6	4	Asks if students can give him a thumbs up that they can hear him
4	12	9	5	Acknowledges a student note
5	15	12	5	This again is not lecturing - it is administrative chat
6	18	15	5	It is setting the scene - overview of the tutorial and where things might go
7	21	18	5	
8	24	21	5	
9	27	24	5	
10	30	27	5	
11	33	30	5	
12	36	33	5	
13	39	36	5	
14	42	39	5	
15	45	42	5	
16	48	45	5	
17	51	48	5	
18	54	51	5	
19	57	54	5	
20	60	57	5	
21	63	1 minute	5	
22	66	3	5	
23	69	6	5	
24	72	9	5	
25	75	12	5	
26	78	15	5	
27	81	18	5	
28	84	21	5	
29	87	24	5	
30	90	27	4	
31	93	30	4	
32	96	33	2	"Okay good" - acknowledging that students are happy with the structure he is proposing for the tutorial
33	99	36	5	He now speaks about some issues around the posting for the assignment.
34	102	39	5	Again this is an admin issue and it is not lecturing
35	105	42	5	
36	108	45	5	
37	111	48	5	
38	114	51	5	
39	117	54	5	
40	120	57	5	

Appendix 8 - Extract from a FIAC Tutorial Report (FTR)

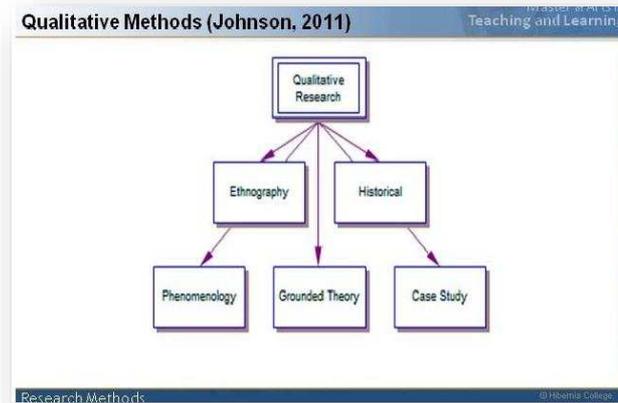
Tutorial 1

So T1 began by asking if the students could hear him and then he outlined some issues that the College was having with the research papers – particularly with getting permission to release them to the students. He noted that they were given an extension. This took up the first five minutes and it really was administrative stuff and not lecturing. At the 5 minute mark he then began to lecture and to start talking about quantitative methods. He used a particularly complex diagram, which is included below but the main teaching strategy here is tutor talk.



He spent about six minutes talking about this slide and the notion of random assignment of variables and quite complex ideas associated with quantitative methods. Then he asks if there are any questions and ask people “to put their hands up”. There were no opportunities for people to contribute.

Then he moves on to speak about qualitative methods and the slide is less complex



He spent 3 minutes talking about this slide and then he announces he is “moving on to”.

He then brings in Mixed Methods and here again he has a diagram which he speaks about the slide for over 4 minutes. Then he tells the students that he is going to stop and he asks them if they have "Any questions, put the hands up on any of this stuff?" Not sure that this type of approach is working well with the group as to date there have been no questions on the material via the microphone.

Slide 1 = 6 minutes

Slide 2 = 3 minutes

Slide 3 = 4 minutes

So in this introductory section he has spent almost 15 minutes covering 3 slides and there is no sense of urgency or sense of the time elapsing. If we contrast this with T2 who is managing time and who has it all planned in advanced. This is an example of someone who has not designed their learning activity, instead they appear to be winging it. It is almost as if he has prepared the slides and he anticipates there will be some engagement because of the slides. In this case there is a lack of structure.

Student Interaction

At around the 20 minute mark he is asked a question by a student in relation to buying the research textbook T1 has drawn significantly from. She asks should they buy the book. T1 responds in a rambling fashion – it takes almost 4 minutes and when she comes back in the entire discussion is going on for almost 5 minutes. This is substantial when one considers that the entire module is 90 minutes.

At 25:42 Student then came in with a second question where she spoke at length (almost 4 minutes) about her own situation. She was teaching in a large DEIS school and has now moved to a two teacher country school and she is thinking out loud on how she might structure her thesis. Instead of cutting her off at the pass and saying he would have a chat with her off line he lets her ramble on. It seems that this is an inordinate amount of time for such an interaction and it begs the question, should we

have ground rules on how much time people can take to have their own personal issues dealt with during a group tutorial? This might be part of a signature pedagogy.

Interaction with Student1

He spent 14 minutes interacting with Student1. This entailed responding to two questions – one in relation to the text for the module and two pertaining to her situation. Almost 10 minutes was devoted to the issue of her situation and finally T1 called a halt to this discussion.

Then Student2 types in a question – because she has no microphone. John reads out the question on her behalf and T1 then answers it. He took around 2.5 minutes to answer the question. He again was rambling in his response.

Then Student3 speaks as she has a similar issue to Student1 – not sure where she is teaching in the new school year.

Appendix 9 - Critical Discussion Disposition Mapping Document

Disposition	Description	Evidence
1. <i>Hospitality</i>	The tutor creates an atmosphere where learners feel welcome and secure and one where there is humour.	<p>She began with the class list and she put people in teams. She called people by name and welcomed them and then got them to meet their partner and to get to know them.</p> <p>I note in the FTR that there was a “very positive atmosphere during tutorial one”. She is constantly affirming student contributions and making them feel at ease. Uses the tutorial to break isolation (interviews).</p> <p>I note in the FTR that “She is extremely positive to the answers she is receiving from the students – she is affirming their answers – “such a high quality answer”, “I love your questions”, “and that is perfect”.</p>
2. <i>Participation</i>	This denotes the idea of a democratic classroom where everyone is encouraged to participate and where it is alright to remain silent , is so desired. Tutor’s role is to manage the discussion and draw students in.	<p>Here the FIAC illustrates that there was a 50:50 participation by both tutor and students in both tutorials. The FIAC for tutorial one shows that T2 only lectured for 14% of the time and even then much of this talk was related to administrative issues, particularly early on in establishing clear ground rules. In tutorial two T2 again only lectured for 18% and again a portion of this was related to setting ground rules for the Constructive Controversy Procedure.</p> <p>In addition the FIAC shows that students had strong interaction during the tutorials. In tutorial one <i>Student-talk-response</i> (Code 8) accounted for 47% of the coded interactions while in tutorial two <i>Student-talk-response</i> (Code 8) accounted for 25% and <i>Student-talk-</i></p>

		<p><i>initiation</i> (Code 9) were coded at 20%. It should be noted that the Code 9s were attributed to the discussions student had while participating in the Constructive Controversy Procedure.</p> <p>T2 was very aware of her role and purposefully set about establishing a democratic classroom. She saw them, not just as a space to ‘unpack’ the lecture, but an opportunity to build relationships. Central to this was addressing the issue of learner ‘isolation’ and in providing a space and opportunities for students to meet and discussion. She provided time at the start of the tutorial for learners to interact and discuss events from their week before getting down to the business of the tutorial.</p> <p>During the interviews (2) she stated that “real learning comes from the heart and not the head” and she wanted her students to participate so she and they could hear each other’s voices and ideas.</p> <p>Efficacy was very strong in her tutorials and she made students feel that their ideas were important and that they added to the overall quality of the tutorial. Comments such as “such a high quality answer”, “I love your questions”, “and that is perfect”. Also the idea of a team answer was part of this efficacy approach.</p>
<p>3. <i>Mindfulness</i></p>	<p>This is to “lose ourselves to become completely absorbed in hearing out what someone else has to say” (Ibid; 11). It involves learning to listen and to hear others. May even involve tutors modelling this behaviour for learners.</p>	<p>T2 modelled mindfulness for her learners. She stated in the interviews that she modelled listening behaviour for the learners and the discussion team activities required both members to listen and to report back a joint response – “I am always teaching them listening”.</p> <p>She ‘managed’ the tutorial very closely. She had a class list and made sure she heard from each group during the 60 minutes.</p> <p>She modelled how to use co-operative learning strategies, she told them “ask not tell” and</p>

		<p>her actions demonstrated how she expected learners to perform in these settings.</p> <p>T2 modelled mindfulness in the way she asked follow-on questions - “Again can I comment on what you said ...”. As people were speaking she was taking notes and she remarked how important paper was to her during tutorials -she took notes on what people said and then probed with questions. B&P (p. 198) and Stavredes speak about the need for tutors to be “active listeners” and this exhibits that.</p> <p>Note what B&P stated that the role of the tutor is to ask “provocative questions” and she uses questioning as a central plank of her tutorials. She stated that questions guided the structure of her tutorials, not PowerPoint slides. She created 3 questions in advance of the tutorial and these were her guides as the pre-recorded lesson consisted of 3 sections, so she had one question per section.</p> <p>She displays a high level of tact and tactfulness by checking her desire to speak. This is very strong.</p>
4. <i>Humility</i>	<p>Related to mindfulness and is the willingness to admit that one’s knowledge and experience are limited and incomplete and to act accordingly (12)</p>	<p>There is most definitely evidence of humility here. She openly acknowledged that she was not an expert on using the technology and she did not pretend that she was. She was more interested in “giving the students voice” rather than dominating the “air waves” with her voice.</p>
5. <i>Mutuality</i>	<p>This notion that our flourishing is contingent on the flourishing of others and this commitment to helping others and working with</p>	<p>Mutuality is very strong in these tutorials. Having students learning from one another was central to her approach.</p> <p>She, like T1, made an interesting observation that she would have liked the opportunity to learn from her colleagues and it seems that there also needs to be mutuality developed</p>

	<p>others leads to trust. It is designed to create a safe place where learners can be open.</p>	<p>between tutors. This could be in relation to forming a community of learners between them so they learn from each other. This point is also made by T3.</p> <p>She also asked students for their views and for instance how the texting feature (chat feature) was working for them. Though one student reported it was challenging she explained it was the best way they had to interact using the software.</p> <p>She wanted the students to set the agenda and that the tutorials were spaces where the tutor and the students set the learning agenda and learned from one another. She stated that she had started to play around with the idea of students submitting their questions in advance – she noted that the 3 questions she posed were her questions and she wanted them to take ownership of this. She also noted that this is something she plans on developing further in the future. “These are my questions, could we come up with your questions?”</p> <p>She certainly took her role in this process very seriously and put enormous energy into designing and facilitating the discussions.</p>
<p>6. <i>Deliberation</i></p>	<p>This refers to the willingness of participants to discuss issues as fully as possible by offering arguments and counterarguments that are supported by evidence, data, and logic and by holding strongly to these unless there are good reasons to do so” (Ibid, 13). This allows all to engage in robust debate where all views are valued. They</p>	<p>T2 in tutorial 10 introduced a strategy known as Constructive Controversy Procedure. The goal of this approach is for students to debate and she provided clear ground rules on what was expected.</p>

	<p>note such a disposition takes a long time to create.</p>	<div data-bbox="1032 252 1854 580" style="border: 2px solid black; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center;">Constructive Controversy Procedure</p> <ul style="list-style-type: none"> • Present argument • My argument is better because... • Your argument is inadequate because... • Your position is... perspective taking...paraphrasing...checking for understanding • Our best reasoned argument is... </div> <p>B&P note that deliberation takes time and here T2 introduced it in week 10. It is a procedure she plans to develop and to use again. It suggests that deliberation should be something the MATL Signature Pedagogy should attempt to build across the entire programme and each tutor should attempt to develop it with their cohorts. In this way students will be more familiar with such approaches and it can develop over the programme rather than over a 10 week module, which is possibly too short.</p>
<p>7. <i>Appreciation</i></p>	<p>They note “few of us take enough opportunities in everyday life to express appreciation to one another for a thoughtful comment, a powerful insight, or a wise observation” (Ibid, 15). They see such a disposition bringing people together.</p>	<p>There are numerous examples of appreciation as she “accepts and uses their ideas”. Each idea that is received is taken – the student is thanked – and a comment is made.</p> <p>The FTR reported the following pattern from the FIAC Analysis:</p> <p>8s (student speaks) – 2 (tutor thanks them) – 3 (tutor picks up on some of the ideas) – 2 (thanks them again)</p>

<p>8. <i>Hope</i></p>	<p>It “provides us with a sense that all of the time, effort, and work will benefit us in the long run, even if only in a small way” (Ibid, 16). They note that both increasing understanding and resolving conflict are underlying principles of this pedagogy of discussion.</p>	<p>Though it is difficult to find specific examples of hope it is clear that T2’s disposition is one of hope. Despite challenges in using the technology she has found a way to work with it and states:</p> <p style="text-align: center;"><i>So yes it was <u>just this confidence</u> but now that it works so well I have said already that I did prepare my tutorials but now I feel I would prepare them even more and it is not even putting in more work but I would vary my methodologies even more</i></p> <p>There is certainly hope in this statement that what she and her learners are engaged in is worthwhile and though it can be challenging at times she is determined to stick with it and see it through.</p>
<p>9. <i>Autonomy</i></p>	<p>That “if democratic classrooms seek to promote individual and collective growth, then people who retain the courage, strength, and resolve to hold on to an opinion not widely shared by others should be given their due” (Ibid, 17). They see this as a temporary state - “this is what I believe in and stand for at this particular time (Barber, 1994 in Ibid, 17).</p>	<p>Again difficult to find clear evidence of this in the FIAC and in the interview data. However, the structure of the tutorial is designed so that learners can be autonomous, they can bring their ideas and their views, but there is an expectation that they will move in their positions over time. The idea of working with a learning partner is also part of this idea, that though they are an individual they need to find consensus or agreement and a common ground or at least a common answer. Also the structure provided for the <i>Constructive Controversy Procedure</i> provides learners with an opportunity to present their own argument and then to make a case as to why it is better than their partner. Then together they form a new argument - again this appears to support autonomy and the idea of being open to take on other people’s ideas.</p>

Interesting Observations

One of the most interesting observations here is how she structured the tutorials. Rather than developing PowerPoint slides she used App Sharing and designed her tutorials around a questioning strategy and not around content delivery. By not having slides it appeared she was able to be more flexible and go with where the discussion went rather than feel obligated to complete her slides and “air” her material. She focused on creating an a community of learners so as to address the issue of isolation on-line – she wanted to create a democratic tutorial. Much of her actions seem to resonate with the suggestions of Brookfield and Preskill below:

They believe that rather than using didactic transmission that the “most familiar material is renewed through questioning, criticism, discussion and deliberation” (195)

They believe that often the tutors role is to step aside and let students “construct their own knowledge and understanding” (197)

The really skilful teachers are able to get students speaking to one another.

“There is nothing passive about this role. It requires teachers to be active listeners and participants, constantly on the lookout for new connections, new understandings, and new constructions of the familiar and the obscure.” (198)

Also her questioning strategy was different to others. Though she had prepared them in advance she again had flexibility to amend them as she interacted with learners on the fly. Also the type of questions she designed facilitated learner discussion – they were not closed questions like others.