Learning to live with a new educational technology: an exploration of tertiary teachers' experience in the Middle East

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I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature: 

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Abstract

This thesis aims to tell the story of a group of teachers at one college involved in the iPad implementation. It considers the effect that the implementation had on their professional identities and how they coped with the experience. Underlying the study is a research-based exploratory background that highlights the importance of acknowledging teachers' perceptions and experiences for the successful integration of a new learning technology into classrooms.

The subject of this study is a group of teachers who were required to adopt a new technology to teach English to Foundation students at a university in the Middle East. The Apple iPad was to be the exclusive means of delivery: no books, stationery or writing equipment was to be allowed in the classrooms. The teachers were 'constructive agents' (Spivey, 2007, p. 3) who built their knowledge of teaching with the iPad out of interaction with their colleagues, the context and the culture of their reality. Their professional identities impacted on how they coped with the new challenges and at the same time, the new challenges impacted on their identities.

Conducting a narrative thematic analysis allows justice to be done to the experiences the teachers referred to in the interviews, observations, reflections and email exchanges. The data revealed a rich lived experience and captured complex, detailed and evolving descriptions from the teachers (Braun, Clarke, Hayfield, & Terry, 2019). I became part of the narrative frame of their storytelling revealed by this narrative thematic analysis.

The findings show that the teachers used a variety of strategies to respond to the sudden change, the negative surprises they encountered were turned into learning experiences and they drew on their professional identities and community for support. An interesting paradox is uncovered as it is revealed that positive outcomes can be achieved as a result of experiential learning, despite a perceived lack of appropriate planning, information and preparation.

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Chapter 1 – Introduction

> *"When we least expect it, life sets us a challenge to test our courage and willingness to change; at such a moment, there is no point in pretending that nothing has happened or in saying that we are not yet ready. The challenge will not wait. Life does not look back."* (Coelho, 2006)

This is the story of a group of teachers and an experience that they shared. It was a time of great change and involved the introduction of a new way of teaching. All paper, pens and books were removed from the classroom almost overnight and they were called on to deliver the curriculum using only technology.

The particular new technology was the Apple iPad but it is not the device that I will focus on, nor in fact how it was introduced, but rather on the teachers' experiences of the process and how it affected them and what impact they perceived it had on their professional identity, i.e., how they perceive themselves as teachers and what factors contribute to these perceptions. Professional identity is not a stable entity; it is complex, personal, and shaped by contextual factors (Clarke, Hyde, & Drennan, 2013). Teachers' perceptions of their own professional identity affect their efficacy and professional development as well as their ability and willingness to cope with educational change and to implement innovations in their own teaching practice (Beijaard, Verloop, & Vermunt, 2000). I believe that a teacher's professional identity is what gives them confidence. If the context in which they are operating is damaging to their professional identity they can suffer and, as a consequence, so can the learners.

This study is about beliefs and change and the teachers' reaction to them and participation in this process. I believe that everything we come into contact with and interact with has an effect on us as people and consequently affects our professional lives and professionalism as well. I will look at what the teachers experienced, how they perceived the experience and how it affected them. There have been initiatives, fads and phases in education over the years and around the time that I first embarked on this study in the summer of 2012, a major initiative was launched, and this thesis is the story of that initiative.

1. 1. Researcher's background

I have been a teacher, manager and teacher trainer for the past 25 years and I have held many different professional identities over those years. These identities have been shaped by my experiences and environments, and this chameleon approach to self- awareness is what has morphed me into who and what I am today. I have experienced a range of educational changes, reforms and innovations over the years, which have affected me in different ways. As rumours of the implementation of the iPad began to spread I became interested in the effects that the not inconsiderable imminent changes would have on my colleagues. I was working at one of the colleges where this new initiative was implemented and was involved with the implementation of the iPad. I was a supervisor in the Foundations department, but none of the participants reported to me or taught the students for whom I had responsibility. My position in the organization could not be seen to either benefit or disadvantage the participants by them agreeing to be part of the research. I had a good working relationship with all the teachers and as far as this project is concerned, I was very much in the same position as them as I too had to learn to use and teach with the iPad. This could cause the research to be seen as 'insider research' and could have led to some concerns regarding ethics and validity. The term 'insider research' is used to describe projects where the researcher has a direct involvement or connection with the research setting (Robson & McCartan, 2016). Positivist researchers assert the traditional view that the researcher should be 'an objective outsider' who studies objects from which he or she is removed (Denzin & Lincoln, 2011).

There are various ways in which a researcher can be categorised as an insider. Professionals may carry out a study in their work setting which can also called practitioner research (Robson & McCartan, 2016). In my case, I was a member of the community, which could be seen as a blurring of boundaries (Jarvis, 2004). Kvale (1994) suggests that with insider research, the concept of validity becomes increasingly problematic because of the researcher's involvement with the subject of study and that the researcher's biases threaten validity. In an attempt to strengthen the validity of my research, I pre-empted questions that could be asked and made sure that I was able to justify the answers to these questions.

Could my relationship with the subjects have a negative impact on their behaviour so that they behaved in a way they wouldn't normally?

- Would my tacit knowledge of the context lead me to misinterpret data or make false assumptions?

  In other words, because I was involved in the project might I be influenced by my judgement of the situation rather than listen to the participants? I was aware that this might be a possibility and so I made every effort throughout the data collection and analysis process to make sure this did not happen.

- Could my insider knowledge lead me to make assumptions and miss potentially important information?

  This is a similar point to the one above and again, I had to be aware throughout the process not to jump to conclusions and to listen carefully to what the participants were saying and not what I thought they ought to be saying.

- Could my politics, loyalties or hidden agendas lead to misrepresentations?

- Could my moral or political views subconsciously cause me to distort data?

  Every researcher has values, loyalties and views and it is impossible to ignore them entirely. However, I was aware of the danger of letting my views and loyalties interfere with my research and as I was aware, I believe I was able to remain as neutral as possible throughout the process

Although I remained neutral, I believe that my knowledge of the context helped in the data analysis as I understood the references that the teachers made to people and events.

My initial literature review led me to read deeply about phenomenology and as phenomenology requires the researcher to examine their preconceptions, I required myself to confront these questions in an attempt to ensure that my research was as ethical and valid as possible. A number of papers discuss emic and etic research issues (e.g., Peterson & Quintella, 2003; Welsbach, Sutton, & Whetten, 1999). There are ongoing debates about the value of one form of research compared to the other and each has its critics and supporters. An approach which adopts the best of both emic and etic perspectives can produce very comprehensive findings. However, there are also many cited advantages of

insider research. It can be argued that the insider has a wealth of knowledge that an outsider would not be privy to (Tedlock, 2005), and Tierney (1994) further supports this argument stating that interviewees may feel more comfortable with an insider and speak more freely. Therefore, the perspective I am taking is that insider research has the potential to add to the validity of my research because of the richness, frankness, authenticity and openness gained from my relationship to the participants.

1. 2. Overview

This study was carried out over a period of 3 years in a tertiary education college for men in the Middle East. English teachers in the Foundations Department volunteered to participate in the study. The iPad was introduced as the primary means of delivery in the English course in September 2012, which is the same time that this study began. The interpretive study narrates the experiences shared by this group of tertiary English teachers at as they introduce the new educational technology and teaching methodology. The impact both of and on their professional identities is documented and the strategies they employed to maintain their professionalism are discussed. The paradox of positive value and negative experience (Griffith & Northcraft, 1996) is used to illustrate how learning experiences and opportunities for professional growth can be found in unexpected situations. Within the problem of the paradox of positive value which states that users of technology who are underprepared by an overly positively biased introduction to technology will encounter negative surprises (Louis,1980), there is a surprising opportunity which is the paradox of negative experience. The negative surprises encountered by users as a result of the lack of information provided to them by the implementers, if not costly or threatening, can be turned into positive learning experiences. This study suggests that exploration-based (rather than instruction based) learning is an effective method to employ in teacher development and that positive outcomes can be achieved from what appear to be negative beginnings.

1. 3. Research questions:

Research Question 1: In what ways do teachers' accounts of change (such as the sudden introduction of a new educational technology) help explain their perceptions of their professional identities?

Research Question 2: How did the change in teaching methodology and methods affect the teachers' professional identities?
Research Question 3: To what extent did involvement in a Community of Practice help teachers in the study respond to change?

At the time I started my doctorate, I had been living in the Middle East and working at the college, which is the setting for the study, for eleven years. I was part of the iPad project and had several different roles throughout its three or four year duration. I also had several different roles within this study. I was the interviewer, transcriber and narrator but more than anything else I was a listener. The experience that the teachers lived through was very stressful at times as they struggled to master the new technology and all the problems associated with it. For some, the interviews were a cathartic process as they were able to tell their story and by narrating what had happened, they were able to reflect on the experience.

As the researcher, I align myself with the assumption that learning is a social activity and reality is constructed in and out of the learners' interaction with the world – not only human beings, but also things or artefacts, and what they are asked to achieve with them. I theorized that learning happens when dialogue takes place between participants in an activity and that learning happens best when the participants are asked to challenge themselves with information or tasks that are one step ahead of their current level or position. This research presupposes that our uses of technology are affected by the social structures and the social construction of technological artefacts and it is concerned about the ways that social and technological uses shape the form and content of learning experiences. 'Learning experiences' in this study refers to how the teachers learnt to use the technology 'on the job' and under pressure. How people adapt to teaching with technology depends on their levels of concern related to the new experience and not having all the information related to the new technology can be seen as being a positive factor if the teachers are able to learn from their mistakes in a non-threatening environment. It has been seen that successful and confident teachers have a strong sense of self and view themselves as professionals with an identity distinct to other professions. Elements and aspects from different theories were drawn on and combined to construct a methodology

which could answer the research questions and narrate the story of the shared experiences in this study.

Chapter 2 – Background

The story takes place in the United Arab Emirates and so it may be useful to provide some background information about the country and the education system.

2. 1. The story of a new nation

The UAE is a very young country with very humble beginnings. Around 50 years ago, the majority of the population was illiterate and led a wandering nomadic life, but now, thanks to the discovery of oil and gas, it is one of the richest countries in the world. It has come a very long way since December 2nd, 1971 when the United Arab Emirates was formed under the leadership of Sheikh Zayed. The demographic of the UAE is unusual in that only 10% of the population are Emiratis, with the other 90% being expatriate workers and their families.

In order to live in the UAE, you need to have a residence visa provided by your employer, or you need to be sponsored by a husband or father who has full time employment in the UAE. A single woman can sometimes sponsor her child, but only if she belongs to one of the professions that are deemed suitable to sponsor family members (e.g. teachers or doctors). Although the situation is slowly changing, employment in the UAE is usually tied to your home and your children's education, since both are generally provided by your employer, so if you lose your job, you lose your home and your children's school fees are no longer paid. Furthermore, expatriate children have no right to attend the local government schools. Life in the UAE as an expatriate is insecure. The price of oil still largely determines the wealth of the locals and the job security of the expats (Haziq, 2017)

The UAE is a popular and safe destination for expatriates. There is little crime and it is a friendly and, in many respects, a very liberal country. Dubai in particular is largely westernized and is also a popular holiday destination with countless 5-star hotels, restaurants and bars. However, one should not be lulled into a false sense of security. It is an Islamic country and the system of government is autocratic and absolute. These are not issues that will be dealt with in this thesis, but it is important to remember the backdrop against which the teachers in this study were living out their lives. Many of them were here with their families and their stability and security depended on their continued employment.

This background of autocracy has an impact on the people working here. The pay and conditions are often far superior to those found in other parts of the world. English teachers are paid very attractive salaries that they could only dream of in their home countries. However, this comes at a cost as will be seen later in the teachers' narratives. My aim in this thesis is to understand what happened to these teachers and how the experience impacted on them and their sense of identity. In order to begin to do this it is first necessary to know something about the environment in which they are living and working. The UAE as we know it today is only 47 years old, but it has a rich history that spans many centuries before that dating back to AD 630 when Islam first came to the region and trading started. Merchants from India, China and Europe were attracted by the Emirates' prime location between Europe and the Far East. The Dutch, British and Portuguese battled for control of the coast and the local Bedouins moved inland to eke out an existence in the unforgiving deserts (Kirk & Napier, 2007)

In the 19th century, the British signed a series of agreements with individual Emirates that resulted in an area known as "The Trucial States." At the time and up to the early 20th century the pearling industry was the main source of seasonal employment for the population of the Emirates. It was a very hard life and could be dangerous. The pearl divers went down to depths of two or three metres with no equipment other than a makeshift clasp to keep the water out of their nostrils. During the pearling season they could be away from home for months and, when they did return, they had meagre wages to show for their labours. The women and children left behind lived in very poor conditions and education at this time was negligible. As if life were not hard enough anyway, the 1920s and 30s brought more challenges to the nomadic desert dwellers. An economic depression coupled with the Japanese invention of cultured pearls caused irreparable damage to the pearling industry and life looked as though it were going to get harder still. Some attempts had been made to establish a basic education system, but these efforts failed along with the pearling industry. The poverty of the period meant schools no longer received local support and most were thus forced to shut their doors leaving the bulk of the population again without access to formal education (Davidson, 2008).

However, this period also brought a great discovery that was to change the Emirates beyond recognition. In the early 1930s the first oil company teams conducted geological surveys in the UAE. Less than 30 years later, in 1962, the first cargo of crude oil was

exported from Abu Dhabi. With the economy steadily progressing, Sheikh Zayed bin Sultan Al Nahyan was chosen as the Ruler of Abu Dhabi in 1966. Under Sheikh Zayed, the steady oil revenues resulted in an infrastructure overhaul with the construction of schools, housing, hospitals and roads throughout Abu Dhabi (Alhebsi, Pettaway, & Waller, 2015).

Under the federal banner of the United Arab Emirates, the sheikhdoms of the lower Gulf were transformed by the massive oil booms of the 1970s. A development miracle was born, and these once impoverished territories suddenly found themselves guardians of the modern world's richest resource. There is no doubt that this great and rapid wealth, more than any other factor, has been the driving force behind almost all aspects of change and development in the region (Davidson, 2005).

The World Bank (Godwin, 2006) classifies the UAE as a developing country with a high national income. This classification as a developing country is, in part, due to the country's limited economic diversification and its heavy reliance on oil. It is also likely in part due to its archaic political structure (Godwin, 2006). The country's hereditary rulers pass laws by edict with no need for ratification by elected assembly. The ruling families control the government bureaucracy by controlling appointments to key positions. In addition, by controlling national wealth, the ruling families shore up their status through patronage and the distribution of financial support to the country's citizens, acting as a pseudo social security payment system (Godwin, 2006). In this regard, the UAE citizenry are, to varying degrees, given a stake in the status quo. The more modern attributes such as openness and entrepreneurship are tempered by the preexisting social and political structure (Delacroix, 1980; Findlow, 2006; Minnis, 2000). Under this system, citizens find it advantageous to remain separate and distinct from the larger population of foreign workers who do not share their economic benefits to nearly the same extent.

The institution in which this research was carried out is very modern and has very advanced facilities in the area of technology. Since 2001 all the students in the institution have been provided with laptops and the classrooms are equipped with the most up to date Smartboards and projectors. A lot of time and effort has been put into providing both students and faculty with Professional Development so that they can use the technology effectively. In order to understand quite what an achievement this is, it is necessary to

understand something of the history of education in the Emirates over the past few decades.

2. 2. The evolution of Emirati education

According to the Ministry of Education in the UAE, the region has gone through four stages of educational development: Mutawa and kateeb, educational circles, semi-organized education and the modern education system (Alnabah, 1996).

The movement to open schools increased after the British occupation, based on the desire of influential local leaders and merchants as a means of spreading Islam and increasing the literacy of the population. Open schools seek to make education accessible to members of society who are not able to attend formal schools for a number of reasons. The system of open schools continues today in India and their pupils are drawn from various target groups and include: "drop-outs from formal schools, marginalised sections of society like rural youth, rural and urban poor, girls, women, scheduled castes / tribes, backward classes, handicapped people, ex-servicemen and the working population at bottom level" (Rajagopalan,2011, p.6) Before formal schools were built in the UAE , open schools provided basic education mainly to boys but the quality of the schools varied according to the knowledge of the scholars (Alhebsi et al., 2015).

Remnants of each of the four iterations mentioned above still exist within the culture and are evidenced in modern day society. The UAE was an early adopter of the concept of free public education, with education widely viewed as a means of maintaining the economic and social independence of the nation and region and as a tool by which future generations can guide and transform society (Alhebsi et al., 2015).

As evidence of such development, progress has been especially noteworthy in reducing the illiteracy rate. Shortly after independence in 1975, the rate of adult literacy was 54 percent among men and 31 percent among women. Today, literacy rates for both genders are close to 95 percent (Embassy of the United Arab Emirates, 2018).

2. 2. 1. Universities in the UAE

It was not until relatively recently that the Emirates branched out into tertiary education, with the opening of UAE University in 1976 in Al Ain, a small city inland and the birthplace

of the country's founder. Since then, it has expanded from the original four faculties of science, education, business and economics, and humanities and social science to nine. It has added information technology, medicine and health, Shari'ah law, agricultural sciences and engineering. Currently, more than 12,000 students, 75% of whom are female, study at the university. However, this university is now only one of many with many international universities such as New York University, Sorbonne, Wollongong, Birmingham and Middlesex having opened campuses in the UAE. In the last decade, a number of private international universities and colleges have set up branches, especially in Dubai with the establishment of Knowledge Village (Godwin, 2006). In the private tertiary institutions, instruction is almost always in English. Godwin suggests that private education providers are continuing to increase market share by developing a profile as a viable alternative to the government education system. In fact, Shah and Baporikar (2011) report there are currently over 200 foreign branch campuses across the GCC as a whole. Generally, these are being established in special education zones within GCC countries such as Knowledge Village in Dubai. The Federal universities, which offer free education to nationals, also deliver all their courses in English.

2. 2. 2. The culture of learning

In addition to the relative youth of the educational system, a range of societal factors affect the quality and extent of education for students in the region. Due to their own lack of educational experience, many parents may not perceive the importance of regular school attendance, completing homework and learning to work independently and therefore do not provide sufficient guidance to their children (Daleure, 2016).

Students become highly reliant on their teachers as sources of knowledge and information and they expect to be 'spoon-fed' information. Without developing independent learning skills, students are disadvantaged in a higher education learning environment which tends to require greater learner independence. Swan (2014) and Khan (2010) discuss the problem of pervasive cheating in the UAE school system, with educators describing students who over the course of their school careers have engaged in cheating with little awareness or concern that it may be wrong. A particular problem in tertiary institutions is the widespread practice of plagiarism. Students in the UAE will pay considerable fees to have papers written for them in order to avoid anti- plagiarism software. Cheating is not

considered to be shameful, students often look at it as 'helping' each other and because of the tribal nature of society in the UAE it is almost considered to be a duty to 'help' other students. As Swan (2014) indicates, cheating is so common that it suggests a failure of the education system to encourage students to be interested in what they are studying: the goal of many is simply to pass whatever course they are doing.

Another societal factor discussed is the difference in family expectations between boys and girls. At home, boys are less likely to be encouraged to do their homework and are free to spend time outside their homes. In contrast, in Emirati society, girls are expected to stay at home and do homework. Returns for male educational involvement are perceived as lower because work opportunities and other social benefits have been more readily available to Emirati men than women. For many young men, the police force or the military has provided a popular career path. For women, on the other hand, marriage prospects are reported as improving with higher education, and perhaps as a result, women in the UAE tend to have much higher participation rates in higher education than men (Daleure, 2016).

Tertiary education is free for Emiratis at federal UAE universities, and most high school leavers access higher education to some degree. The entry requirements to the universities vary – at some, entry to the bachelor's program can be as low as an IELTS (International English Language Testing) Band 5.0. The college where this study was carried out is one of the oldest higher education institutions in the UAE, with branches in all the Emirates. Each Emirate having two separate colleges – one for men and one for women. In recent years Emiratis have assumed positions within the colleges as managers and administrators and a handful have also become faculty. At the time this study was carried out there were around 20,000 students. In 2012 there were 1.2 million Emiratis (www.statista.com) of whom 40,433 were studying in the three federal higher education institutions (Ministry of Education, UAE, 2016). These students were taught by faculty from 57 different countries (Higher Colleges of Technology, 2011).

2. 3. Background to the technology

2. 3. 1. Technology integration in education and the Apple iPad

The 1980s were memorable for many reasons. In this decade we saw bizarre fashion trends in the form of shoulder pads, legwarmers, neon colours and extravagant 'big hair' for both

men and women. The children of the 80s played with Rubik's cubes and Cabbage Patch Kids and the teenagers were plugged in to Walkmans and played video games in arcades for the first time. It was also a time of rapid growth for the computer industry. Following on from the creation of Microsoft and Apple towards the end of the 70's, the technology and the speed of innovation both in hardware and software together with the relative low costs provided a speed of growth and adoption. The birth of the IBM PC signaled the arrival of personal computers first in offices and then in peoples' homes. Computers soon became an integral part of modern life. Following on from Microsoft's MSDOS on PCs to the first versions of Windows a GUI Graphical User Interface. Apple's Lisa personal computer was the first computer to use a graphical user interface. As well as the hardware and software changes a new technology was evolving. Tim Berners, an English physicist, was responsible for the innovation of 'Bulletin boards' which was later to become what we now know as the Internet. It was in the early 1980s that technology began to be seen as a useful tool that could also be put to good effect in education. It has very quickly gained popularity and widespread use and the students of the 21st century would find it very difficult to live without it. As personal computers became readily available to the public, computers were viewed largely as stand-alone machines and productivity devices (Benton, 2012). During the 1990s, networked resources became available that allowed researchers and educators to communicate electronically, shifting the focus from the computer as a machine, to the computer as a mechanism for communication and collaboration. It was not until the late 1990s, that widespread Internet access became available and forced a paradigm shift in how the computer and the Internet were integrated in classrooms (Molnar, 1997). During this phase, which continues to the present, technology has been viewed as a primary means of locating, analyzing, creating, and sharing information (Cennamo et al., 2010). According to Roblyer and Doering (2009), four distinct periods of digital technology integration can be further defined that reflect the types of technology available to schools, as opposed to how they were actually utilized by teachers. Benton (2012) outlines the four phases:

1. The pre-microcomputer era extended from the 1950s to the 1970s. Although few schools could afford the first mainframe multimedia learning station, the IBM 1500, a few universities attempted to introduce these systems in their schools of business.

2. The second era - the introduction of the microcomputer. Some initiatives attempted to make these machines available in classrooms.

3. The 1990s saw the introduction of the internet and the use of technology in education took off with email and multimedia resources enabling teachers to use it creatively in the curriculum. During this stage, some educational establishments began offering distance education programs and 'virtual schooling' (Roblyer & Doering, 2009).

4. Mobile technologies and ubiquitous access to technology. This phase sees the growth of wireless and mobile computing to facilitate learning that is available on demand and in any location.

The transition from Web 1.0 through 2.0 to now can be seen as a shift in the role of the user from consumer to participant to creator. The next stage, Web 2.0, was described as ubiquitous computing or pervasive computing and led to added participation on the part of the user. What this refers to is a scenario in which embedded processing in everyday objects enables intercommunication and unobtrusive data sharing throughout the user's environment. An example of this would be a fridge that sends a grocery list to the fridge owner's smartphone as a reminder to restock. As can be seen from the above, technology has come a long way very quickly. When the teachers involved in this study were at school, or even at university, they did not have access to computers. For these teachers, using technology in the classroom does not come as naturally as it does for their students.

The teachers who were the focus of the study had varying levels of competence and interest in these developing technologies. However, the average age of the students they were teaching was approximately 18, and they were of the generation who adopts each new technology almost without thinking. The ease with which the younger generation adapts to using new technologies such as the iPad could be seen as an advantage by the teachers but could also be seen as a threat. It could be seen as an advantage if the teachers were happy to admit their lack of knowledge and accept help from the students. However, for those teachers who like to be the authority figure in the classroom such a switch in the dynamics could be uncomfortable. This will be discussed further in Chapter 5 and 6. The implications for the use of these mobile handheld devices in teaching and learning are profound. Although competing models of handheld and tablet devices were and still are available, the Apple iPad was the most popular device on the market at the time of the study due to its unique design, accessibility features, and the abundance of available

apps that, according to Apple, if implemented properly, could potentially impact educational practices. Apple's marketing strategies probably also had an impact on the iPad's popularity

Many schools and universities worldwide have recognized the value of providing their students with these types of technology tools and have purchased classroom sets of the devices, initiating various implementation models to enhance classroom practice. According to the technology website TechCrunch, as of 2013 (the data for this research was collected from 2012-2014), Apple had sold over 8 million iPads direct to education worldwide (Etherington, 2013).

In the academic year 2012 to 2013, the federal government in the UAE, launched an initiative that saw over 6,200 students and 360 teachers in the Foundations program being equipped with iPads and using them for the entire 15 hours per week that was devoted to learning English. Each student and teacher was given a personal iPad to use for the duration of their time either studying or working at the institution. As mentioned earlier, we can compare this to other implementations in which pilot studies were carried out with three of four classes over a year to 18 months, e.g., a qualitative research study was conducted with three schools in New South Wales. It involved five teachers, over 90 students and 75 iPads were used (Goodwin, 2012). It could be argued that the project in the UAE was too ambitious and that a smaller scale initiative including a pilot would have been more appropriate. This project was also unusual in that it required the iPad to replace all other means of delivery and in some colleges (including the one that was the focus of this research) the use of paper, pens and text books was ruled out completely, at least in the first few months.

2. 3. 2. Issues and problems using the iPad in English Language Teaching

One of the most obvious capabilities of iPads is their ability to act as highly efficient repositories and delivery mechanisms for course materials. The advantages of iPads in this context are extensive, beyond the most obvious advantages of portability and immediacy of access to digital content. Melhuish and Falloon (2010) make the observation that often the education sector adopts and forces the use of technologies perhaps unsuitable for a learning environment. At its most fundamental the iPad in particular is first and foremost a media consumption device (Murphy, 2011).

Unfortunately, at the time the study began (September 2012), there was little or no material for teaching English available for the iPad. E-books could have made the course dynamic and motivating, but there were none available for English. The publishers had not, as yet, produced any versions of their textbooks for the iPad. One publisher started work with the institution to produce materials for the Foundations English course, but it soon became apparent that the materials were little more than PDFs of the existing textbooks with limited interactive functionality. Initially, issues with sharing materials was a big concern. There were apps that were very good for brainstorming, vocabulary learning and testing such as Quizlet, ScoTutor, Popplet and Scribble Press but where the teachers really struggled was with teaching extensive reading such as that required for IELTS. The size of the screen made reading difficult and scrolling up and down to read the questions and find the answers made the task more difficult for the learners. Not only did battery life cause problems, but the length of the charger cables made them difficult to use in the classrooms.

Testing was also made more complicated. LockDown Browser was used to avoid students navigating to other sites during exams, but the set-up process at the start of exams was lengthy and time consuming.

2. 3. 3. The Apple iPad

Apple's iPhone and iPod Touch were already received, integrated, and accepted into the educational sphere before the release of the iPad in the spring of 2010. In fact, Apple had been working on the concept of the iPad as far back as 1979 when they invented the Apple Graphics tablet and the iPod was just the precursor of what was to come. When the iPad was unveiled in 2010 it was met with great excitement. Not only had Apple achieved their goal, but they had done so at a cost that was relatively accessible to many consumers. On the first day it became available, 300,000 iPads were sold and 15 million had been sold by the time the second generation was launched a year later. Since its initial launch there have been six incarnations of iPad. The model used in the context of this study was the iPad 3. The device was originally intended to be used for interacting with audiovisual media, including Web-based content, video, music, and electronic books (or e-books). Due to the device's popularity, third-party applications have been developed that allow utilization of the device for a number of productivity tasks, in effect allowing the iPad to function as a personal computer. Thousands of applications have been developed that allow for word

processing, database and presentation development, as well as spreadsheet entry. Designed to be extremely durable and suitable for use even by children, the iPad is constructed of the same glass and metal used in airplanes.

Numerous educational establishments have used iPod technology to support independent student learning through teacher-developed podcasts (teacher-created, downloadable audio recordings) and vodcasts (video podcasts). Primary school teachers are using them in the classroom and downloaded literacy and mathematics applications are used by students for independent study Teachers have found that many of its features can be used to enhance the quality of teaching and learning for those with a range of special educational needs. In the United States, some districts with large numbers of English as a Foreign or Second Language Learners have found success with using iPods to teach language acquisition (Patten & Craig, 2007). These devices are especially useful in learning vocabulary and focusing on pronunciation.

However, the potential of technology has not always been accepted as readily in some educational environments such as in the English language learning environments, as is evident in the educational technology literature (Baker, Bernard, & Dumez-Féroc, 2012; Voogt, Erstad, Dede, & Mishra, 2013). There are contexts where its use has often been described as uneven or limited, with the tendency of technology to be used on the periphery or on an 'ad hoc' basis (Blake, 2013; Kreijns, Vermeulen, Acker, & Van Buuren, 2014). This reality challenges the concept of "normalisation" which was first introduced by Bax (Chambers & Bax, 2006) to investigate the integration of technology into tertiary-level English language teaching. As defined by Bax (2003), normalisation involves "the stage when technology becomes invisible, embedded in everyday practice and hence 'normalised'" (p. 23). The state of normalisation is achieved when teachers and students use technology as a learning resource on a daily basis as an integral part of every lesson (Bax, 2003).

After reviewing studies conducted in four schools utilizing iPods to assist English language learners, Patten and Craig (2007) reported that "considering the large number of immigrant students entering public schools (in the U. S. A), one cannot overlook the potential value of the iPod in assisting students who are entering a new school environment, learning English as a second language, and becoming familiar with a new cultural environment" (p. 40). In the current study, students at the college involved in the study were all UAE nationals

studying in their own country. However, as English is the medium of instruction in higher education in the UAE, tertiary students are required to raise their English proficiency to a level that allows them to pursue their studies at undergraduate level. Thus, they are, in effect attempting to assimilate themselves into a new culture, one where they have to learn and function in English.

Technology and in particular, iPads are continuing to have a big impact on education in general, and the impact on higher education is also evident. The portability of the iPad makes it very popular with young people and the freedom that it gives them to learn anytime, anywhere means that they can study and learn in settings that suit them and not just within the confines of the classroom. Technology has opened up education to people in remote or deprived areas who previously had few opportunities to study. MOOCS, for example (Massive Online Open Courses) are making university level courses available to people who might never get the opportunity to enroll in a university. However, technology and iPads do not work on their own. Proper preparation for technology integration has to be made and without a clear understanding of how it should be integrated into curriculum and of the effects on students and teachers, it's possible that the many educational advantages it can afford could be missed. (Wang & Churchill, 2013)

2. 4. The Apple iPad initiative

This thesis aims to tell the story of a group of teachers at one college involved in the iPad implementation. It considers the effect that the implementation had on their professional identities and how they coped with the experience. In order to understand their experience, it is necessary to understand something of the environment in which they were living and working and the background to the implementation itself.

In 'An iPad Implementation Framework' from June 2012 (Cochran, Ben Halim, Khalil, & Gilroy, 2012, p.4) it is stated that "at the request of his Excellency, Minister of Higher Education and Scientific Research, the three government-funded institutions of higher education in the United Arab Emirates have jointly embarked on an ambitious project to introduce the use of iPads in higher education for UAE nationals." The project vision was stated as being "to transform higher education" and the iPad would serve as a catalyst to

motivate and engage students in their own intellectual development and achieve higher standards of success. The aim to promote individual development and to increase motivation was indeed a departure from the 'traditional' form of teaching that largely endured in the UAE government schools. As mentioned earlier, the local high schools still relied heavily on learning by rote as the main means of instruction. The document reports that independent learning and a focus on critical thinking was lacking from the current system.

According to Hargis, Cavanaugh, Kamali, and Soto (2014), Sheikh Nahayan Mubarak Al Nahayan, the United Arab Emirates (UAE) Minister of Higher Education and Scientific Research and Higher Education Chancellor, challenged the three federal higher education institutions in 2012 to create functional, meaningful mobile learning in and outside of the classrooms, stressing that sound pedagogical principles should guide implementation. The three institutions were encouraged to embark on a major initiative to move education into the mobile learning era by phasing in iPad-based teaching and learning for all Foundation students from September 2012 (most UAE colleges have a foundation or entry year which provides English, math and study skills needed before students are able to begin their chosen major). "The scope and scale of the initiative will disrupt traditional notions of teaching and learning and align these with the 21st century young learners." (Cochran et al., 2012). It was suggested that students would find new ways of learning that recognized their aptitude for mobile learning by making education more effective and rewarding. This view is supported by Conole, de Laat, Dillon, and Darby (2008): " the emergence of new forms of mobile, internet and social software technologies, which enable distributed collaboration suggests we are reaching a turning point in the way technology is used for learning" (Conole, de Laat, Dillon, & Darby, 2008, p.516). With the nationwide launch involving over 14,000 iPads, it is interesting to note that there was no pilot, or to look at it another way, the 'pilot' involved 14,000 students and teachers. To put it into context however, let us compare the UAE implementation with initiatives around the world, in countries with far larger populations.

In December 2014 Maryville University, a small, private university in Missouri, deployed an initial 150 iPads to all full-time faculty and adjunct faculty (Baab, Bansavich, Souleles, & Loizides, 2017), which later increased to more than 3,600 devices for all full-time students (Hardy, 2018). In 2012, the government in Victoria, Australia, completed a trial of 700 iPad

devices in primary and secondary schools to test whether education outcomes improved (Apple, 2018). The de Ferrers Academy—one of the largest academies in the UK, serving more than 2100 middle and high school students—launched an iPad program in 2012. Initially deploying iPads to teachers, they expanded the number of devices to students over the course of two years, resulting in 1300 total devices deployed (Apple, 2017). Apple also described an iPad program in Milan in Italy in 2010 that "facilitated a restructure of the school and its curriculum" (Apple, 2017) with over 860 iPads deployed across two campuses.

In 2013 at Wilhelm Ferdinand Schüssler Day School Düsseldorf, Germany, a shared iPad program was implemented in two classrooms, becoming a complete one-to-one school in 2014 (Apple, 2017). These Apple reports advise that "the data shown in this document is self-reported by the institution—Apple was not involved in the gathering or analysis of the data reported, nor has any knowledge of the methodology used".

By any standards, the physical scale of the UAE's iPad implementation was a huge undertaking. In order to make a smooth transition into the mobile learning era the three institutions formed a steering committee and several working groups whose aim it was to focus on Pedagogy, Infrastructure, Content and Communication. These groups were formed mainly from representatives from the management team. In May or June 2012 all faculty were to receive their iPads. It was hoped that the initial focus of the project would completely transform the national foundations programs. At the end of June, the institutions closed for summer vacation and faculty returned to work on August 26th. Teaching re-commenced at the beginning of September and it had been decreed that faculty in all three foundation programs would deliver all their courses using the iPad. At the college that is the focus of this study, the iPads for faculty did not arrive till June. It was an uncertain summer for many teachers as they anticipated the new academic year. Before the vacation, one of the working groups prepared a document in which some possible problems were anticipated. The document started by saying:

> *"Planning is imperative for any technology initiative – iPad or otherwise. We need to ensure that we clearly understand and communicate how the technology integrates with our overall pedagogical objectives. Too many institutions purchase technology and then search for ways to utilize it …… or leave it collecting dust on the shelf.*

> *Planning needs to consider both infrastructure needs and the educational applications of the new technology. Without proper preparation, technology initiatives are liable to become expensive failures"* (Preparing our Institute for an iPad implementation, 2012, p. 2).

The report examines campus infrastructure considerations including signal strength, solid incoming bandwidth, wireless signal and distribution, wireless network, group device management, classroom management, individual device management, application purchase and management and content management. Questions regarding pedagogical considerations included pedagogical models and how the use of iPads would be integrated into the institution's educational processes were also discussed. It was questioned whether the use of apps and which apps would be used had been fully explored. The area of professional development received attention. It was questioned whether sufficient ongoing time had been allowed for staff professional development. The document stated that its faculty should have regular sessions where they could learn and exchange experiences with each other. It continued:

> *"…professional development often focuses heavily on 'technology training'. Make sure it also guides teachers towards best educational practices for utilizing technology (student-centred, project-based, etc.)* (p. 3).

The document questions whether websites and online networks through which teachers can connect with other institutions/schools in the region and beyond had been sourced. Finally, it asked whether the plan was to move current paper-based resources and books to eBooks and whether indeed there were any eBooks available for the curriculum that was in place. Finally, the document focused on the community and whether the technology implementation had been discussed with the UAE community and professional community. Overall, there were numerous questions in this summer 2012 document – few of them had answers at that stage in the implementation.

The working group whose job it was to focus on content stated:

> *"in September 2012, faculty in all three foundations programs will deliver all of their courses using the iPad. All three institutions are in the process of redesigning foundations courses and rethinking the relationship between learning materials and*

the teaching environment. In preparation for the start date, course materials developed by the UAE institutions themselves have been transformed into e-books, commercial suppliers are providing electronic versions of textbooks. This initial focus will lead to the complete transformation of the national foundations program" (Cochran et al., 2012).

The pedagogy team coined the phrase 'iPadagogy,' summarized as being:

1. Evidence-based decision-making
2. A powerful tool for serving all students, in particular second-language learners
3. The contribution for promoting active learning in and beyond classrooms
4. New and effective learning environments
5. Forms of PD needed for successful new learning environments
6. A range of pedagogical eLearning Objects needed for learning and a platform for connecting faculty, students and resources
7. A heuristic teaching and learning approach – in the Heuristic Teaching and Learning Model (HTLM), students drive learning as discoverers. The iPad was to be a vehicle as the students "explored and proposed responses to real-world contextualized challenges posed by faculty" (Cochran et al., 2012)

The vision of the learning environment was no less idealistic. In their walkthrough of an iPad campus the pedagogy team reminds its audience that "on September 9th, all Foundation students, faculty and supervisors will be using iPads rather than laptops or printed books……they will gather in comfortable group seating areas where they can connect iPads to shared displays for brainstorming, studying and co-creating media …. They respond to formative assessments and asynchronous discussions about course topics" (Cochran et al., 2012). Chapter 5 will shed light on the reality the teachers in this study faced.

"In classrooms there would be "no front of the class", because students and faculty share responsibility for leading and participating in class activities. In some group activities, the iPad has a supporting role, providing on-demand, just-in-time reference materials that keep

discussions moving forward, or supplying media to illustrate a point ……. Anyone can display the contents of an iPad using large plasma panels or projectors and Apple TV. Furniture is mobile so it can be arranged and rearranged for small and large group activities as needed ……around the room are sharing materials like mobile whiteboards" (Cochran et al., 2012).

This may have been true in some classrooms around the Emirates but Chapter 5 will show a different picture for the teachers in this study.

2. 5. The first stages

The professional development for the project started on 14th May 2012 when 30 select faculty members from the three institutions met for the first time with the Apple trainers and senior management to start the training process. On May 23rd and 24th these faculty members met again for the first session. They were to go back to their institutions and cascade the training to the rest of the faculty. From June 3rd-8th iPads were to be distributed to all faculty. Unfortunately, the majority of the 38 Foundations English teachers in the college in this study did not receive them till late June.

June 18th and 19th saw the faculty receiving training from the Apple team. One or two trainers delivered day long sessions to audiences of 100-150 in large auditoriums around the Emirates. On August 26th the faculty returned from vacation and swiftly set off for Dubai to attend a training session entitled "Learning with iPads". There were three sessions, each attended by between 150-300 teachers and staff. Also, in August there was a three-day training program on iPad English, iBook author and iTunesU for all faculty. It is worth noting that at this time some, if not many, faculty were still struggling with the rudiments of turning the device on and off and wondering where they could insert a USB so they could access their teaching materials. Student orientation and distribution of iPads took place between the 3rd and 7th of September and teaching started the following week. In mid-September the initiative was launched across the Emirates with much publicity and many visits to the institutions by the Sheikh and other dignitaries. Everyone wanted to see the iPad classroom for themselves.

2. 6. The demographic of the students in the program

The elementary and high school system in the country is very traditional and much emphasis is put on rote learning and on the teacher to impart the information that needs to be learnt. Little emphasis is placed on creating a learner-centred environment or on promoting critical thinking. In contrast, the higher education institute that is the context of this study promotes independent learning, a student-centred curriculum, lifelong learning and critical thinking. Paul and Elder define critical thinking as being "self-directed, self-disciplined, self-monitored and self-corrective thinking…. it entails effective communication and problem-solving abilities and a commitment to overcome "our native egocentrism and sociocentrism" (Paul & Elder, 2007, p.2). However, to the majority of the students who enter the Foundations program, these concepts are very foreign indeed. The medium of instruction at the college is English, which is also a challenge to many of the students. The Foundations course is divided into 4 levels and students are placed in a level according to their CEPA score. The Common Educational Proficiency Assessment is the exam that all high school leavers in the United Arab Emirates had to take at that time in order to graduate from high school. CEPA can be aligned to IELTS, the International English Language Testing System (the most commonly used standard for English language testing in the field of ESOL) and CEFR, the Common European Framework of Reference for Languages. Depending upon their level of proficiency in English when the students entered the college, Foundations can last from six months to two and a half years. At the time of writing, the exam was CEPA, but now the common exam is EmSAT, which is the national system of standardized computer-based tests linked to UAE national standards.

The students were mostly school leavers and had an average age of 18. There were some mature students and they studied in the afternoon classes as they were also working. The majority of the students came from local government schools and they had a low level of English. In order to move out of Foundations and into the bachelor's program they needed to achieve a Band 5 in IELTS with no skill below 4. At this time, they were allowed to combine IELTS certificates in order to achieve this goal. These were not academically strong students and they had a limited, in some cases very limited, grasp of English. At the time of the study there was no entry requirement to Foundations and so anyone, no matter what their English level, was welcome in the program. This laissez faire attitude to student

admission meant that the class sizes often exceeded the 20 that was supposed to be the maximum number.

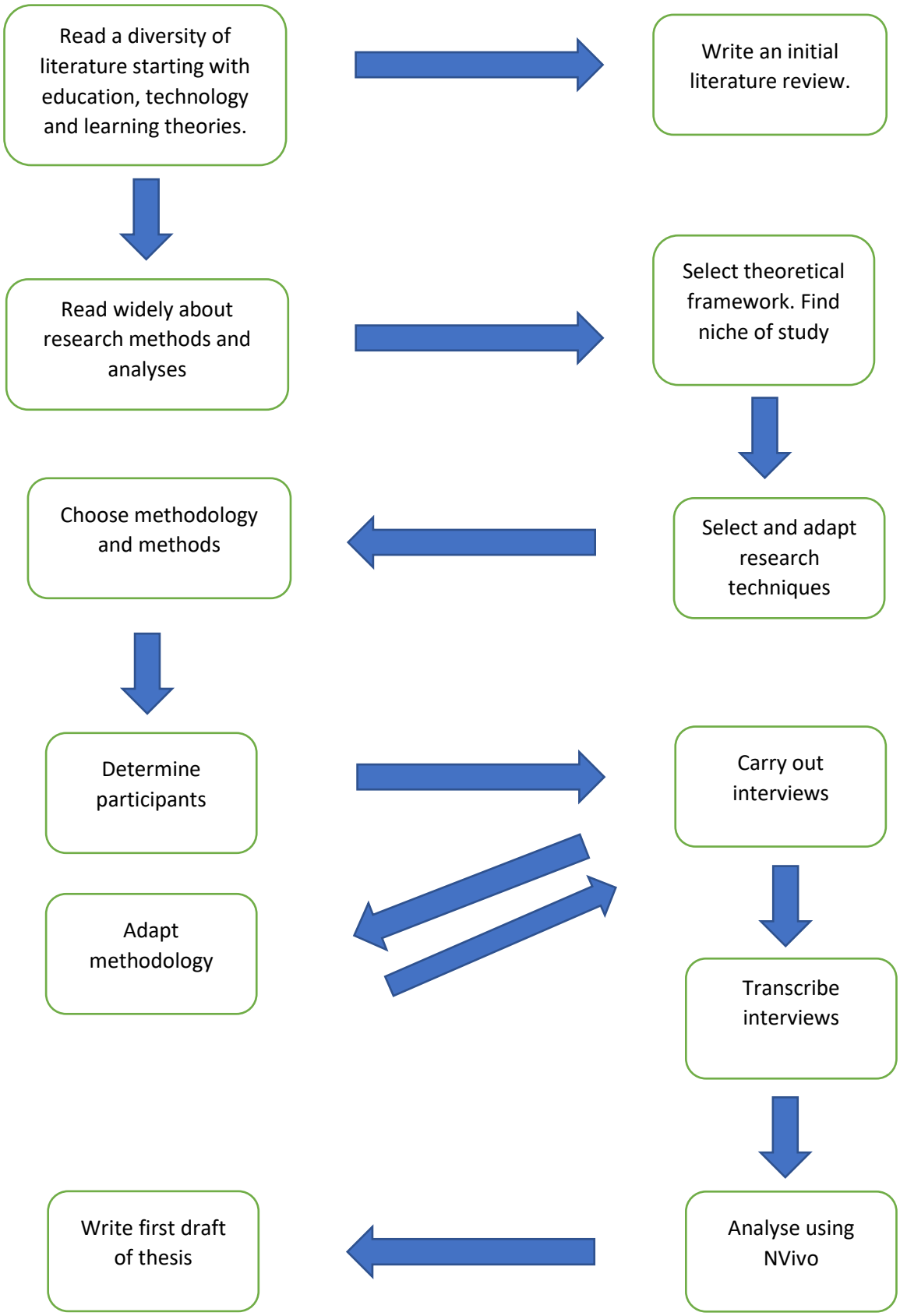
2. 7. Summary

The subject of this study is a group of teachers who were required to adopt a new technology to teach English to Foundation students at a university in the Middle East. The Apple iPad was to be the exclusive means of delivery: no books, stationery or writing equipment was to be allowed in the classrooms. The teachers were 'constructive agents' (Spivey, 2007, p. 3) who built their knowledge of teaching with the iPad out of interaction with their colleagues, the context and the culture of their reality. Their professional identities impacted on how they coped with the new challenges and at the same time, the new challenges impacted on their identities.

I wanted to know the answers to the three research questions outlined in 1.3 as I am interested in teacher development and would like to know how teachers can be supported through times of organizational and educational change. I wanted to know if a teachers' view of self can have an impact on how successfully they deal with difficult transitions in their professional lives and if the community in which they work can provide the most effective support.

Table 1 below is a brief project outline of the steps I followed in order to carry out this study.

Table 1: Project outline



Chapter 3 – Literature review

3. 1. Introduction

A qualitative study of experienced tertiary education EFL teachers' perceptions and shared experiences of the implementation of a new technology (the Apple iPad) is reported, in which participants were immersed in a project which required them change their teaching practice and adapt to teaching with a new technology very quickly.

Underlying the study is a research-based exploratory background that highlights the importance of acknowledging teachers' perceptions and experiences for the successful integration of a new learning technology into classrooms. To carry out this study, it was necessary to complete a critical review of the current literature. The review was ongoing throughout data collection, analysis, and commentary to ensure that new research was included in the final paper. In order to select an appropriate methodology and ensure that the research questions could be answered, I reviewed a range of papers, studies, theories and research in the fields of educational technology and its implementation. In particular, the impact of dialogue, culture and context on collaborative learning, teachers' sense of identity, their professional development and the communities in which they work.

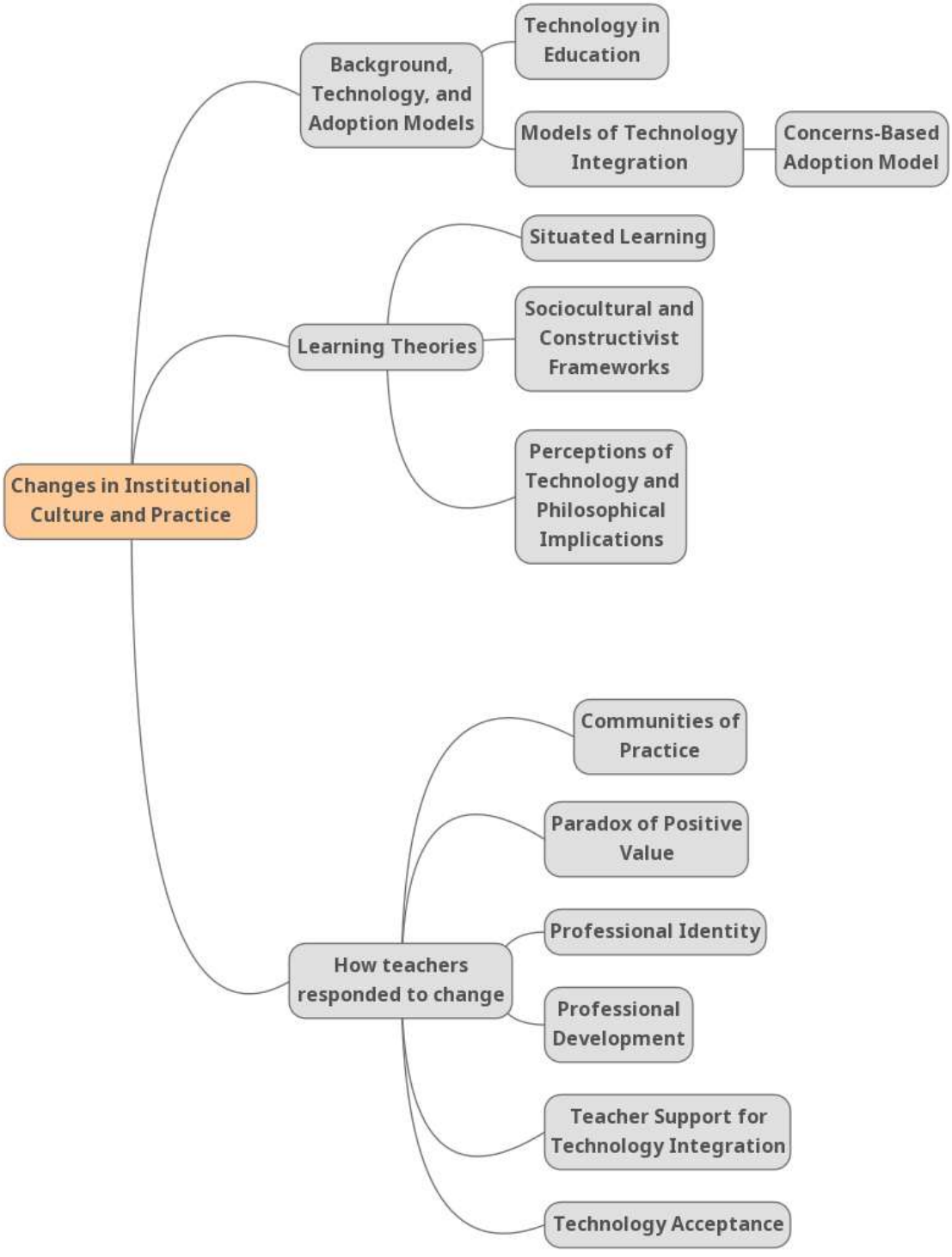
Research Question 1: In what ways do teachers' accounts of change (such as the sudden introduction of a new educational technology) help explain their perceptions of their professional identities?

Research Question 2: How did the change in teaching methodology and methods affect the teachers' professional identities?

Research Question 3: To what extent did involvement in a Community of Practice help teachers in the study respond to change?

During the literature review these three research questions were referred back to constantly and gradually strands were brought together to build the theoretical framework on which this study is based. The concept map on the following page summarizes the main focuses of the literature review.

Table 2: Concept map: focuses in the literature review



A combination of constructivist and sociocultural theory is drawn upon to inform the research project. The constructivist element makes it possible to view social reality and learning from the individual's perspective. The making of meaning in this context is explained in terms of what the individual mind does and the unique experience each of us lives (Burr, 1998; Crotty, 1998) and so, perception is 'constructed' by these. Constructivists regard people as "constructive agents and view the phenomenon of interest (meaning or knowledge) as built instead of passively received by people whose ways of knowing, seeing, understanding, and valuing influence what is known, seen and valued" (Spivey, 2007). Sociocultural theory, on the other hand, views learning as a social undertaking. Culture plays a major role in shaping our social realities and learning experiences and the collective generation and transmission of meaning is at the focus of the researcher within this framework.

The Concerns Based Adoption Model operates as an integral part of this theoretical framework and informs the design of the data collection instruments. The stages of 'concern' and 'use' were the basis the semi structured interview questions as they clearly map the different stages that people go through as they use a new technology.

In the literature review, I outline the key concepts of constructivism and socio-cultural theory as related to teacher education or learning experiences. Vygotsky's emphasis on education for social transformation and the placing of the individual within a socio-cultural context provides the natural link between constructivism and socio-cultural theory (Wertsch, 1985). The Concerns Based Adoption Model provides a framework for the semi-structured interviews, classroom observations and reflections that are used to collect the data for this study (Anderson, 2003; Cicchelli & Baecher, 1987; Hall, 1974; Newhouse, 2001). The Stages of Concern associated with CBAM uses a standard set of stages to describe teachers' concerns about the innovation and describes how teachers perceive an innovation and their feelings about it. The CBAM and all the models of successful technology integration in classrooms that were read as part of this literature review acknowledge the need for a thorough and planned process of professional development for those involved. However, these theories fail to adequately explain the notion that surprises and knowledge gaps can be viewed as positives. I also draw on the Paradox of negative experience and positive value (Griffith & Northcraft, 1996) and Vygotsky's ZPD to explain why this might be so (Wertsch, 1985). Finally, theories of professional identity and the formation of Communities

of Practice help to provide a background and explanations for why teachers hold certain perceptions and how these impact on their ability to deal with the changes that form part of their shared experiences. The overarching theme in the study is how teachers' sense of professional identities can be impacted by changes in instructional design and the introduction of new educational technologies. Bullough and Gitlin (1991) discuss the tensions between what a context demands of us and who we want to be, asking if teachers can be who they want to be in the classroom. To answer this, teachers need to know who they are and where they stand. The research questions were formulated by drawing together strands found in key areas of the literature and by combining the theoretical ideas found therein, I will construct a framework which will help inform the decisions I make regarding methodology and methods.

3. 2. The change in the institutional culture of instruction

The implementation of the new technology, the Apple iPad, can be viewed as a major change in the institution. Before the change, every student and teacher had a laptop and Blackboard Vista was used for partial or total delivery of many courses and the use of technology was widely accepted to be good teaching practice. Blackboard Vista was the Learning Management System used at the institution. Technology was used in tandem with traditional course-books and teaching methods. The major change that happened was that overnight one division of the institution was destined to become paperless. No textbooks, handouts or papers would be allowed in the classroom. There are a number of general barriers that can reduce peer acceptance of an innovation. Lewin, (1947) argues that before people can undergo change, they must unfreeze their typical attitudes and behaviours – a process that can be threatening. This is probably because, according to Kotter and Schlesinger, (2008, p. 132), "…even changes that appear to be 'positive' or 'rational' involve loss and uncertainty" – so it is possible that staff feel threatened by the pressure of learning a new system. According to Carney (2000), 'It is not the change that causes the problem, rather it is the transition from the pre-change to the post-change situation'. It is this transition from working within the confines of a 'comfort zone' to trying something new that can be the biggest challenge of all (Sembi, 2012).

3. 2. 1. A model of change

Kanter (2012) outlined ten common reasons for people to resist change and below is a summary of his ideas.

Table 3: Kanter: resisting change

Loss of control	People may feel their power lost when they no longer have control.
Excess uncertainty	Change can make employees feel like they are walking off a cliff blindfolded.
Surprise, surprise!	There is often the element of surprise in changes and no time to react.
Everything seems different	When a habit needs to be changed it can be uncomfortable.
Loss of face	People associated with previous decisions may feel defensive about their methods.
Concerns about competence	People feel skeptical and constantly worry if they are doing it correctly.
More work	Change creates extra tasks compared to the daily norm

Ripple effects	The ripples from a change can spread out affecting other stakeholders.
Past resentments	Leaders may need to consider resolving old issues before making changes.
Sometimes the threat is real	Change is resisted because employees may fail at attempt and cause the company losses.

(Kanter, 2012)

As Kanter illustrates, there are so many reasons why people might resist change, it might be for just one or two of the reasons or it is possible that some people have all the concerns in the column on the left of the table. The change that was introduced in the college that was the focus of the study came as a surprise to many of the people involved and they had very little time to become accustomed to the idea. Habits needed to be changed and this was a challenge for many people who had been teaching in the same way for years. However, the culture in the college was one that encouraged people to follow directives and not to question decisions that were made by those higher up, so despite reservations the change was sudden and dramatic. The narratives in Chapter 5 tell the story of the project and illustrate how the teachers responded to the changes as described by Kanter in the table above.

3. 3. Learning theories

3. 3. 1. Constructivist theory as applied to teacher learning

Constructivism is an epistemology, a learning or meaning-making theory, that offers an explanation of the nature of knowledge and how human beings learn. It maintains that individuals create or construct their own new understandings or knowledge through the interaction of what they already know and believe and the ideas, events, and activities with which they come in contact (Cannella & Reiff, 1994; Richardson, 1997). This study aims to narrate and understand the perceptions that teachers hold about their identity, their place in their teaching community and the use of technology in teaching. They learnt through involvement with content instead of imitation or repetition (Kroll & Laboskey, 1996). Learning activities in constructivist settings are characterized by active engagement, inquiry, problem solving, and collaboration with others and are regarded as producing greater internalization and deeper understanding than traditional methods. While there are commonly accepted attributes of constructivism, there are also different interpretations of it. Vadeboncoeur (1997) identifies three significant strands within these interpretations:

Piagetian, sociocultural, and emancipatory constructivism. These strands are differentiated primarily by the subject of study, views about how cognitive forms develop and the "liberatory power of the pedagogical approaches derived" (Vadeboncoeur, 1997, p. 22). In general, two broad interpretations can be found among contemporary educators - psychological constructivism, most notably articulated by Piaget, and social constructivism, associated with Vygotsky. Two major issues shape these interpretations: the first being education for individual development versus education for social transformation and secondly the degree of influence that social context has on individual cognitive development (Richardson, 1997; Vadeboncoeur, 1997).

Social or Vygotskian constructivism emphasizes education for social transformation and reflects a theory of human development that situates the individual within a sociocultural context (Richardson, 1997). Individual development derives from social interactions within which cultural meanings are shared by the group and eventually internalized by the individual (Richardson, 1997). Individuals construct knowledge in transaction with the environment, and in the process both the individual and the environment are changed. The subject of study is the dialectical relationship between the individual and the prevalent social and cultural context. Schools are generally the sociocultural settings where teaching and learning take place and where "cultural tools," such as reading, writing, mathematics, or as in the case of this study the iPad, are fundamental. In the context of this study, the sociocultural setting is a tertiary education institution in the Middle East and the teachers are not only teaching, but also learning. To a certain extent, and in parallel, the learners are not only learning but also teaching, as their skills with technology are sometimes in advance of the teachers. "It is widely acknowledged that the entrenched idea of the teacher as an authority is no longer easy to sustain if students with easy access to the Internet can 'know' more about any given topic than the teacher does" (Hall & Hord, 2014). Constructivism has several variants, socio cultural theory being one of them. This theory expands on the notion of social interaction being a fundamental part of learning. It also emphasizes the role of culture and community in the learning process.

3. 3. 2. The application of Sociocultural theory to teacher learning

As in constructivism, a sociocultural theory of learning views learning as "involving social interaction and collaboration. It acknowledges mental processing as situated within the

cultural, historical, social, and institutional contexts of a broader community" (Ramanair, 2016, p. 124). Ramanair used the lens of activity theory to examine the integration of technology in tertiary level English language programs. In this current research project, as in his, a sociocultural perspective of learning is relevant as it provides a basis for exploring teachers as 'on the job' learners as they integrate technology in their instructional practices. It is possible to draw parallels between Ramanair's research and this study as the teachers were very much 'on the job' learners. They received their iPads in June, went on annual vacation in August and started teaching exclusively with the iPad in September. The context and culture in which they were situated, their goal and their teaching community all had an impact on their shared experience and the effects of that experience. Prominent researchers in the field are the source of four interrelated principles of sociocultural theory of learning (Jonassen, 1984; Jonassen & Jonassen, 2003; Nasir & Hand, 2006; Salomon & Perkins, 1998).

1. The "human mind is mediated" (Lantolf, 2000, p. 1)
2. The role of context in which the learning takes place (Barab & Duffy, 2000; Lave & Wenger, 1991; Schuh & Barab, 2007; Wertsch, 1985)
3. Learning as goal-directed. Goals are an important part of activities as they provide the impetus that can promote learning and development (Engeström & Miettinen, 1999).
4. Participation in the practices of a particular community enhances the process of learning and development (De Weerdt et al., 2006; Lave & Wenger, 1991; Schuh & Barab, 2007).

A constructivist and sociocultural perspective of learning can be drawn on to narrate the social, cultural and community aspect of the learning experience of the group of teachers in this study.

3.3.2.1 Tool mediation

Vygotsky introduced the concept of tool mediation—that is when human beings come across an object in the environment—a stimulus, they do not act on it directly, but through the mediation of various tools. These tools are described as "anything that mediates subjects'

action upon an object" (Russell, 2002, p. 70). In the case of this study, the iPad was the tool that the teachers used to mediate with the students and vice versa.

3. 3. 3. Social identity theory

Social identity theory explains that part of a person's concept of self comes from the groups to which that person belongs. An individual does not just have a personal selfhood, but multiple selves and identities associated with their affiliated groups. A person might act differently in varying social contexts according to the groups they belong to, which might include a sports team they follow, their family, their country of nationality, and the neighborhood they live in, among many other possibilities. When a person perceives themselves as part of a group, that is an ingroup for them. Other comparable groups that person does not identify with are called outgroups. We have an "us" vs. "them" mentality when it comes to our ingroups and their respective outgroups. As social identity theory can be applied to an individual's personal identity, so can it be applied to their professional identity (Tajfel & Turner, 1979).

3. 3. 4. Situated learning

A theoretical framework that I found salient is that of Lave and Wenger and their work on Communities of Practice and situated learning (Hunter et al., 2007; Pachler, 2003). I have seen my colleagues working in communities and using them to overcome huge challenges in the workplace. Another that I found particularly pertinent was that of Foucault and his deconstruction of the idea of the autonomous citizen and his later attempts to reconstruct the idea in order to bring some new perspectives to the discussion about the foundation of professionalism (Barrow, 2006). Autonomy is not always an option in the environment in which the research took place and it is interesting to consider the idea of whether or not autonomy is fundamental to the notion of professionalism.

Each individual has many 'selves' - the personal self that lives with their family or possibly just on their own, the professional self that they are in the workplace and finally, the social self that belongs to a group of friends and is part of a number of different communities.

The literature discusses the role of self, such as self-reflection, agency and self- authorship as being a key part of the process of professional identity development. Baxter Magolda (2004) implicitly draws a link between personal epistemology formation and professional

identity development. De Weerdt et al. (2006) see reflection as a key process for professional identity development. They state that 'reflection is the important mediator between experience and identity' (p. 318). They emphasize that deep professional learning involves the 'professional as a "whole person" rather than just the hands or brain' (p. 324). Bramming (2007) explored transformative learning and described strong learning as a result of creating a crisis that is confronting and challenging and requires high support. This aligns very closely with the context in which my research project is set.

The literature indicates a strong link between reconciling personal with professional understandings of what values, morals and dispositions underpin their future practice. Peel (2005) described professional identity development as a journey of becoming a 'critical learner' and argued that 'professional growth is very much a personal odyssey, grounded in experiential learning from which personal meaning is derived' (p.495). Paterson et al. (2002) similarly discussed reflective practice, experiential and self-directed learning.

The teachers involved in this study went on a journey of discovery and while they were on the journey they became 'critical learners' as they were forced to choose what they needed to learn and how they were going to gain this knowledge. If they hadn't been in the situation that they were placed in, there would have been no need for them to learn so much so quickly. They also learnt about themselves as professionals and the ones who were most successful were prepared to relinquish their position as 'the professional' in the classroom and reevaluate their relationship with their students. For many, the 18 months that they were immersed in the iPad implementation was a kind of Odyssey and the transformative learning they experienced was as a result of a crisis being created (Bramming, 2007).

3. 3. 5. Teachers' perceptions of learning technologies and associated philosophies

Existing and emerging e-learning technologies are having intense, immediate, and disruptive transformations on education systems with a major impact on teaching practitioners (Archer, Garrison, & Anderson, 2013). Archer et al. go on to add that the emphasis for the implementation of new learning technologies should be placed on the teachers.

3. 3. 6. Advantages and disadvantages of learning technologies

It is possible to identify advantages and disadvantages of the use of learning technologies in teaching. Advantages of e-learning technologies that are frequently proposed include an ability to provide immediate learning, increased access; removal of time, place and situational barriers; cost effectiveness; greater accountability; increased interaction; provision of future employment skills for students; and effective support for life-long learning (Kanuka, 2008). However, there is also a list of concerns which include the commercialization of teaching; lack of face-to- face teaching time between students and teachers; techno-centric models prioritized over face-to-face culture; devaluation of oral discourse/ discussion practices; centralization of decision-making and service provision; concerns that complex and deep learning cannot be satisfactorily achieved without real-time classroom experience; increased technological and pedagogical uniformity; surveillance options that violate privacy policies; re-contextualization of established cultural practices, such as education as a cultural discourse; and concern about the growing digital divide (Kanuka, 2008). There is a clear divide of opinion, and the nature of the disagreement needs to be examined. "If we reflect on our own as well as others' opinions about both technology and education through a philosophical lens these kinds of differences can be 'reduced to perspectives or philosophies-in-practice" (Kanuka, 2008, p. 98).

3. 3. 7. The importance of teachers' opinions, philosophies, beliefs and orientations

Draper (1993) asserts that an examination of our opinion, or philosophy-in-practice, is more than an academic exercise. Our philosophy determines how we perceive and deal with our preferred teaching methods – which included how (or if) we choose and use e-learning technologies. However, the teachers in this study were in a slightly different position. The introduction of the new technology was imposed and their individual philosophies on the use of e-learning/m-learning were not taken into consideration. Kanuka (2008) suggests that this is not an unusual situation. She proposes that individual teachers can determine the content and scope of what they are going to teach and that they choose the e-learning technologies that will best suit their learners. She goes on to say that these decisions are embedded in our philosophical views about both education and technology, underlying these views is our interpretation of the world and our actions within it. As such, knowing our philosophical views is important with Kanuka noting that many educators' philosophies are

"often unrecognized" by themselves and their management (2008, p. 92). If we pursue this line of thought, we can see that although the educators might be choosing what they are going to teach they are not basing their choices on philosophies or beliefs about teaching. More importantly, educational practices concerned with using and choosing e-learning technologies could be conducted more effectively if basic philosophical differences were understood. Differences over the benefits of e-learning technologies are linked to differences over the ends our educational purposes are to achieve (Kanuka, 2008). When considering the interrelationship of philosophy and the choices we make about e-learning technologies, it is important to be aware that philosophy inspires our activities and gives direction to our practices. Specifically, when we are aware of the philosophies of teaching and technology, we can then articulate our own personal philosophy. Knowing our personal philosophy helps us to understand why we act and think the way we do about using e-learning technologies, as well as why others think and act the way they do. Moreover, knowing our own and others' philosophies provides us with the ability to understand the consequences of our technological choices, as well as the effect that our philosophical orientation has on our learners. Further, it can facilitate effective communication with others when we can explain not only what we are doing, as well as why (Darkenwald & Merriam, 1982; Draper, 1993; Zinn, 1990). A common mistake in the attempt to integrate technology into teaching contexts is that the emphasis is put onto what to do with the technology rather than on why we are doing it. Zinn (1990) proposes that a philosophy of teaching and technology can be defined as a conceptual framework that embodies certain values from which we view the many aspects of education, including the field of e-learning. Draper, (1993) and Elias and Merriam (2004) conclude that "a philosophy of e-learning technology is necessary because too often educators are concerned with what to do with e-learning technologies without examining sufficiently why they should do it (Draper, 1993; Elias & Merriam, 2004), p. 94. The findings and conclusion section will show that it is possible that this was the case in this study.

3. 3. 8. E-learning technologies - three orientations

In regard to e-learning technology there are three main orientations or philosophical schools of thought (Dahlberg, 2004). The first position is referred to as 'uses determinism'. This view pertains to the instrumental, the uses of technological artefacts and, correspondingly, the uses effect on technological artefacts and society. The second position is referred to as

'technological determinism'. This view focuses on the forms and effects that technological artefacts have on users and society. The third position is referred to as 'social determinism'. This view asserts that social contexts and cultures affect forms and users of technological artefacts.

In its simplest sense, 'uses determinism' emphasizes technological uses and focuses on the ways in which we use technologies within learning and teaching transactions. In this approach, technologies are perceived as neutral tools and are simply devices that extend our capacities. As users, we determine the effects of technological artefacts. Scholars commonly associated with this orientation include Fiske (Ebersole, 2000; Fiske, 1987; Garramone, Harris, & Anderson, 1986; Harrison & Stephen, 1999; Katz & Rice, 2002; Sudweeks, McLaughlin, & Rafaeli, 1998; Welchman, 1997).

In a famous analogy, Clark (1994, p. 445) argued that technologies "are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition." This orientation asserts that technology is neutral and is able to serve the aims and objectives of the educators employing them. In 'social determinism' educators are concerned with the integration of technological artefacts within social systems and cultural contexts. This perspective emphasizes the way our uses of technologies are affected by the social structures and the social construction of technological artefacts. Educators holding this view are concerned about the ways that social and technological uses shape the form and content of the learning experiences. Scholars commonly associated with this orientation include Garnham (1990), Golding and Murdock (1997), Mosco (1996), and Schiller (1999). This orientation holds the belief that technology is socially embedded, and it is within this orientation that this research study is positioned.

The final orientation is that of 'technological determinism'. Within this orientation, technologies are viewed as causal agents determining our uses and having a pivotal role in social change. Scholars most commonly associated with this orientation include Dubrovsky, Kiesler and Sethna (1991), Argyle (1996), Spears and Lea (1994), Lyotard (1984), and Castells (1999). The assumption underpinning these views is that technology determines our uses and impacts society in a negative way. There are those, however, who believe that

technology determines our uses and impacts society but in a beneficial way. However, they are not usually referred to as 'technological determinists'.

The integration of learning technologies into classrooms is being promoted and supported around the world. Underlying the promotion and support are claims that successful integration will lead to enhanced learning outcomes. These claims are difficult to justify, however. Research into the impact of learning technologies on the quality of students' learning outcomes is limited and outdated according to Honey, Culp and Carrigg (2000). A limiting factor has been the difficulty of defining and measuring enhanced learning outcomes attributable specifically to the use of learning technologies (Mitchell & Bluer, 1997). Contributions to this research come from a number of different perspectives on teaching and learning, principally relational (Ramsden, 1988), phenomenographic (Marton, 1986), constitutionalist (Trigwell, Prosser, & Waterhouse, 1999) and constructivist (Biggs, 2011). While these perspectives differ on precisely how knowledge is formed, it is a commonly held belief that an understanding of teachers' and students' perceptions of learning contexts is key to improving teaching and learning. In this paper I am focusing on the teachers' perspectives of their context and the change to their teaching practice that was implemented in the form of the iPad. The study aims to narrate the story that the teachers shared and will identify if they aligned themselves with these three orientations and what impacts, if any, their orientations had on their experience of the implementation of the iPad.

Teachers' attitudes towards teaching vary but they are generally interconnected in a number of ways. To put it simply, teachers who perceive learning as the accumulation of information are more likely to view teaching simply as the transfer of information. Such teachers are more likely to use a teacher-centred approach where the teacher imparts information to students and uses assessment techniques which encourage and test rote learning. Such teachers could be placed in the orientation of uses determinism. In contrast, teachers who view learning as conceptual change are more likely to view teaching as enabling conceptual change. Such teachers are more likely to use a student-centred teaching approach where independence in learning is encouraged through discussion, debate and questioning among students, and assessment which reveals conceptual change (Cope & Ward, 2002; Prosser, 1999). Such teachers could be classified as being social determinists.

Teachers' perceptions and approaches and, consequently, the learning contexts they provide, are known to influence students' perceptions. Successful integration of learning technologies leading to enhanced learning outcomes is unlikely unless teachers perceive and use technology as an integral part of a student-centred/conceptual change teaching approach. Only through students perceiving learning technologies as part of a learning context which encourages independence in learning and deep learning approaches are enhanced learning outcomes likely (Cope & Ward, 2002). It is for this reason that I am interested in seeing what perceptions the teachers hold about the new technology and their shared experiences of the change in teaching practice. The study also seeks to find connections between the teachers' sense of identity and their ability to cope with the experiences. Their professional identity is impacted by their alignment with one of the three orientations mentioned above. In order to answer my research questions 1 and 2 it is necessary to unpack the teachers' perceptions about technology and its use in the classroom, these three orientations help to explain teachers' attitudes to technology and their responses to the iPad implementation.

3. 4. Background, technology and adoption models.

3. 4. 1. Arguments against using technology in the classroom

There are differing views about the use of technology in the classroom with opponents of technologies arguing that they should be banned completely as they are a distraction to those using them and to those sitting in their vicinity (Richmond & Troisi, 2018).

Experimental evidence points out that students perform better on tests when they take notes on paper rather than on a laptop. A 2014 study removed the distraction factor because the experimental procedure was such that laptops could be used only for note taking. It was found that it was not just distraction that was the problem, it was the actual process of taking notes on a computer that caused a negative effect on the learning (Mueller & Oppenheimer, 2014).

When students have free rein to use their cellphones or other devices in class, they perform lower in exams by half a grade than when they don't use their cellphones. Cognitive psychologists explain these results as a product of divided attention and the myth of multi-tasking which means that people think they can effectively pay attention to multiple stimuli

at once. In other words, listen to a lecture, take notes and check their social media simultaneously (Educational Psychology, 2018).

However, it is difficult to imagine a classroom these days with no technology and ways have to be found to counteract the distraction factor as the positive benefits are numerous, as will be shown in the following sections.

3. 4. 2. Models of effective technology integration

According to Johnson & Johnson (2009), technology should prepare staff and students for a 21st century world of work and education. Other research, however, seems to directly associate effective instruction with increases in student learning as evidenced on standardized tests (Dennis, 2009; Moss, 2005). In the context of this study, there is a constant drive for accountability which does not does not always complement the drive for the integration of technology and skill development also stated as being essential for student success. Unfortunately, the way the students are assessed does not take into account the technological skills that they are acquiring in class and in the institution in this study, students are still asked to sit a traditional pen and paper exam at the end of their course (IELTS). Their progression out of Foundations and into the Bachelors programme depends on them gaining a Band 5. 0 in this IELTS test.

Constructivist instructional practices are frequently "crowded out of the curriculum" by practices designed to prepare students to score well on statewide tests (Brooks & Brooks, 1999). As a result, many teachers struggle to balance curricula and present holistic learning experiences that prepare students for a broad spectrum of skill development. What happened in the context of this study was that the iPad was introduced as the means of instruction, but initially little else changed. The type of assessment remained the same, which meant that the faculty were faced with the struggle of reaching a goal that was already challenging, without the resources that they usually had at their disposal.

A qualitative study conducted in two high schools in California found that some schools and teachers with high access to cutting-edge technologies infrequently used the equipment to enhance the existing curriculum because of their perceptions that computers may not be appropriate for all student projects or lessons or because the teachers felt that the

integration of technology did not comfortably fit into their existing pedagogical approaches (Cuban, Kirkpatrick, & Peck, 2001). However, when students in these schools were assigned to teachers who did attempt to integrate technology into the curriculum, evidence showed that these students perceived themselves to be better learners and the computer literacy that they gleaned from their experiences was transferred to other subject areas. A similar study found that classroom technology had a positive impact on student behaviors related to preparedness for class, attentiveness, work quality, student participation, and overall student learning (Lavin, Korte, & Davies, 2011). These researchers also reported higher student perceptions of teachers who integrated technology. To most educators, behaviours such as these do illustrate effective teaching strategies because they indicate increases in student motivation to learn and academic achievement. However, in order for technology integration to take place, effective or otherwise, teachers must first be supported in its implementation in their classrooms. They should be given appropriate development and allowed the time to experiment and collaborate (Gitsakis &Robby, 2013)

3. 5. Concerns-based adoption model

In the 1990s, research efforts in various countries began to develop and apply models for investigating the implementation of computers in classrooms (Cicchelli & Baecher, 1987; Marcinkiewicz, 1994; Rieber & Welliver, 1989; Sandholtz, Ringstaff, & Dwyer, 2005). Many of these were based on teacher concerns about innovations involving the use of computers in the classroom, often referred to as concerns-based models. This model is especially pertinent to this study as it is the concerns of the teachers involved and the reasons for their concerns that will answer the research questions.

Most concerns-based models have evolved from the work of Fuller (Conway & Clark, 2003) with regard to the concerns of teachers as they developed their pedagogical skills. The concerns-based adoption model, or CBAM, was developed from Fuller's model in the early 1970s and has since been widely applied to the implementation of educational innovations in general. The model associated with the Apple Classrooms of Tomorrow (ACOT) project, the instructional transformation model, and the Project Information Technology (PIT) models developed in The Netherlands are specific to the implementation of computers in schools and were ultimately based on Fuller's model. However, the CBAM model has been more fully developed and applied and, thus, is more often referred to by other models.

The research in educational computing that has applied these models has typically grown out of interest in issues concerned with the implementation of computers into classrooms. It has become increasingly clear that to address issues such as the effectiveness of using computers to support learning and why computers have had such little effect on schooling, research needs to address how computer support is implemented and, particularly, take into account the specific concerns of the teacher. Marcinkiewicz (1994, p. 234) argues for the use of concerns-based models in educational computing research because to "understand how to achieve integration, we need to study teachers and what makes them use computers, and we need to study computers and what makes teachers want to—or need to—use them."

The CBAM model comprises three key dimensions, stages of concern (SOC), levels of use (LOU), and innovation configuration (IC), the first two being explanatory and the third diagnostic in nature and scope. Each dimension represents a facet of the change process, with SOC and LOU focusing on the implementer, while the IC considers the nature of the innovation itself. The SOC and LOU dimensions were developed out of the work of Fuller, but the IC was developed much later. For the purposes of this study, only SOC and LOU are employed as it is the teachers' perceptions and reactions to the implementation of the iPad that are the focus of the study. Associated with each dimension is a designated research method and an instrument to collect and present appropriate data. The SOC and LOU deal generically with the change process from the social-psychological perspective of those undergoing the change. The CBAM requires the researcher to be immersed within the scene of the innovation and to continually refine judgments associated with the diagnostic dimensions. The researcher was involved in the iPad project under discussion, so it was a logical decision to adopt the CBAM as an element of the framework which informs the study.

The SOC describe how teachers perceive an innovation and their feelings about it. It uses a standard set of stages to describe teachers' concerns about the innovation. The instrument used is a questionnaire with a set of scales to prepare a numerical and graphical representation of the type and strengths of participants' concerns. A study by Gitsaki et al. (Gitsaki, Robby, Priest, Hamdan, & Ben-Chabane, 2013) conducted at the institution of which the context of this study is a part, utilized the CBAM designed by Hall and Hord (1987). The CBAM consists of strategies for monitoring, identifying needs, and providing support for the implementation of the change effort, such as the iPad initiative. It focuses

on the needs of the faculty responsible for implementing the changes and using iPad apps, and involves analyzing the 'stages of concern' (SOC) as well as the reactions and experiences of faculty implementing the iPad as a medium of instruction. Concerns are defined as: feelings, thoughts, perceptions, motivations, and attitudes about a motivation (Hord, Rutherford, Huling-Austin, Hall, & Knoll, 1987). Gitsaki and Robby (Gitsaki & Robby, 2014; Gitsaki et al., 2013) state that concerns are initially on a personal level, before shifting to a task level and then moving to an impact level. The table below outlines the stages of concern and levels of use that were adapted to formulate questions for the initial survey, open-ended interview questions and prompts for the reflection. The expressions of concern start and end with awareness and move from personal concerns to how users will be able to collaborate and find ways of working with the technology that will serve their students better.

Table 4: Stages of concern

Stages of Concern		Expression of Concern	Focus
0	Awareness	I am not concerned about it.	SELF
1	Informational	I would like to know more about the iPad.	
2	Personal	How will using the iPad affect me?	
3	Management	I spend all my time preparing.	TASK
4	Consequence	How is my use affecting students?	IMPACT
5	Collaboration	Concerned about relating what I am doing to others.	
6	Refocusing	I have ideas about what may work better.	
7	Awareness	I would like to know more about the iPad.	

(adapted from Gitsaki and Robby, 2013)

Table 5: Levels of use

Behaviours Associated with Levels of Use (LOU)	Levels of Use	
No interest shown in iPad and no action taken	0	Non-use
Begins to gather new information	1	Orientation
Begins to plan ways to implement	2	Preparation
Concerns about mechanics of implementation	3	Mechanical

Comfortable with iPad and basically uses as intended	4	Routine
Begins to explore ways for continuous improvement	5	Refinement
Integrates with other activities	6	Integration
Explores new and different ways to implement the iPad	7	Renewal

(adapted from Gitsaki and Robby, 2013)

The levels of use are intertwined with the levels of concern and are also represented in the participants' responses as seen in Chapter 5.

The CBAM model suggests that the adoption and implementation of new educational innovation or practice is more successful when support meets individual needs. The CBAM assumes that change involves developmental growth, and that the feelings and skills will change relative to an innovation with experience. Change can be promoted with support, training, and communication to address concerns and questions; and it should be planned and supported in personal ways that will reduce trauma to individual experiences and increase effectiveness (Hord et al., 1987). The original CBAM model is used in quantitative methodologies, but for the purpose of this study, elements of it were adapted for use in qualitative instruments. This will be expanded on further in the methodology chapter.

The literature provided the basis for the development of my research questions and the interview questions and instruments that sought to find answers to them

3. 6. How teachers responded to the change.

3. 6. 1. Professional identity

It is interesting to note that not all the literature gives a definition of professional identity. For self-clarity, I examined the definitions available and then formulated a personal, hybrid definition, which is the one that I will be using in this thesis. Paterson et al. (Paterson, Higgs, Wilcox, & Villeneuve, 2002, p. 6) define professional identity as being 'the sense of being a professional', but the authors illustrate elements of professionalism that must be combined to ensure that professional identity development occurs. They argue that technical skill and interpersonal skills alone cannot ensure the development of professional identity. The authors stress 'the use of professional judgment and reasoning… critical self-evaluation and self- directed learning]' (Paterson et al., 2002, p. 7) as essential components

of professional identity. This article also refers to definitions developed in the broader literature on the concept of professional identity. The authors refer to Cox and Ewan (1988, p. 85), who defined professional identity as a 'self-image which permits feelings of personal adequacy and satisfaction in the performance of the expected role'. Adequacy and satisfaction are gained as the individual develops the 'values and behavior patterns consistent with society's expectations of members of the profession' (Paterson et al., 2002, p. 6), and describe professional identity as occurring when a member of a profession develops attitudes, beliefs and standards which support the practitioner role and a clear understanding of the responsibilities of being a [health] professional. Paterson et al.'s research is in healthcare, but later in this thesis I will draw on interviews conducted with English language teachers on the Foundations Program at a tertiary education college in the Middle East, which will demonstrate that that this view of professional identity can also be applied to the teaching profession and especially to the context of my research focus.

There is a wealth of descriptions of professional identity in the literature. The widely held view is that professional identity is a way of being oneself and that it is also a lens through which researchers can assess, learn and make sense of what professionals do. Clouder (Clouder, 2005, p. 506) focuses on professional identity as doing and being in practice. In agreement with Rappoport, Baumgardner and Boone (1999, p. 99), she argues that individuals are a 'dynamic portfolio' of selves, which implies a dynamic and continuous negotiation and renegotiation of roles and relationships.

Some other noteworthy descriptions of professional identity or professional identity development found in the literature include:

'Constructed around caring for others' (Clouder, 2005, p. 506): 'Identity transformation involves a more profound change, in the sense that old elements are put into the background and new ones come to the fore' (De Weerdt, Bouwen, Corthouts, & Martens, 2006).

'Identity development and professional socialization are framed as a process of negotiated meaning-making within a community of practice' (Hunter, Laursen, & Seymour, 2007).

This final description has particular relevance for this thesis as I am proposing that Communities of Practice play an important role in maintaining a positive professional identity in times of change and were very important during the implementation of the new technology.

Sfard and Prusak (2005) state that the 'notion of identity cannot become truly useful unless it is provided with an operational identity' and I align myself with this view. My definition is similar to that of Keltchtermans and Vandenberge (1994) — that identity is complex, multidimensional and dynamic, consisting of representations and meanings which develop over time as a result of interactions between the individual and their environment. The teachers were encouraged to reflect on what understanding they have of professional identity and elements of Keltchtermans and Vandenberge's definition were present in their responses. Therefore, based on my reading and the research findings, this is the theoretical definition of professional identity that I am offering in this thesis:

> *'The nature of Professional identity is multi-faceted and personal. It changes over time and also according to the context in which the person finds themself. Professional identity is shaped by interaction with the environment and colleagues.'*

I am not rejecting the concepts detailed in the other definitions, but instead I am taking elements from them and combining them to construct a definition that is most appropriate to the context in which I am carrying out the research as it helps me to understand the professional identities of the participants in this study.

3. 6. 2. Communities of practice

A community of practice (COP) is defined as a group of people who share an interest in a domain of human endeavor and engage in a process of collective learning that creates bonds between them. The three main characteristics shared by a COP include: domain, community and practice. A COP may operate formally or informally and be cohort or issue focused. A COP may be within a single institution (the most common type), a multi-institution setting or on a global scale. Lortie (2002) identified that teachers tended to practice their craft as well as learn about their profession in isolation from their colleagues. Traditionally, teachers have taught in their individual classrooms with the doors closed to any outside influences. Unless there were problems in the classroom or complaints from parents, the teacher was left alone to teach their class as they wanted. Research, however,

has shown that teachers who engage in collaboration have improved perceptions of their own identities as well as satisfaction from their work (Day, Kington, Stobart, & Sammons, 2006). Fullan (1995) argued that a collaborative culture is a powerful learning and change agent in schools. When teachers participate in dialogue, they become aware of the many approaches and ways of doing things, are engaged with a range of resources, and share ideas so that they can locate themselves in current and potential practice (Coldron & Smith, 1999).

"Starting with teachers' knowledge dignifies the 'wisdom of practice' and helps open teachers' classrooms to inquiry, breaks the isolation that keeps teachers from becoming colleagues and forms the basis for a professional learning community" (Lieberman & Pointer Mace, 2009, p. 469). The purpose of the professional learning community is not to highlight the weaknesses of the individual teacher members, but to draw attention to and share the practices, strategies, and ideas that are being used productively to improve student learning and then build on them.

Wenger and Snyder (2000) maintained that professional learning communities "are about knowing, but also about being together living meaningfully, developing a satisfying identity, and altogether being human" (p. 134). When a teacher feels that he or she is doing meaningful work as a part of a group that is trying to make a difference in improving student learning outcomes, they feel a sense of belonging and this, in turn, will have a positive effect on their sense of wellbeing. Hannikainen and van Oers (1999) found the concept of togetherness in the context of a professional learning community. They maintained that group members tended to maintain or even strengthen the sense of group togetherness in an attempt to counter any conflicts that may arise during the course of the collaboration activities. In the case of the context in which I am working there was an external threat, a drastic change to the mode of delivery in the classroom was introduced and this change led to communities of practice being formed as emphasis was placed on dealing with the 'threat'. The formation demonstrates a need and a desire on the part of the individual teachers involved in a professional learning community to protect the sense of belonging and positive well-being that is a product of collaborating with colleagues for a common purpose. In fact, following their work on teacher identity, Flores and Day (2006) found that "teachers who worked in collaborative cultures were more likely to develop and to demonstrate positive attitudes towards teaching" (p. 230). Once teachers experience a

feeling of belonging to something that matters and is making a difference for students, they have a tendency to want to continue working in that environment.

According to Coldron and Smith (1999), the craft of teaching is that set of skills which can be trained, a type of toolbox, attached to a resume of what a teacher can offer. It is tangible, and poses itself as a minimum skill level. The moral tradition of teacher identity consists of the critical analyses that the teacher engages in determining the 'right thing to do' out of a set of multiple options. Coldron and Smith identified that this is done in three ways: the teacher evaluating what it is that they are asked to do, the teacher critically evaluating the culture in which they are a part, and the teacher using values in negotiating competing priorities. The artistic tradition of teacher identity requires individuality and the knowledge of how the teacher negotiates their practice. That is, knowing when he or she has captured the attention of the students through a combination of relationship, care, content, style, and skill. The scientific tradition of teaching is can be described as being the search for "best practice" (Coldron & Smith, 1999). The scientific tradition of teaching comes to fruition when teachers conduct their own investigations to solve the problems of teaching and learning. It places the teacher as a researcher. However, in order to reflect, the teachers need time, and this is not something of which they always have a great deal. Teachers engage in the scientific tradition when they critically reflect on their successes in the classroom. The teachers in this study were very much involved in the scientific tradition as they strove to make a new practice work and find 'best practice' for a new technology. However, at the same time they were struggling to retain their 'artistic identity' and capture and hold the students' attention. The teachers themselves used the term 'toolbox' and refer to the iPad as being just one more tool in their toolbox (see Chapter 5).

"In plain terms—people learn from and with others in particular ways. They learn through practice (learning as doing), through meaning (learning as intentional), through community (learning as participating and being with others), and through identity (learning as changing who we are)" (Sachs, 2001, p. 227). Communities of Practice are an example of "socially situated theory of learning where learning is seen as social participation" (Conole, Galley, & Culver, 2011). As such, developing communities is an increasingly popular trend among professional development initiatives because it encourages collaborative reflection on action, develops knowledge of practice, and builds on the sociohistorical, contextual experiences of participants (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004). A Community of

Practice evolves through the preoccupations of its members. Their shared knowledge and interests are what bring them together and are also the basis of their problem solving and learning experiences which they need to deal effectively with work-related changes and challenges they may face. In approaching learning as a social practice, the Community of Practice theory opens doors to a connection between organizational knowledge and collective action (Wenger 1998). Because the identity of a teacher is rich and complex, (Wenger, 1998) it should be nurtured and cultivated under conditions surrounded by mutual respect and open communication (Sachs, 2001).

3. 6. 3. The paradox of positive value and negative experience

Griffith and Northcraft (1996) posit the theory of positive value and negative experience and it has relevance in the context of this study. A problem arises when there is a discrepancy between the cognitive frames that implementers, those who are in charge of the implementation, bring to implementation - and consequently the information that implementers present to prospective users, those who have to put the implementation into practice - and their informational needs (T. Griffith & Northcraft, 1996). This problem, known as the paradox of positive value, occurs when implementers present predominantly positive descriptive information about a technology. Implementers may emphasize positive descriptive information because that is the cognitive frame they bring to implementation - a frame of strong belief in the benefits of the technology. Implementers may unintentionally disregard operational concerns because of their familiarity with the technology; even complex operational issues will have become second nature to implementers and thus, are not salient when implementers present information to prospective users (Sproull & Hofmeister, 1986). When the iPad was introduced, because it was such a large-scale project, Apple sent a team of representatives to provide professional development to a group of 'iChampions' from the colleges whose task was to return to their respective institutions and cascade what they had gleaned from the sessions. In early May 2012, a National Pedagogy Team created and shared a call for proposals to all federal higher educational institutions to nominate individuals as iChampions. Each of the three federal institutions selected ten iChampions, who soon began an extensive training with Apple World Education leaders in mobile learning technologies and active learning techniques in preparation to be the leaders among their colleagues (Hargis et al., 2014). The iChampions

were selected in some cases it appeared, quite randomly. They had varying degrees of technical ability, but all were seen to be excellent teachers. Some of these did not even know how to turn on an iPad at the first session. Apple had a vested interest in extolling the positive virtues of the iPad and pitched their sessions at a high level of technical difficulty.

Subconsciously, implementers may emphasize the benefits (positive descriptions) of a technology in order to ensure users' initial interest or to rationalize their implementer role (e.g., Festinger (1957)). Users, in contrast, have a high need to reduce uncertainty (Lester, 1987) and gain control over the technology (Baronas & Louis, 1988; Falcione & Wilson, 1988) during implementation. Appeasing these needs should lead users to want to know more than just the benefits of the technology; users should want an understanding of the operational facets of the technology, as well as an understanding (forewarning) of any negative features. This is the paradox of positive value - by focusing only on the benefits of the technology, implementers seem destined to disappoint users - not fulfill users' informational needs - and thus, increase the likelihood of implementation failure (Sproull & Hofmeister, 1986). It is not that implementers wish to deceive users; implementers, because of the cognitive frame they bring to implementation, simply are unable to adequately empathize with users' information needs. This was the case not only with the Apple representatives, but also with the trained IT specialists in the college.

The problem presented by the paradox of positive value is that users who are underprepared by a positively biased introduction to a technology will encounter negative surprises (Louis, 1980) - operational difficulties and unanticipated costs - and that these negative surprises doom implementation to failure. However, what is pertinent to the context of this study is what Griffith and Northcraft (1996) have suggested. They suggest that within this problem there is a surprising opportunity - the paradox of negative experience. Users should be discouraged by a technology's negative surprises only when those surprises are costly. If the discovery of negative surprises is not costly to users, negative surprises offer opportunities for trial-and-error learning that instill in users the prospect that there is more to learn. The paradox of positive value is that an implementer's positively biased presentation of a technology makes negative surprises inevitable; the paradox of negative experience is that these negative surprises, if managed well, become valuable positive learning experiences for users. The paradox of negative experience is built on the idea of exploration-based (rather than instruction-based) learning. Exploration-based

learning entails providing novices only enough understanding of something, in this case a new technology, to begin using it and to begin discovering the limitations of that understanding (Davis & Bostrom, 1993). Comparisons can be drawn between this theory and Vygotsky's constructivist Zone of Proximal Development theory. If learners are presented with challenges that are one step ahead of their current level of learning, and have the assistance of a more experienced peer (or in the case of children, adult) then they are able to deal with the challenges and subsequent learning occurs. However, if the gap between what they know and what they are expected to learn is too great, then there is a threat to learning and confusion and frustration take centre stage (Wertsch, 1985).

This theory has direct links to teachers' sense of professional identity. When teachers feel that they are not being given enough information they can feel frustrated and lacking control, as was the case in the early stages of this study. This can lead them to doubt themselves and their ability to carry out the tasks expected of them to the best of their professional ability. However, when they are given the opportunity to experiment and make mistakes which are not too costly to them, their professional identities can be strengthened as they learn new skills and grow in confidence.

3. 7. Professional development

Teachers who are not given the opportunity to grow professionally in the use of technology will be disadvantaged in the future as students are becoming more and more used to having access to education remotely and they are coming to view teachers as facilitators who can direct them to the best sources of (online) education. According to Bonk, more students are being provided opportunities to select their own online teachers based on their interests and/or geographic location and the result is that "the notion of a teacher will shift from a deliverer of content to that of a concierge who finds and suggests education resources" (Bonk, 2010, p. 184).

Research by Gayton and McEwen (2007) examined 20 studies related to how professional development was commonly evaluated and devised a model for achieving effective professional development in technology. Their model described five levels of planning that are needed for successful teacher training. Firstly, professional development must be logistically planned, what instructors need to know and be able to do must be identified before

student learning outcomes can be established. Next, internal support is needed for effective integration and changes to instructional practices must be identified and made measurable. Finally, student learning outcomes related to technology must be identified.

I believe these five points have relevance for the research questions I am asking. It seems fundamental to any project that the teachers should be trained appropriately and have the knowledge and information they need available to them. In the same way, they should have the internal support they need to carry out their duties. I believe that it is important for teachers to have a strong sense of professional identity if they are to be able to support their students in the best way possible and I also believe that a lack of professional development and internal support can lead to negativity and consequently have a negative effect on the students. The other three points related to learning and student outcomes and changes to instructional practices also have relevance to this study. It would seem that if a new educational technology, especially if it is the only means of instruction is introduced, then a new curriculum, student learning outcomes, and assessment strategy should also be developed.

In this research project, the initial teacher survey, semi structured interviews and teacher reflections were designed to shed light on the five areas mentioned above.

Similar research revealed that teachers who received "school-level supports in combination with a wide array of curricular and assessment resources and logistically more convenient technology access, expressed increasingly stronger ideological affiliations across time with technology integration and learner-centered instruction" (Shapley, Sheehan, Maloney, & Caranikas-Walker, 2010, p. 24). This indicates that each step within the planning process should also take into consideration the curricular goals for student learning, as well as those related to technology skill development in teachers and students. The most common forms of training and support consist of workshop attendance, in-house or sitebased, and self-directed professional development sessions.

The professional development that was offered at the start of the iPad implementation in the college that is the focus of this study involved IT professionals and representatives from the Apple corporation lecturing to a group of around 40 individuals. Darling-Hammond and McClauglin (1995) suggest that a more effective model is to provide teachers with

opportunities to show or share what they have learned with colleagues or peers, as well as apply new concepts and strategies within their own disciplines and unique contexts

3. 7. 1. Evolving professional identity

In the formation of their identity, the teacher's answer to the question of who they are is constantly being shaped by what they perceive their work to be (Graham & Phelps, 2003). From the beginning of their careers, teachers are engaged in the process of creating their identities (Coldron & Smith, 1999; Walkington, 2005). The professional identity of a teacher is central to the practices, behaviours, and competencies that teachers exhibit in action (Beijaard, Meijer, & Verloop, 2013; Walkington, 2005; Wenger, 1998). This process starts with teachers' pre-service years and continues right up until their retirement. What a teacher believes about teaching leads their professional identity to be constantly changing (Coldron & Smith, 1999; Walkington, 2005). How teachers view themselves and the environments in which they work can also affect professional identity (Flores & Day, 2006). Teacher identity is never stable and it can be transformable throughout a teacher's career (Flores & Day, 2006). Teachers should be constantly developing and improving their craft. They need to keep up to date with new developments and they need the strength and confidence to deal with change. If professional identity is shaped by interaction with the environment and with colleagues, then it is important that the identity that is presented is a positive one. If teachers are negative about what they are doing and feeling then it is very easy for the negativity to spread and pervade the environment. Obviously, this could have serious consequences for the learners

3. 7. 2. Teacher support for technology integration

Theories on what is the best and most effective way to introduce technology into classrooms differ, but one thread runs through most of them – the need for adequate support and training in the use of technology. If the teachers do not get adequate support, they may resist the new technology and revert to their traditional tried and tested methods for delivery. In this way, they miss out on the opportunity to learn new skills and enhance their teaching. However, it is interesting to note here that this is not always the case, as outlined in section 3.6.3. The paradox of negative experience and positive outcomes can lead to surprising results.

According to Cennamo, Ross, and Ertmer (2010), teachers must undergo a series of developmental stages of technology integration as they move from novice user to teacher facilitator of student use. I have chosen to use Puentedora's SAMR model (substitution, augmentation, modification and redefinition) (Puentedura, 2006) to illustrate this, as it enables teachers to design and develop digital learning experiences that utilize technology. The goal is to transform learning experiences so that they result in higher levels of achievement for students.

In a study of students' attitudes to technology use, Conole et al. note that they are using technology widely and for a variety of educational purposes. "The findings suggest a shift in the way in which students are working and suggest a rich and complex relationship between individuals and tools" (Conole et al., 2008, p. 521). The implication being that teachers need to at least keep pace with their students' knowledge of how to use technology. The teachers in this study had concerns about looking unprepared or appearing to lack knowledge in front of their students. However, some managed to turn this into a learning opportunity for them and their students as will be seen in Chapter 5.

According to Allred (2010), "the most effective teachers realize that the world and students have changed since they completed their undergraduate work, and they look for opportunities to address the gaps in their knowledge and ability" (p. 11). Until such gaps are addressed, some teachers will continue to exhibit behaviors associated with those found at the lowest stage of Puentedura's model.

3. 7. 3. Technology acceptance

The technology acceptance literature documents a collection of models and theories that can be used to explain the adoption of information technology innovations (Venkatesh, Davis, & Morris, 2007; Venkatesh, Morris, Davis, & Davis, 2003). These models and theories are used in scientific research into the acceptance of technology and are not suitable for the type of research being carried out in this study, but it is important to know the background and to be able to position the research in context. It is interesting to note that these models posit that technology acceptance can be explained by the subject's intention and the belief that most people who are important to him or her think he or he should display certain behavior.

With respect to individual (as opposed to organizational) acceptance of technology these models use intention or usage as a dependent variable. Examples of some of the most influential models include the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975); the theory of planned behavior (TPB) (Ajzen, 1991), and the technology acceptance model (TAM) (Davis, 1989) along with modifications of these models.

The theory of reasoned action (Fishbein & Ajzen, 1975) is anchored in social psychology and particularly in expectancy-value analysis and has been used extensively to study technology acceptance. According to TRA, an individual's acceptance of technology can be explained by his/her intention. This in turn is determined by the individual's positive or negative feelings towards the target behavior (attitude) and the individual's perception that most people who are important to him/her think he/she should exhibit the behavior under consideration (subjective norm).

The theory of planned behavior (TPB) (Ajzen, 1991) extends TRA by including perceived behavioral control as an additional determinant of behavioral intention. Perceived behavioral control represents the ease or difficulty of performing the target behavior. Similar to TRA, TPB has been used to predict intention and behavior in a wide variety of settings.

Chapter 4 – Methodology

The methodology for this study was developed based on the research questions that I was seeking to find answers to. The purpose of this chapter is to describe the methodological

and procedural steps I undertook to explore the connection between educational change, professional identity and Communities of Practice. It is useful at this point to re-visit the research questions before turning to the choices I made and the procedures I followed:

Research Question 1: In what ways do teachers' accounts of change (such as the sudden introduction of a new educational technology) help explain their perceptions of their professional identities?
Research Question 2: How did the change in teaching methodology and methods affect the teachers' professional identities?
Research Question 3: To what extent did involvement in a Community of Practice help teachers in the study respond to change?

Constructivism is an epistemology, a learning or meaning-making theory, that offers an explanation of the nature of knowledge and how human beings learn. It maintains that individuals create or construct their own new understandings or knowledge through the interaction of what they already know and believe and the ideas, events, and activities with which they come in contact (Cannella & Reiff, 1994; Richardson, 1997). This study aims to narrate and understand the perceptions that teachers hold about their identity, their place in their teaching community and the use of technology in teaching. They learnt through involvement with content instead of imitation or repetition (Kroll & Laboskey, 1996). Learning activities in constructivist settings are characterized by active engagement, inquiry, problem solving, and collaboration with others and are regarded as producing greater internalization and deeper understanding than traditional methods. A Community of Practice is an example of a constructivist setting as the participants interact with each other and their environment to create new understanding and knowledge.

The analysis of data to discover emerging themes is a feature of qualitative research defined as thematic analysis (Braun et al., 2019). Thematic analysis fits within a spectrum of qualitative methodologies including: content analysis (Hsieh & Shannon, 2005);

conversation analysis (Hutchby & Wooffitt, 1998); discourse analysis (Wetherell, Taylor, & Yates, 2001); grounded theory (Charmaz & Belgrave, 2012); interpretative phenomenological analysis (Flowers, Larkin, & Smith, 2009); narrative analysis (Riessman, 2008) and narrative inquiry (Webster & Mertova, 2007).After conducting the literature review, the method that lent itself best to this study was that of narrative inquiry, although aspects of phenomenological analysis were also employed. I was researching teachers' professional identities and how they responded to a change in their teaching context. The combination of aspects of phenomenology and narrative inquiry allowed the teachers to tell their narratives – their stories of what happened to them over a two-year period and how it impacted on them and how they reacted to it. The thematic narrative analysis used in this research allows individual units of meaning, primarily words and phrases, expressing thought, ideas, experiences and emotions, to emerge from within the text of the interviews. These units of meaning have the potential to be formed into themes, but in contrast to grounded theory where hypotheses are formed, they are interpreted hermeneutically by the narrative context that surround them.

Conducting a narrative thematic analysis allows justice to be done to the experiences the teachers spoke about in the interviews, observations, reflections and email interactions. The data revealed a rich lived experience and captured complex, detailed and evolving descriptions from the teachers. I became part of the narrative frame of their storytelling revealed by this narrative thematic analysis (Braun et al., 2019).

Over recent years there have been a number of contributions relating to the use of narrative as a method of qualitative inquiry for exploring areas of education, reflecting its value as 'one of the fundamental sense-making operations of the mind' (Lodge, 1990, p. 141). Clandinin and Connelly (2004) explain narrative enquiry as a way of understanding experience through 'stories lived and told', involving 'collaboration between researcher and participants, over time, in a place or series of places, and in social interaction with milieus.' Narrative enquiry offers the twin advantages of allowing the 'story' and the experience that it represents to reflect 'distinctive ways of knowing' (Merriam, Caffarella, & Baumgartner, 2007) based on the perceptions and the context of the narrator, while also fostering responsiveness and construction of meaning by others in the context of their own experiences (Iser, 1979; McEwan & Egan, 1995). Teachers' professional identities are personal and are the story of their working lives. In section 3.6.1, I offer a definition of

professional identity that is constructed from the participants' perceptions of what the concept means. The definition states that identity changes over time and depends on context and interaction with others. All these factors contribute towards a narrative – characters, setting, plot and it was for this reason that narrative inquiry seemed to be the most appropriate methodology for this study.

This approach is also appropriate in the dynamic field of technology-based education where there is 'too little secure knowledge learned and shared from existing experience for academics and designers to be able to build on experience' (Laurillard, 2013, p. 194). Understandings are gradually evolving from individual experiences, often shared and developed through conferences and other opportunities for discourse, but established guidelines for practice are still in their infancy. This is consistent with the ideas I reviewed in Chapter 3.

As is the case in other qualitative approaches, the narrative which emerges offers characteristics which go beyond criteria associated with the quantitative paradigm for determining the value of data, such as reliability, validity and generalizability. Rather, it reflects the richness and complexity which result from acknowledging multiple ways of knowing, and the contingency of human knowledge on personal experience and individual conceptions of the world (Eisner, 2003), embodying a form of educational research that makes practice more 'theoretical' in that it is enriched by critical reflection and simultaneously remains 'practical', in the sense that it helps to make the judgments which inform educational practice more trenchant. In short, "[its purpose] is to ensure that the observations, interpretations and judgments of educational practitioners can become more coherent and rational and thereby acquire a greater degree of scientific objectivity" (Carr & Kemmis, 1986, p. 124).

4. 1. Paradigm on which the research is structured

4. 1. 1. Narrative research

Creswell (2012) proposes that qualitative research is a way of organizing our ideas and grounding them in the scholarly literature. He offers five approaches to qualitative study - narrative research, phenomenology, grounded research, ethnography and case study. A combination of two of them presented itself as being the most appropriate way to find

answers to my research questions. In contrast to the other approaches, narrative can be a research method or an area of study in and of itself. Creswell supports Clandinin and Connelly (2004) by defining it as a study of experiences "as expressed in lived and told stories of individuals" (Creswell, 2012, p. 70).

Creswell maintains that there are four types of narrative available to the qualitative researchers. The first being biographical study which is writing and recording the experiences of another person's life. Autoethnography, in which the writing and recording is done by the subject of the study (e.g., in a journal). Life history, portraying one person's entire life and finally, oral history which is reflections of events, their causes and effects. (Creswell, 2012)

Before a research project is designed, Creswell recommends determining if the particular approach is an appropriate tool for the research question or questions. In narrative research methodology does not necessarily follow a rigid process but is described as informal gathering of data and Creswell outlines two concepts within the approach that are unique and are appropriate for this study. In the process of restorying, the researcher gathers stories, analyzes them for common elements and then rewrites them to position them in a chronological sequence. An aspect of this approach that I found most interesting and fitting for the context of this study is the collaboration that occurs between participants and researcher in which both gain valuable insights of the experiences as a result of the process.

Aspects of phenomenology were used in this study to add thick description and strengthen validity, but the main methodology employed in this study is that of narrative enquiry as it also offers the freedom to move between philosophies and interpretive methods (Brunner, 1994), allowing theorizing to grow out of practice and experience, thus potentially providing a method for reflecting on aspects of educational practice and considering them from a range of theoretical points of view (Benson, 2007).

> '*…narratives form a framework within which our discourses about human thought and possibility evolve, and they provide the structure and functional backbone for very specific explanations of this or that educational practice. They contribute to our capacity to deliberate about educational issues and problems. In addition, since the function of narrative is to make our actions intelligible to ourselves as well as to*

others, narrative discourse is essential to our efforts to understand teaching and learning,' (McEwan & Egan, 1995, p. xviii).

One conclusion that can be drawn from this is that narrative can be seen as gaining 'an in-depth understanding of the situation and meaning for those involved' with the resulting insights having the potential to 'directly influence policy, practice, and future research' (Merriam, 2002, p. 19), the narrative providing the means of drawing individual cases together in order to make sense of them. Merriam and Caffarella (2007) note the recent interest in story-telling in adult education as a way of researching the influence of socially constructed notions of race, ethnicity, gender and sexual orientation in adult development. This approach is also appropriate in the technology-based education where there is 'too little secure knowledge learned and shared from existing experience for academics and designers to be able to build on experience' (Laurillard, 2013, p. 194). Understandings are gradually evolving from individual experiences, often shared and developed through conferences and other opportunities for discourse, but established guidelines for practice are still in their infancy. Riessman (2008) outlines three levels of inquiry and analysis in narrative research:

Stories told by research participants
Interpretive accounts by the researcher (narrative of narrative)
Reader's reconstruction (narrative of narrative of narrative)

Riessman , like Creswell (2012),also summarises narrative research into four approaches, structural analysis, dialogic or performance analysis, visual narrative analysis and finally, the approach that I chose to adopt in this study - thematic analysis. Content becomes the exclusive focus, the story is kept intact, and thematic meanings and the 'point' of the narrative are emphasized. It is an interpretive account where context is important and the narrative is re-told. It was this factor that led me to choose narrative over phenomenology. Although the synthesis that was produced from the first interviews captured the essence, or the main points, I felt that the story being told could reveal much more

4. 1. 2. Phenomenology

An approach that holds common ground with narrative enquiry is phenomenology. Phenomenology is a way to study an idea or concept that holds a common meaning for a

small group (3-15) of individuals. The approach, like that of narrative enquiry, centers around lived experiences of a particular phenomenon, such as the introduction of new technology, and through a complex process of data manipulation allows researchers to reduce individual experiences to an essential concept or essence whilst the phenomenological researcher seeks to identify themes in the data. In addition to its relationship to philosophy, another key phenomenological feature is bracketing, a process by which the researcher identifies and sets aside any personal experience with the phenomena under study (Vagle, 2016). This contrasts with narrative enquiry where the researcher plays a much more participatory role in the process. In this study I analysed two of the sets of data using first phenomenological techniques and then narrative thematic analysis. The combination of the two methods adds thick description and depth to the study. I played a participatory role in order to be able to construct the narrative while at the same time constantly being aware of my own belief set, values and knowledge of the situation so as not to be biased in my interpretation of the facts.

To comprehend technology's impact on societies generally and on teaching and learning more specifically, it is vital to understand individuals' experiences with technology. Jonnassen's argument underlined that "since experiencing a mediated event is substantively different from direct experience of an event, the resulting phenomena or conscious perceptions must be substantively different" (Jonassen, 1984, p. 166). As seen in the literature review (section 3.3.5), experiences with technology generally, and with teaching and learning with technology specifically, are phenomena distinct from experiences with traditional forms of teaching and learning. This necessitates studying experiences with media and technology in-depth to understand their role in and impact on teaching and learning. Heidegger (1962) used phenomenology to describe our being in the world and to describe perceptions.

The importance of studying humans' experiences with technology and perceptions of technology, including those of teaching and learning with technology, is evident in the prominent role the term "experience" has begun to play in educational technology (Friesen, 2009, 2012), and the existing research with the theme of experience with technology. The literature investigating experiences with technology includes three main areas of educational technology research, namely studies of: (1) students' experiences with online education; (2) teachers' experiences as they integrate technology in their teaching; and (3) users'

psychological experiences with computer applications. It is on the second area, that of teacher experiences as new technology was introduced, that I have chosen to focus in this study (see section 3.3.5).

Phenomenological research is a systematic attempt to uncover and describe structures of lived experience to arrive at a deeper understanding of the nature or meaning of experiences of phenomena (Giorgi, 1997; Husserl, 1965; Moustakas, 1994). According to Cilesiz, "phenomenology has been specifically designed to study the essence and meaning of experience… thus, it is phenomenology that is uniquely suited to building a research agenda on experiences with technology (Cilesiz, 2011).

Furthermore, of the various qualitative approaches, phenomenology is notable in that it comprises a theoretical framework and method designed specifically to study lived experiences of phenomena from the perspective of those who experience them (Giorgi, 1997; Moustakas, 1994; Van Manen, 1990; van Manen, 1995). Thus, research aiming to develop a deeper understanding of several individuals' common or shared experiences of a phenomenon— for example, so as to develop practices or policies—constitutes the proper domain of phenomenology (Creswell 2012).

The purposes of a phenomenological study are to understand and describe a given phenomenon in-depth and arrive at the essence of humans' lived experiences of that phenomenon. The phenomenon that was being studied in this research was the implementation of the iPad into Foundations English classes and I was principally trying to understand the lived experiences of five teachers although the experiences of other teachers were also included to add to the thick description. Essence refers to the condition or quality of an experience that is common or universal; it is what makes an experience what it is and without which an experience would not be what it is (Husserl, 1965; Moustakas, 1994; Osborn & Husserl, 1932). Every experience is a manifestation of its essence; it is through these manifestations that we can understand the essences. Uncovering the essence of an experience is the purpose of phenomenological research, however not the essence but only its manifestations can be observed. Empirically, the essence of an experience is never completely exhausted, therefore the results of a study do not represent a universal truth, but rather the essence at a specific time and place as manifested in the participants' experiences and as seen from the perspective of an individual

researcher (Moustakas, 1994). Within the field of educational technology, we can investigate individuals' experiences with a given (aspect of) technology and arrive at the essence of the experience of that (aspect of) technology via the various individual experiences (manifestations). What remains common across cases after particulars are removed, is the essence.

In a phenomenological study the important reality is what people perceive it to be, therefore the focus is on subjective experience (Giorgi, 1997; Kvale, 1994, 1995) and the only evidence phenomenology seeks and accepts is conscious experience. There are no factual claims, because "pure essential truths do not make the slightest assertion concerning facts" (Husserl, 1965, p. 57).Therefore, in phenomenological research how an object presents itself is more important than how an object is (Giorgi, 1997). In general, phenomenological inquiry aims to obtain descriptions of experience without considering its cause or attempting to ascertain whether these descriptions correspond to an independent reality (Giorgi, 1997, 2000; D. E. Polkinghorne, 1989). Moreover, phenomenological inquiry does not aim for empirical generalizations, establishment of functional relationships, or development of theory with which to predict or control; instead it makes it possible to generate plausible insights, bringing us in more direct contact with phenomena (Van Manen, 1990).

4. 1. 3. The phenomenological procedure

In phenomenological research generally and indeed in narrative research, data consists of descriptions of lived-experience, which can be collected through interviews, observations, or written self-descriptions (van Manen, 1990). In this study an initial survey was administered in the first week that the teachers were using the iPad as a teaching aid in class. Out of the 35 teachers who were surveyed, 22 responded. This aspect of the research does not fit into traditional phenomenological methodology but I was interested in seeing how the population of teachers was feeling about the implementation and it would have been impossible to interview all of them, especially at this point in the project when they were all very busy dealing with the new technology.

4. 1. 3. 1. Selection of participants

Three months into the implementation, five participants were selected from those who had volunteered and then asked if they would participate in this research project. These individuals were selected because I believed them to be a relatively homogenous group of

participants who would be able to identify and describe in-depth a shared essence of experiences within this particular group of teachers. This is in keeping with the criterion sampling method advocated by Poland (1995). They were all experienced in the use of technology in the classroom and had been working at the institution for at least 4 years. Each interview lasted between 30 to 45 minutes and was recorded and then transcribed verbatim, as suggested by Poland (1995). See appendices 4 and 5 for interview questions.

4. 1. 3. 2. Survey analysis

The initial survey was analysed by identifying the themes that emerged. The teachers were asked to write down how they felt about teaching with iPads and whether they felt they were prepared for the task ahead of them. To the first question most responded with one-word answers and the themes that emerged were that they were feeling anxious and unprepared. The second question prompted the following perceptions to be revealed: a feeling that they might look foolish in front of the students and the perception that they might look unprofessional as they felt unprepared. When asked what they found most helpful about the preparation they had been given, the theme that emerged was contact with other teachers and the support they could give to each other. The least helpful factor appeared to be the professional development that was offered. The questions were administered by SurveyMonkey and sent to 35 teachers. 22 teachers responded.

4. 1. 3. 3. Procedure for analyzing the interviews

Three months later, five interviews were carried out and the data was analysed in the following way. First, the interviews were transcribed, and the data was horizontalised. In other words, the transcripts were read multiple times with an attempt to view them with a fresh eye each time. Each statement relating to the participant's perceptions about the introduction of the new technology was noted and given equal value. I asked a colleague to peer-review my horizontalization in an attempt to check that I had chosen relevant statements. Next, the data was transformed into statements representing meaning units. Cilesiz (2011, p. 499) explains meaning units as being "words/phrases that represent only one meaning" and goes on to say that the process of identifying these units involves "splitting statements whenever there is a transition in meaning." As Henri pointed out over 20 years ago, online messages frequently have more than one unit of meaning. Researchers can choose between t-units - an independent clause together with clauses dependent on it (North, Coffin, & Hewings, 2008, p. 261) - sentences, paragraphs, thematic units, or

illocutionary units (speech acts) (Howell-Richardson & Mellar, 1996). However, Henri suggested that the choice of the unit of analysis is related to the objective of the content analysis, and not necessarily in a division into words, group of words, propositions, sentences, paragraphs, or entire messages (Henri, 1992). For content analysts interested in the reasons for and results of interaction, the essential factor is generally not form but meaning (Merriam, 2002): Henri (1992) used the term "unit of meaning."

A list of all the meaning units across the participants was compiled (around 300) and then it was noted which ones were present in each participant's data. The third step involved creating narratives for each participant, which represented a description of his/her experiences of the phenomenon (the introduction of the new technology.) These textural descriptions were built up by using their verbatim statements with any necessary supplementary statements added by me included in brackets. The fourth step is referred to as imaginative variation and involved elaborating on the individual textural descriptions to arrive at the underlying structures of the experience. Each textural description was read several times in order to approach them from different points of view and attempt to derive possible explanations of what structures might underlie the individual manifestations of experience. Elements that contradicted the data at large were eliminated and then structures of the experience that were supported by the rest of the text were combined into a consistent narrative for each participant (individual structural descriptions). The final step or synthesis was to identify similarities in the participants' experiences and to compile these commonalities or shared meaning units (Cilesiz, 2011) into a composite textural description which is a unified narrative written in the third person. This unified narrative is included below and the stages that preceded it are included in the appendices.

The findings are summarized in the composite textural description or synthesis. It is a time-consuming process to examine the data in this way, but the final synthesis provides the essence of the teachers' perceptions (at this time). If the process were to be carried out again the essence or essences could be different.

It can be seen from the synthesis that the teachers perceived that the implementation of the new device was not handled well and that this led to feelings of anxiety. The way it was introduced can be seen to have had, in some cases, a negative impact on their professional identity. Although the survey that was carried out at the very beginning of the

implementation is not considered to be part of phenomenological research, it can be seen that the themes that were identified in the responses to that survey are very similar to the essences captured in the composite textural description. See appendices for the sample horizontalization, meaning units, and narrative of one participant.

These interviews were also analyzed using thematic analysis. The procedure for this is outlined later.

4. 1. 4. Validity of phenomenological research

Ashworth (1999) and Peshkin (1988) advocate formulating a subjectivity statement at the beginning of a phenomenological study as a useful starting point to deliberately search for and highlight one's prejudgments and facilitate a bracketing process throughout the investigation. The researcher is supposed to engage in *epoche* throughout the study and it is most important to bracket one's subjectivity during data analysis. Husserl's Epoche is an attempt to place common sense and previous knowledge about phenomena in brackets (hence the term, bracketing) to arrive at an unprejudiced description of the essence of an experience. Thus, before commencing data analysis, the researcher should revisit his/her subjectivity statement and reflect on all his/her prior experiences related to the phenomenon, in order to more consciously keep them in brackets and minimize their impact on the findings.

4. 1. 5. Subjectivity statement

Before embarking on the interviews, I constructed a subjectivity statement in an attempt to do as Ashworth and Peskin advise and consciously confront my pre-conceptions about the subject and thus be able to more successfully bracket my prejudices:

The teachers will resent having the way they teach imposed on them. They will be scared of the new technology and will feel threatened by it. They might refuse to adopt the technology and continue teaching as they always have done.

By reflecting on my pre-conceptions and writing this statement before I interviewed the participants, I raised my own awareness of what I was expecting to hear and therefore reminded myself of what a neutral stance would be. By reading the statement again before I started analyzing the data and by reading it numerous times during the process, I believe that I managed to put myself nearer the neutral position that is required in order to make a phenomenological study valid. To further bracket my subjectivity in the study I went back to the participants after I had transcribed the interviews to clarify some interpretations about which I was not certain.

Polkinghorne (2005) and Creswell (2012) present additional specific questions to be asked when evaluating the validity of a phenomenological study. Techniques such as peer review can reduce the impact of the researcher's subjectivity on the findings, which is a very important issue in phenomenology. As previously mentioned, a peer reviewed the horizontalization process. She is a PhD student in her fourth year of study and she largely concurred with my statements. Where we disagreed, we discussed the statements until we came to a consensus on which ones to retain and which ones to disregard.

Using aspects of phenomenology to analyze the first interviews was interesting, but I felt that I was not doing justice to the story that the participants had to tell. It was for this reason that I turned to narrative enquiry and selected it to be the principal methodology for my research.

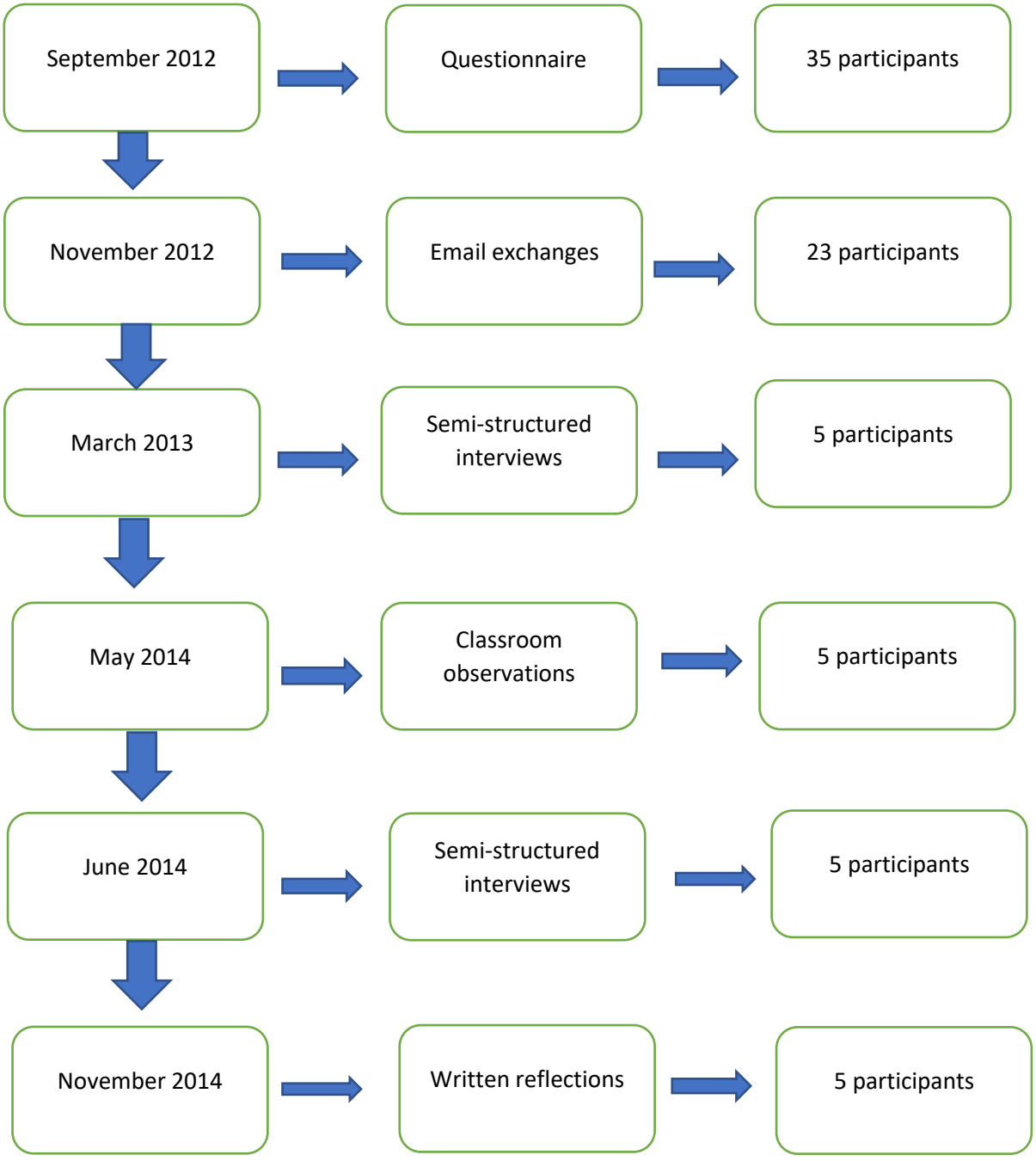
4. 2. Methods and procedure

The methods and procedures are outlined below. The findings will be dealt with in depth in the following chapter.

The survey was used to build up a picture of the emotions the teachers were feeling as they started the project and to select participants for the later stages of the research. The email exchanges began to build up a picture of what strategies the teachers were using in order to learn how to navigate teaching with the device. In conjunction with the first interviews, these instruments sought to find answers to RQ1 and RQ2. The classroom observations were also useful for RQ1 and 2 and were used to add illustration to statements made by the participants regarding their use of the iPad in class. The second interviews and the

reflections were used to answer RQ3.

Table 6: Timeline for instruments used:



4. 2. 1. Questionnaire – September 2012

An initial survey was administered to 35 teachers working in the preparatory program at an institute of higher education. The survey was delivered via Survey Monkey and the participants could remain anonymous. If they were willing to participate in further stages of the study they were requested to give their names, or email the researcher Building on the findings from this survey, five teachers were selected from those who volunteered and open-ended interviews were conducted in March 2013. The findings from the survey are referred to in Chapter 5 and can be found in full in appendix 8.

4. 2. 2. Email correspondence - November 2012

Approximately three months after all paper was removed from the classrooms, I was asked to report back to management about the progress of the iPad project. In order to gain insight into what was happening 'on the ground', I sent an email to the teachers in the preparatory program asking them to comment on the following:

teaching and learning - positives and negatives

students being prepared for the assessments

solutions or modifications to current practice

This was a very busy time for the teachers, yet around 20 of them took the time to write responses and in some cases the responses were very detailed. These themes were returned to in the interviews with the five teachers who volunteered to participate in the later stages of the research.

4. 2. 3. Semi-structured interviews – March 2013

One of the questions in the initial questionnaire asked if the respondent would be prepared to participate further in the research. The participants for the interviews were selected based on their willingness to participate. From the pool of teachers who volunteered five were selected who fitted the criteria for phenomenological sampling mentioned above in section 4.1.3. These interviews were analysed using methods from phenomenology and narrative inquiry.

The teachers were all experienced in the use of technology in the classroom although the level of interest in it was varied. They had been working at the institution for at least 4

years. Each interview lasted between 30 to 45 minutes and was recorded and then transcribed verbatim as suggested by Poland (1995). These interviews were also later subjected to narrative analysis and were used in conjunction with the other instruments to build the narrative. The phenomenological analysis was used as a means of adding thick description to the data (see section 4.1.3) and appendices 1, 2 and 3.

4. 2. 4. Data analysis

NVivo was used to assist in the thematic narrative analysis. All the transcribed interviews, the emails and the classroom observations were uploaded to NVivo and then they were read and re read in order to identify the nodes or themes. These nodes or themes were then cross referenced to find the emergent themes that were used to find the answers to the research questions. I used NVivo as a means of storing and organizing my data but the analysis was carried out manually.

4. 2. 5. Classroom observations – May 2014

In order to build a rich and thick description for the narrative, classroom observations were carried out in May 2014. When the five participants agreed to participate in further research, they were aware that they would be interviewed and observed. What happened in the classroom was recorded in detail. The teachers' use of the iPad and their classroom management was one aspect that was focused on. The attitudes of the teachers (and students) were also of interest. In the interviews, the teachers discussed what was happening in their classrooms and the classroom observations were an attempt to provide further triangulation and add more detail. Although they were not the focus of the observation, the students were asked for their consent and the form is included in the appendices.

4. 2. 6. Semi-structured interviews – June 2014

Approximately one year after the initial interviews, the same five teachers were interviewed again. These interviews focused on the effects that the implementation of the paperless classroom had had on them. These interviews turned towards the teachers' sense of professional identity and the coping strategies they had used to respond to the change in their professional lives.

4. 2. 7. Written reflections – November 2014

Approximately two years after the start of the project, the five teachers were asked to reflect on the previous two years. Whereas the first interview, email exchange and survey focused on the first and second research question and the second interviews, classroom observations sought to answer the third research question, the aim of the reflections process was to bring all the threads together and reinforce what had gone before.

The teachers were given prompts to help them in their writing of the reflection, but they were encouraged to go beyond these and write down anything that was important to them about the experience through which they had lived. In all five cases these reflections were very detailed and provided an invaluable source of data

4. 3. Participants

The participants were volunteers who were involved in all the stages of the study. 38 took part in the initial survey, 23 were involved in the email correspondence and five took part in all the ensuing stages. None of them were natives of the country and they came from a variety of cultures and backgrounds, but they all had in common that they were working at a college of higher education in the Middle East in the preparatory programme. As a consequence of this they were, by default, participants in the implementation of the iPad as the only means instruction in the classroom and the 'paperless classroom'. The teachers were asked if they would like to participate in further parts of the study and out of those who volunteered, five were selected. Three males and two females participated in the study. They were all teaching in the upper two levels of the Foundations programme and had been working at the college for a number of years when the study began so they were accustomed to the students and the normal teaching practices of the college. They were all experienced teachers who were used to teaching with technology (although not the iPad). The selection criteria are explained earlier in section 4.1.3.1., and Table 7 gives a brief description of the participants and their level of participation in the study.

Table 7: List of participants

The participants' identities were protected throughout the study and they were given pseudonyms.

Sid, male, early 50s	Initial survey, interview 1, interview 2, lesson observation
Nancy, female, early 40s	Initial survey, email exchange, interview 1, interview 2, lesson observation, reflection
Bing, male, 60s	Initial survey, email exchange, interview 1, interview 2, lesson observation, reflection
Frank, male, mid 40s	Initial survey, interview 1, interview 2, lesson observation, reflection
Shirley, female, early 40s	Initial survey, email exchange, interview 1, interview 2, lesson observation, reflection

4. 4. Ethical considerations

In order to conduct any ethical research, the researcher has to apply for, and be granted ethical clearance from their University. In 2012 when I first started my Doctorate at Exeter, I applied for ethical clearance to carry out research for an assignment. As part of the request I stated that I would be continuing the research for the following four years. In 2015 I applied for ethical clearance for the thesis stage of my studies. Unfortunately, my tutor at the time did not process my request correctly despite being reminded about it. I followed up on this when I was nearing the completion of my studies and the error was discovered. Consequently, I was given an ethical clearance certificate which is included in appendix 13. Also included are the emails and the ethical clearance that I was granted earlier which states that I would be carrying on the research for my thesis (appendices 9,10,11 and 12). I was told at my Viva that I should include this information in order that there should be no doubt about the ethical nature of my research.

Qualitative interviews require special consideration due to the personal relationship often established between researcher and participant and the often-unpredictable directions that conversations may take (Brenner, 2006). Before embarking on the survey and the

interviews I applied for, and was granted, ethical clearance from the University of Exeter. Pseudonyms are use throughout and the information will only be shared in this paper. The participants signed an informed consent before they agreed to participate in the study, and it is clearly stated in this document that they can withdraw from the study at any time if they wish to do so. None of them elected to withdraw. I will also explain how I ensured that the project was credible and that all the relevant ethical aspects were taken into consideration.

Before embarking on the interviews, I constructed a subjectivity statement in an attempt to do as Ashworth and Peshkin advise (Ashworth, 1999; Peshkin, 1988) and consciously confront my pre-conceptions about the subject and thus be able to more successfully bracket my prejudices:

By reflecting on my pre-conceptions and writing this statement before I interviewed the participants, I raised my own awareness of what I was expecting to hear and therefore reminded myself of what a neutral stance would be. By reading the statement again before I started analyzing the data and by reading it numerous times during the process, I believe that I managed to put myself nearer the neutral position that is required in order to make a phenomenological study valid. To further bracket my subjectivity in the study I went back to the participants after I had transcribed the interviews to clarify some interpretations about which I was not certain.

As previously mentioned, in an attempt to strengthen the validity of my narrative research, I pre-empted questions that could be asked:

> Could my relationship with the subjects have a negative impact on their behaviour so that they behaved in a way they wouldn't normally?
>
> Would my tacit knowledge of the context lead me to misinterpret data or make false assumptions?
>
> Could my insider knowledge lead me to make assumptions and miss potentially important information?
>
> Could my politics, loyalties or hidden agendas lead to misrepresentations?
>
> Could my moral or political views subconsciously cause me to distort data?

> As phenomenology requires the researcher to examine their preconceptions, I required myself to confront these questions in an attempt to ensure that my research was as ethical and valid as possible.

Throughout the interviews and the analysis of them and all the data collected I kept at the forefront of my mind that it was not my place to make assumptions or judgements, but instead to tell the narrative that was unfolding before me in as accurate and honest way as possible.

Clandenin and Connelly (2004) propose that other ethical considerations when doing narrative research involve deciding who owns the story being told and how to handle opinions of its veracity. A further possible issue is how the researcher deals with conflicting information. With regards to this study, I believe that the narrative which is told belongs to all the teachers who were part of the implementation of the iPad. The accounts gathered from the five participants can be seen to be representative of those involved and the initial survey and email exchanges add to this assertion. There was little factual conflict in the participants' narratives, but their responses to the events were different.

4. 5. Conclusion

Similar approaches to that outlined above have often been employed by researchers in the social sciences and have grown out of the literary storytelling tradition. Narrative researchers use a variety of methods to collect their data. In the field of education, they can be interviews, observations, documents, email exchanges or reflections about the lived and told experiences of individuals. This study aims to recount the narrative of the lived experiences of five teachers over a period of approximately two years while they were living through great change in their professional lives and educational practice. Narrative enquiry records experiences, reports them and then chronologically orders their meaning while phenomenology seeks to uncover the essence of an experience. These two methods can complement each other to build a thickly descriptive narrative of a shared experience. In this study I aim to explore teachers' narratives of professional identity in a tertiary education college in the Middle East and also how Communities of Practice can impact on maintaining a positive professional identity. In the context of this research, reforms and changes are frequent and sudden and usually come from the top down. I am also interested in how the

teachers respond to the changes and reforms related to the introduction of the iPad to the English classroom.

Chapter 5 – Results of the analysis of the narrative accounts

5. 1. Experience and impact in participants' narrative accounts

In this chapter, I present the results of my analysis of the narrative accounts. Firstly, I focus on the primary analysis of the data I collected. I conducted a cross- narrative thematic analysis of the five participants' accounts of their experiences as part of the iPad implementation and the impacts it had on them and their professional identities. These results address research questions 1 and 2:

Research Question 1: In what ways do teachers' accounts of change (such as the sudden introduction of a new educational technology) help explain their perceptions of their professional identities?

Research Question 2: How did the change in teaching methodology and methods affect the teachers' professional identities?

Later in the chapter, I present the results from a secondary analysis of the five individual accounts to examine a particular coping strategy that was used to accommodate the change in the method of instruction. This analysis answers the third research question:

Research Question 3: To what extent did teachers' perceptions of a community of practice help teachers in the study respond to change?

The findings are discussed in Chapter 6.

The results of the cross narrative thematic analysis are presented under three main heading with subheadings under each. These headings reflect the main experiences revealed by the participants' accounts and include: impressions of the implementation, preparation and planning and notion of professional identity and professionalism. Under each theme and sub-theme, the different significance attached by participants will be discussed and where relevant, how this changed over the course of the two-year study. Illustrative extracts from participants' narrative interviews, survey responses, email exchanges, lesson observations and reflections will be used where appropriate. In order to protect their anonymity, I chose

synonyms for my participants. They are all names of singers, the names have no relevance other than that it entertained me while I was writing about them. Sid (Vicious), Nancy (Sinatra), Bing (Crosby), Frank (Sinatra) and Shirley (Bassey).

On occasion, responses from other participants will also be drawn on. 35 English teachers were involved in the iPad project and they were all surveyed two weeks after they started teaching with the new device. They were asked if they would be willing to take part in the ongoing research project. Thirteen initially agreed to participate, but not all of these participants were available throughout. Five of them participated in all the elements of the research.

5. 2. Impressions of the implementation

The phenomenological reduction and synthesis (see Chapter 4 and appendix) provided an illuminating overview of the implementation and was a useful springboard for the cross narrative thematic analysis. Extracts from the synthesis are also included here as a comparison and to add thick description to the data. Themes identified in the narrative accounts are as follows:

how it became reality

feelings and the effect on teachers

the effect on students

it's not the answer to everything

not the only tool in the toolkit

following directives…. or not…

5. 2. 1. How it became reality

In September 2012 iPads were introduced into the Foundations Programs of the three federal higher education institutions in the UAE. Two of the institutions took a softer approach by introducing the iPad as a supplementary resource. One institution introduced it as the only means of instruction in English classrooms and initially no books or paper or pens were allowed. As is revealed in the participants' narratives, the project was unusual from the start. It wasn't until around April 2012, two months before the summer vacation

and around three months before the project was launched that the teachers began to learn about the new innovation. One of the first to hear was Nancy:

> *When did I first hear about iPads in the classroom? Erm, it must have been last April. April 2012. Erm, it was told to me that we would be given iPads and that was the first I heard of it. The Dean of Education at the time mentioned it.* (Extract from Interview 1 with Nancy)

It appears there was no formal announcement, Nancy heard earlier, even before her supervisors, because she was going to be part of a task force:

> *The supervisor at that time in fact knew nothing so the dean had kind of gone directly to me and bypassed the supervisor, erm, on that one, and I think the supervisors themselves were finding out through the grapevine rather than having any official information handed to them. That was my understanding of how it was at the time.* (Extract from Interview 1 with Nancy)

Sid and Frank couldn't remember whether they were told in a meeting or by email, but Sid does remember the directive:

> *I can't remember whether it came in an e-mail or in a meeting or exactly how we were informed but we were informed that we would be teaching using iPads the following semester and that everything would have to be done with iPads and there would be no laptops, no computers, and no paper.* (Extract from interview 1 with Sid)

Bing and Shirley remember that rumours started before there was any official announcement:

> *I want to say it was like April or May I think that we heard about it. Like maybe that first PD week last year. I want to say that it could have been when the rumor started to drop. Around it…it's hard to pin down. Yeah. I even went back to some of my e-mails and I couldn't find an email about it. But I want to say it was around that time when the rumors started to come.* (Extract from interview 1 with Shirley)

> *Uh, well, we heard, uh, rumblings, uh, second semester of um, mm, 2011-2012* (Extract from interview 1 with Bing)

Bing commented on the fast pace once people did find out about it

> *…… somewhere toward the end, there was a bit of a furious sort of a meeting ……. well, it was an emergency meeting. We all had to…to meet up…and it…well not, not an emergency but it was like…very important we attend. Everybody from Foundation had to come and um, the whole point was that we, uh, each had to write a, a demonstration lesson that can be put in the iPad that had lots of details and flashy connections and pictures, and all that sort of thing and very vague and… but like done immediately within the next few days…and dadada… that sort of thing.* (Extract from interview 1 with Bing)

5. 2. 2. Feelings and the effect on teachers

A survey was carried out about two weeks after the start of the project in which 22 of the 38 English teachers in the Foundations survey participated. In answer to how they felt heading into the project, the majority answered 'anxious' or admitted to having feelings of anxiety. Three months later Shirley remembers:

> *It was a ridiculous amount of anxiety. I don't think I've ever in my career as a teacher been in a more freaked out environment…. and August was the worst. August was, and I remember you doing PD sessions for us and other people doing them where you'd see, I mean 4 or 5 were just sittin' there with just tears on our faces, you know.* (Extract from interview 1 with Shirley)

Later in the same interview:

> *just absolutely terrified that I would come across as someone who could not help these guys. That there first complaint…that they were just gonna be like…'I need a new teacher because this person is an idiot.' That's how I felt, yeah.* (Extract from interview 1 with Shirley)

Sid talks about his frustration with the way the project is being implemented:

> *Frustrated and altogether not good. This project should have been piloted first. Also, adequate hands-on training given by experts should have been provided well in advance of start-up of the fall semester.* (Extract from interview 1 with Sid)

Nancy feels that she is coping well, but she is not happy with the blanket approach to the use of the new technology:

> *it is a tool and should be included with other tools and not made the only technology available for teaching. It is difficult to get ordinary things done in a timely manner. We should incorporate it but not throw out other useful tools.* (Extract from interview 1 with Nancy)

She points out though that despite her misgivings, the students are enjoying the iPad so far:

> *……. the students are enjoying their lessons and that is the most important thing. It is still a new method of teaching and will take time. Sometimes there are technical problems with mirroring or no wifi which slows down the lesson.* (Extract from interview 1 with Nancy)

The technical problems are a feature of the project that the teachers keep coming back to. Although they did seem to be coping at this early stage of the project, the overwhelming feeling that they were experiencing was a high level of anxiety. They had been told that no paper, pens or books were to be used in the classroom and the fear of what would happen if they disobeyed this directive is highlighted in section 5.2.6. The effect that this anxiety had on the project and the teachers themselves is examined in Chapter 6.

5. 2. 3. The effect on students

In the first interview Frank felt that at first the effect on his students was quite positive and that they preferred it to alternative technologies. However, by the end of the first semester he felt that they were more distracted in previous semesters.

> *I mean, erm, they like the iPad, I think. I think they definitely prefer it to a laptop. And because of its size, it doesn't create that sort of screen between you and them that the laptop created, if you know what I mean?*
>
> *Erm, yeah…I mean there's the off-task stuff that they do... and that was…they hadn't sort of figured that one out in the beginning…they were actually on task a lot more. And then as the semester wore on, they… they got worse. . . I mean... and*

> *they spent an awful lot more on games and Facebook and whatever…* (Extract from interview 1 with Frank)

In his reflection about 18 months later he says:

> *I just banned it. As the IELTS got closer I realized that they just weren't going to get anywhere if we carried on with the iPad. I know they told us to. It wouldn't have been fair. I just took the risk. A lot of us in level 4 did. It was really harming the students.*

The students in Level 4 of the Foundations program had six months to prepare for IELTS which is a paper-based exam. Candidates have to write a total of 400 words by hand on paper and also complete listening and reading components. The readings are quite long, and the students are used to being able to see the questions while they are reading the text. One of the criticisms of the iPad that the teachers in the study raised was that it was not suitable for all purposes. Two of these being extended reading and writing. Many approaches were tried to find solutions to these problems including dividing the screen and switching between screens, but the size of the iPad screen made it difficult to read the text and the questions. Some students bought external keyboards in order to make it easier to type but even if they became proficient on the keyboard it didn't help them in the exam as they then had to revert to handwriting. They needed practice handwriting as this was a skill with which many of them were still struggling. The teachers felt that they were losing out on valuable practice:

> *Reading material currently available doesn't allow focus on skills practice. We have tried using the app Sidebyside but the screen is small, and it is far from ideal as you can't annotate.* (Extract from the initial survey)

> *We were just not preparing them for the exam. I felt bad for them.* (Extract from Frank's written reflection)

Nancy enjoyed using the iPad and she was one of the teachers who had been selected to become an early adopter. She was not especially fond of technology, but neither was she against it. She could see the benefits and was prepared to have an open mind. However, she felt that it was a distraction for students who were already easy to distract:

I think the iPads have opened up escapism for students who don't really want to be there or there not terribly interested.

I see their limitations. I see their limitations in terms of the times that we should be using them. They should not fill one's complete day. They should only be part of the day. Has it improved my teaching? No. (Extract from interview 1 with Nancy)

Bing was surprised that many of the students seemed to miss paper in the classroom as much as he did. He mentions though, that the next generation probably won't.

They're used to paper. Um, they're used to touching so, for them…they go with their first learning experiences (Extract from interview 1 with Bing)

Sid was angry about the lack of choice offered to the students (and the teachers). He questioned the apparent dichotomy of wanting to foster autonomous learning while at the same time not giving students any control over how they studied. Sid seemed resentful and this was mirrored by his students. It is interesting to note here how often this mirroring was noted throughout the study, where the teachers were positive and willing it seems their students also followed suit.

a lot of confusion, a lot of resentment… and a lot of questions being asked to why, why, why teacher?

they ha-, they have no autonomy cause they're not given any choices. They're, uh… everything is prescribed in the way that they do things.

(Extracts from interview 1 with Sid)

There was just so much wasted time. They should be ashamed really – whoever thought of this…

(Extract from interview 1 with Shirley)

Shirley was worried about the amount of time wasted on technical problems. She felt that this could have been avoided had she been allowed to take paper into the classroom as a backup. This was something that all the teachers agreed on.

5. 2. 4. It's not the answer to everything

Well, I don't think it's the right strategy to go a 100%, zero per cent, I think that's very, erm, primitive in an approach. Erm, I think what the college need to do is to say 'Yes, let's have iPad and let's give our teachers the professional autonomy that they should have to decide when it's appropriate to use them and when it's not appropriate to use them.'

But we need to be sensible about this and that's what it comes down to. We need to always have in our minds the purpose of why we're here which is to teach, it's for students to learn and if the iPads are not moving us all in that direction then we need to turn them off and put them away. (Extract from interview 1 with Nancy)

It would be fine if they were used when and where appropriate. Integrated and not as the missing link in education. . . and if things were set up properly in the college.

The gung-ho approach to wanting 100% iPad is contrary to sound pedagogy which advocates a diversity of tools and techniques. (Extract from Sid's survey response and email exchange)

5. 2. 5. Not the only tool in the toolkit

Many of the teachers refer to the iPad as a tool. Again, the overwhelming feeling is one that it can be useful, but only if it is used appropriately and in conjunction with other 'tools'.

It is a tool and should be included with other tools and not made the only technology

The iPad is a useful tool in the classroom and will enhance learning in certain setting

I like the idea of having the iPad as a tool but am not happy that it has been deemed more important than paper/textbooks.

I would like to see the iPad become one of many tools at the disposal of teachers and students instead of being the only authorized/sanctioned/encouraged one.

I would like the option of reinstating the use of previous tools with known utility for the sake of our students. (Extracts from email exchange between the researcher and Foundations teachers)

5. 2. 6. Following directives

As was mentioned in Chapter 1, this was a project that was undertaken by the three Federal higher education institutions. The institution that was the focus of this study chose to adopt the iPad as the only means of instruction and they were initially very strict about the approach as can be seen from the teachers' responses. This approach led to fear and anxiety, but also rebellion. This study spans a two- year period and towards the end of the period the five teachers were observed in class. This observation was as part of the annual review process and the teachers were asked to teach as they normally did and were asked not to divert from their normal weekly plan of work. By the second semester the 'no paper' edict had been relaxed. There were still no textbooks and the ones that were being developed for the iPad were still little more than PDFs with limited functionality.

Nancy explains how she did her best to follow the instructions, but she questioned how it was useful:

> *……. well, we were under a very strict instructions that absolutely no paper was allowed at that time and I did follow those instructions so I, had honed in on, erm, using e-mail to deliver PDF files to my students. When we did the Listening, I played through the Apple TV. Students annotated using generally Adobe Reader or good notes or another annotation app that they have found themselves. Erm, when they wrote, they wrote on pages and e-mailed them back to me and I corrected using iAnnotate and I e-mailed it back to them with the corrections and we managed. Erm, so an average day I would not say that it was bad. I don't feel that there was much value added to what I had previously been doing in terms of, erm, paper pencil-based classroom.* (Extract from interview 1 with Nancy)

When Nancy was observed 14 months later it was apparent that she had been using the IPad effectively and that she had managed to integrate it into her 'toolkit'. The observation was carried out by her supervisor and permission was obtained from both Nancy and the supervisor to use the extract here.

> *Both teacher and students were comfortable with the use of technology. The teacher modelled the planning process with the aid of Popplet, and students later used this app when planning their own essay. Apps used were the teacher's Weebly website, Popplet and Pages.* (Extract from Nancy's observation notes)

Frank viewed the strict directive in a positive light stating that he thought that a 'softer' approach might have led to fewer teachers 'coming on board'.

> *Erm, baptism by fire. Yes, erm, I do understand that theory as a management approach because, erm, I agree that, erm, teachers are very resistant to change and can, erm, pose huge resistance to anything that's different and just won't come on board, erm, that is a problem, I think and I think that there is a very strong possibility that a lot of teachers wouldn't have given it a bash at all erm, if that had been the approach.*

Although he saw the positives in the approach, he was not prepared to follow it blindly when he felt he was being asked to do something that went against his beliefs:

> *There was definitely a feeling from the outset well, not a feeling, erm, directive that you must use the iPad at all times. ……many of us teachers including myself did not use any of the textbooks at all because we felt that they were basically an embarrassment to our professionalism in terms of what we present and how we present it.*

When Frank's lesson was observed the supervisor commented:

> *The teacher was very comfortable using technology – iPad and projector. The students all used iPads and were obviously used to doing so. They worked in pairs and used the iPad to read the text for the IELTS practice reading while the questions were handed to them on paper.*

In his earlier interviews and email exchange Frank had said that his students did not find the iPad easy to use for reading, but in this lesson he had clearly found a solution to the problem.

In contrast to Frank, Shirley found the authoritarian approach to the introduction very negative. She felt that there had been missed opportunities to turn the implementation into a positive experience.

> *I mean, they could have said: "We believe it's the way for the future. A lot of other countries are up…bring…introducing it, um, we'll try to do in such a way that will enhance your teaching not hinder it.* (Extract from interview 1 with Shirley)

Despite her initial negative feelings towards the project Shirley appears to have persevered with the device and found ways to integrate it in her teaching.

> *Shirley is obviously very comfortable with integrating technology and exploiting the students' love of mobile devices. The technology was in no way a hindrance to the students, so is clearly a normal tool in their lessons. The high level of student engagement in the tasks meant that they were not tempted to misuse the technology.* (Extract from Shirley's observation notes)

Bing also talks negatively about the top down approach and the authoritarian tone of the instructions they received. He wishes that the softer approach adopted by the other institutions could have been applied in his context as, unlike Frank, he didn't think that it had a positive effect.

> *I actually think it was bad for our health. I mean, all that stress. I like technology and I would have tried to integrate it, but I don't like this gung-ho approach. It's not healthy.* (Extract from interview 1 with Bing)

The supervisor commented that:

> *Student materials were accessed on a Weebly site that Bing created called EMC – English Made Clear. Students were obviously familiar and comfortable with accessing materials in this way.*

It may be hard to imagine that teachers were actually in fear for their jobs if they were seen taking paper or books into the classroom but to the teachers it was a very real threat. Early on in the project a Sheikh visited the college and toured the classrooms to see the iPad in action. In one room a student had made a few notes on a slip of paper and had unfortunately left it on a desk. The 15 students and teacher in the room had exclusively been using the iPad to carry out a speaking activity, yet it was this slip of paper that was noticed and negatively commented on.

Sid took another approach again to the strict directives. He felt that there was more a sense of rebellion than anxiety or fear.

> *Erm, it caused rebellion I think more than anxiety from teachers who said 'Well, I'm not participating in this'. 'I'm not doing this.' 'This is a wrong thing for me.' 'It's the*

> *wrong thing for my students' erm, 'It's not going to work out'. So, erm, without having a voice, erm, to air, teachers made their own decisions and made choices, some earlier than others about how to manage this new thing called an iPad.* (Extract from interview 1 with Sid)

In his observed lesson Sid's use of the iPad was minimal:

> *The text and questions were emailed to students and they accessed them on their iPads. I'm not sure if the students were able to open the material in iAnnotate or another program that allowed them to highlight text, for example.* (Extract from Sid's observation notes)

5. 3. Preparation and planning

This section examines the participants' impressions of the preparation and planning that went into the project. As mentioned in Chapter 1, committees were in place and time was spent on planning the project. However, how much of this was evident to the teachers? Themes identified in the narrative accounts are as follows:

- Plan, what plan?
- Professional development
- Teaching materials
- Curriculum and assessment
- Less haste, more speed
- What about a blended approach?

5. 3. 1. Plan, what plan?

The overwhelming feeling coming from the teachers was that there was no plan and that the goalposts for what they were expected to do moved from day to day. As seen in section 5. 2. 1, there was no real announcement or devolution of the iPad implementation project. The participants learnt about it through word of mouth, with some teachers finding out about it before their line managers and some finding out through hearing rumours. There was a plan that had been developed at the high levels of the institution, but this plan seemed to have overlooked the nuts and bolts of how to practically use the iPad to deliver the curriculum that was in place in the Foundations programme at that time. The teachers were not party to decisions made at higher levels than them and were unaware of any plan.

> *I think that's what was mainly lacking was that that there was no strategic plan at the time of how to do this. And it's not that anybody set out to frustrate us, but it was that nobody had sat down and made any kind of a plan as to how best to introduce this.* (Extract from interview 1 with Nancy)

> *No. The introduction was very very poorly handled because of the pitching, erm, because there was no central coordinator who might have a plan. I think at some point during the introduction somebody decided ok let's make a plan and they did.* (Extract from interview 1 with Shirley)

The other major concern was that the project was on such a large scale. Sid and Nancy (and many of the other teachers on the Foundations program were concerned that there was no pilot and that it was to be used for everything.

> *……. but I was also a bit perturbed with the idea that it would replace everything. Um. Yes, I mean…it just seemed… a bit, uh, in a word ridiculous, unrealistic, unprofessional and went against all educational theory, I mean with…with no pilot scheme, no introduction, no research done, no basis for this at all.* (Extract from interview 1 with Sid)

> *the fact that nothing was piloted before being presented to us …that we had to be technicians as well as teachers, setting up email accounts etc.… …the pressure of being forced to attend a session then 'cascade' the info to our colleagues when most*

of the time we barely understood what we were doing. (Extract from Nancy's survey response)

The lack of information had a profound effect on the teachers and led to the feeling of absurdity and surrealism and led Bing to comment:

It could only happen here. I mean we're used to dealing with stuff here, but this really surpasses everything we've seen before. (Extract from email exchange with Bing)

5. 3. 2. Professional development

There are numerous examples in the literature of what constitutes good Professional Development. "Effective professional development is supportive because it considers the needs, concerns and interests of individual teachers…… Considerations include teachers' personal and professional needs, individual learning preferences and input regarding what and how they will learn" (Hunzicker, 2011, p. 178).

When the teachers returned from their summer vacation, they were immersed in days of very intensive PD to prepare them for the start of the iPad project. Frank remembers there being so many sessions he couldn't remember what he had been shown.

Erm, we had an awful lot of PD sessions…a lot, and, what else happened? We just had…we just had... we were introduced to an awful lot of applications... the apps and all the different software that was available.

The sessions were pretty much daily as I remember. We were presented with so many apps, I couldn't even remember what the last one was. (Extract from interview 1 with Frank)

All the participants felt that they were being ignored and that their needs were not being taken into consideration. They felt as if they were being bombarded with information that other people thought they should know.

Well, I think, perhaps ask a few questions before you start training people would help. (Extract from interview 1 with Bing)

Shirley became totally overwhelmed because she felt she couldn't understand what she was being asked to do and she also felt that the people doing the training were not the best people for the job.

> *… we couldn't understand, like, we couldn't understand anything Hamish was saying to uh… then again, I'll speak for myself. I couldn't understand anything Hamish was saying to me. So, every time he talked about creative book builder and something in a cloud and puttin' it in a cloud and then taking it out of the cloud and putting it in creative book builder and building all of our own textbooks …. by next week!*
>
> (Extract from interview 1 with Shirley)

One of the biggest criticisms of the training was that it was being delivered in large groups by people who were not experts, or if they were experts, they were not teachers and couldn't understand what the teachers actually needed to be able to do in the classroom.

> *The way training and training sessions have been managed has been frustrating and unhelpful. Far too many people in a session with far too much noise. Trainers conducting the sessions were NOT experts.*
>
> *Sitting in meetings with 40 other people being 'talked at' about the iPad…. most of the time, the person sharing the information knew it too well to share effectively, as we were so far behind in knowledge.*
>
> *Hours, days and weeks of being lectured at. Tedious large group sessions about things that were trivial or in the long run proved irrelevant.* (Extract from survey responses by Foundations teachers)

Nancy commented that the most useful PD was having the device over the summer to experiment with and then working with the other teachers. Many of the teachers felt that they had no time to work with the iPad themselves because too much time was taken up with the 'pointless' PD sessions.

> *I think, erm, amongst the teachers themselves we were able to help each other out. We were able to deliver PD in a more effective manner than had been done I think in the months before the holiday break. That raised morale, a bit anyway!* (Extract from interview 1 with Nancy)

5. 3. 3. Teaching materials

One of the biggest concerns for the teachers going into the project was what were they actually going to teach. A wealth of in-house materials had been produced over the years, but the participants didn't know in the early stages of the project how to share materials with the students.

> *I think that we were presented with... in many cases 3 or 4 different ways to do the same I think that it would have been better handled with a central repository materials that we all, er, I mean we use the same system. Therefore, it would facilitate sharing, it would facilitate an ease of transfer of any materials that we are going to share with each other.* (Extract from interview 1 with Frank)

> *……. we have a… a wealth of, uh, in-house materials. How do we get it from where it currently is to a place where we can use it? Cause, uh, despite, uh, having to introduce an app, uh, and, and iPads to a student who never had them, we actually had to get people through tests. And, uh, so we had, you know, this… you know, bounty of iPad… uh, uh, iPad apps but the real question of how do you, you know, get the material to them, how can they use it wasn't really dealt with. You know?* (Extract from interview 1 with Shirley)

The publishers had 'converted' the textbooks for use on the iPad, but it soon became clear that these were nothing more than PDFs, the quality of which were so bad that many of the teachers commented that they were embarrassed to use them.

> *We did not have apps textbooks or materials on the iPads that were of adequate quality for us to use.* (Extract from Nancy's reflection)

> *At this stage, iBooks from publishers are poor substitutes for real books as students cannot write notes or interact easily. Therefore, the students are missing out. - Reading is not as effectively practiced as it could be due to inefficiency in moving between the text and answers. It would be great if the iPad could have dual screen possibilities…*

Graded readers on the iPad were horrible, they didn't use the swipe capability and looked worse than a scanned PDF option. The Kindle ones look much nicer if there are any graded readers available for that application?

However, from an IELTS perspective it is limited. It's a resource rather than a learning forum. Reading material currently available doesn't allow focus on skills practice. (Extracts from teachers' email exchanges with the researcher)

5. 3. 4. Curriculum and assessment

The 'only' change to the Foundations course in 2012 was the introduction of the iPad. No changes were made to the curriculum, syllabus or assessment strategies. It was apparent to the teachers that there was a mismatch between what they were doing and the curriculum they were supposed to be delivering.

In time, not only our assessments, but also our syllabi need to be revised in light of the digital literacy skills we expect our students to be equipped with. (Extract from interview 1 with Bing)

He suggests that:

A portfolio system with clear rubrics can be introduced. In their portfolios, students can have the chance to display not only their language skills but also their digital literacy skills and creativity. As we are expecting them to have digital literacy and 'create' content, we should incorporate this into our assessment design and reward students for the content they create throughout the semester.

Other teachers commented:

Our exams, especially reading tests and weekly quizzes should be online.

Current classroom techniques with the iPads are insufficient preparation for the exams.

Exams are written, and therefore teaching with iPads does not reflect the actuality of assessment requirements or conditions.

The whole curriculum needs to be reevaluated. We're spending hours on the iPad, but they get not credit for the skills they are learning. (Extracts from teachers' email exchanges with the researcher)

5. 3. 5. Less haste, more speed

The teachers involved in the project found out about in May of 2012 and then started teaching exclusively with the iPad in September of the same year. It is not clear exactly when the decision was taken to involve the three Federal institutions in the project, but it was probably around the beginning of 2012. This is something that the teachers felt very strongly about. They found it hard to understand why there was no pilot for the project from which everyone could learn.

The impression I got coming in from outside the system is that it was a hastily introduced (could be wrong on that though) technology led move with the piece of kit dictating to the syllabus and what aspects of teaching and learning can or can't (easily or effectively) be done with it. Coming from the UK tertiary sector, technology led approaches are completely counter to what is considered good practice in the effective deployment of learning technologies. (Email exchange with a teacher who had joined the college after the start of the project)

I feel that the training would have been much more useful if the IT team had had enough time to figure out the basics to teach us, like iFiles and BbLearn. The training we received before summer was not very helpful as the content and the level of the training was not suitable for beginners and it created more frustration within in the team. (Extract from email exchange with Nancy)

Right… in hindsight. Um, small pilot schemes… with… targeted groups… looking initially at what the learning outcomes are… for those particular… subjects… or… areas within the… college system. Erm… yeah, small… targeted, nicely researched pilot groups and in growing from there once the results had been property-properly… analyzed and looked at… and then, seeing where these tools could be… used appropriately and of use and where not. (Extract from interview 2 with Sid)

Bing also felt the approach was wrong and felt that the teachers should have been consulted in the beginning to gauge what was needed.

> *Well, I think, perhaps ask a few questions before you start training people. I mean, you know…How do we do this?*

(Extract from interview 1 with Bing)

Shirley feels the iPad is an asset to the programme, but she regrets the time that was wasted in the beginning and the effect that it had on the students at the time.

> *… it just seemed like the decision was made on a Tuesday and Wednesday it was implemented. That's how it felt. Um, and again…like I think the iPad could be…can be. . . and is being used by a lot of people as an amazing tool but, only now, almost a year later. Um, so, I think…had it been piloted* (Extract from interview 2 with Shirley)

5. 3. 6. Blended approach

The request that is voiced frequently in the interviews, emails and reflections is to use the iPad in situations and contexts where it benefits learning and where it doesn't, to use other methods and materials. It is frequently referred to as a tool and furthermore, one that is not alone in the toolkit.

> *I do think that it would be most beneficial if teachers and students were not required to use one particular tool (the iPad) without considering whether or not it's the best tool for the task. I would like to see the iPad become one of many tools at the disposal of teachers and students instead of being the only authorized/sanctioned/encouraged one.*
>
> *Elsewhere the notion of iPads seems to be one of 'integration' into the learning arena and perhaps this should be the aim for future use.*
>
> *A blended approach with the iPads would be great and highly welcomed. Use of the iPads 15-20% of the time as reinforcement and supplement would be more beneficial to the students (both student progress and motivation).*

iPads are a fantastic learning tool and should be integrated as much as possible in the college. However, it has become clear that at this early stage of development, they are not yet a substitute for every other teaching and learning means.

I think the iPad is great but banning paper completely (or being told to use it 'sparingly') is like using paper and banning computers or iPads or computers. There is no pedagogical reason for it. We should use what works to achieve our goals. (Extracts from email exchanges between Foundations teachers and the researcher)

I would have liked to have started the journey with a blended approach, in which I could use paper for such activities and use iPads 'meaningfully', when they bring more interactivity and creativity to the class. (Extract from email exchange with Bing)

5. 3. 7. Summary of findings for Research Question 1

Information about the implementation of the iPad was revealed in an unsystematic fashion. Those chosen as early adopters were informed before their supervisors and many of the teachers heard rumours about the project before they were given any formal announcement. This led to feelings of anxiety, fear and insecurity among the participants and doubts about their ability to perform in the classroom were expressed. The lack of appropriately directed professional development was cited as one cause of the feelings of anxiety as was the excessive amount of inappropriate PD that they were required to attend. Another cause of anxiety was the lack of a trial period or pilot scheme and the fact that every teacher and every student in the Foundations programme would be involved without having any access to books, paper or writing material. Previously confident professionals expressed that they were nervous about entering the classroom. The students seemed to enjoy using the iPad but they were easily distracted by it and time was wasted. The teachers were concerned that the students were not getting the practice that they needed especially with regards to IELTS reading and writing. The teachers felt that the students were not receiving the quality of instruction that they had in previous semesters.

The findings show that there was no real plan and that what the teachers were being asked to do changed from day to day. Their levels of anxiety were increased by what they perceived to be the hurried nature of the project. Part of their sense of Professional Identity seemed to be security in their knowledge that they knew what they were doing (because

they had qualifications and experience) and that they were doing it well. The nature of the implementation meant that they were often not in possession of the necessary information and that they did not immediately have the technical skills or infrastructure they required in order to deliver the curriculum to the students. Part of their sense of Professional Identity also stemmed from being treated as a professional and being asked for their opinions on matters related to teaching. The data reveals that the participants felt that their experience and expertise was being ignored as they were not consulted about the kind of professional development that they required and the anxiety and stress would have been greatly reduced if they had been given appropriate training. The notion of 'doing the job well' was also cited as being a major part of a sense of professional identity. The existing curriculum was not changed to accommodate the iPad and the teachers found it difficult to meet some of the learning outcomes. The findings show that the teachers called for the curriculum to be adapted to embrace the new teaching method and they asked for it to be used in conjunction with other methods that could complement its strengths and supplement it in areas where it was not appropriate. The findings show that a sense of professional identity is built on being listened to and having one's expertise and experience recognized.

5. 4. Notion of professional identity and professionalism

This section examines how the participants' view themselves as professionals and significance they attach to being professional English language teachers. Themes identified in the narrative accounts are as follows:

pride
knowledge and knowing what to do
relationship with colleagues
the impact of the iPad project

5. 4. 1. Pride

The five participants all had a strong sense of professional identity that they said had been built over the years as they had gained in experience and qualifications. EFL is not always viewed as a profession and the notion still pervades that if you can speak English, you can

teach it. However, in the Middle East, teachers are generally held in high regard including at the institution where this study was conducted. In order to teach at the college, teachers must have a minimum of a master's degree and previous experience in tertiary education. The participants in this study were well qualified and had previously worked in a many different countries and educational systems. They had also all been teaching at the college for a minimum of one three- year contract and been retained for a further contract so they had reason to be confident in their abilities as teachers. Shirley and Nancy talk about being proud of being a teacher and everything that stands for:

> *When I think about professional identity I think about who I become as a person when I walk through the door at work, not only necessarily in my classroom but also in the hallways, sitting at my desk, just in terms of work itself erm but also I think with the fact that I am a teacher, I think I identify with that quite closely erm so when people ask me what I do and I say I'm a teacher it's a really proud thing for me so it's a professional identity that I carry with me. I put a lot of stock in that and just being really good at what I do but being also a good employee at the office …. you know...* (Extract from interview 2 with Shirley)

> *your skill set determines how good you are, what you can do ah in your job so yes, absolutely, very important. It makes me proud if I do my job well and if people view me as a professional.*

> *because I have, besides qualifications, a skill set that I am bringing into the classroom with me, ahm, that I have accrued through 15 years of experience, ahm, so, yeah, the skill set is what makes me a professional. I've worked hard for it, it's something to be proud of.* (Extract from interview 2 with Nancy)

5. 4. 2. Knowledge and knowing what to do

A big part of their professional identity, according to the participants, was knowing their subject and knowing what to do. They felt that they knew 'what to do' because of the length of time they had been teaching and the experience they had gained. They felt that they were more secure in themselves now than they had been at the start of their careers.

> *Well absolutely, yes, your skill set determines how good you are, what you can do ah in your job so yes, absolutely, very important.*

I think they should do, yeah. I think it shows. I mean, I remember when I started, some of the things I've done, just horrify me. I mean as you practise more, as you study more, you progress (Extracts from interview 1 with Frank)

I mean, I've been teaching for nearly 20 years all over the world. I have gained a lot of experience. That's what my professional identity is, what it means to me. It's more important than the qualifications, but you need them too. People don't take you seriously if you don't have them. Especially here. (Extract from interview 2 with Sid)

5. 4. 3. Relationship with colleagues

The interviews and other sources of data were analysed using a system of coding in NVivo, which is a data analysis software. Nodes (or themes) are identified and then arranged systematically. Key words can be highlighted as they occur in the data and their frequency can be highlighted. A theme that recurred frequently in the participants' responses was their relationship with those they worked with and the impact that this had on the professional identities. Part of professionalism, according to the participants, was knowing how to behave towards colleagues and expecting reciprocal behaviour from them.

I would expect that people would behave a certain way towards me and I expect to do the same. (Extract from interview 2 with Bing)

Another factor that had contributed to their professional identities was learning from their colleagues. All the teachers mentioned the interaction with their colleagues and learning from them as being an important factor in their professional development.

when I started out I was less qualified, obviously, completely inexperienced so over the years I have, you know, gathered a lot of experience erm, made a lot of mistakes, erm learnt from those mistakes, upgraded my qualifications, worked with a lot of other professionals and through all of his collective experience erm have progressed and become a much better professional. (Extract from interview 2 with Nancy)

5. 4. 4. The impact of the iPad project

A teacher's professional identity is central to who they are. Threats to their identity impact the way they see themselves and also contribute to how effectively they carry out their duties. Confidence in their ability to teach is central to how effective they are in the classroom. The iPad project was a huge change to their normal teaching practices and required quick and drastic modifications to their daily routines. Shirley felt that she was not the professional she was used to being:

> *Working with the iPad and the way it was introduced here made me feel just like I had no brain, so I was walking into the classroom every day feeling totally incompetent which totally shook my confidence. I think that was probably the hardest thing about it, how it made me feel as a professional.* (Extract from interview 2 with Shirley)

Nancy felt frustrated but didn't feel that she was in any way less of a teacher:

> *I never doubted myself erm, it certainly was frustrating at times and I don't think I agreed with everything in terms of how it was being implemented, the speed at which it was being implemented erm and the way that the professional development was run er but nonetheless I didn't doubt myself as a teacher.* (Extract from interview 2 with Nancy)

She did feel however, that what she was being asked to teach with did at times impinge on her sense of professionalism:

> *we were between a rock and a hard place where some of the things that we needed were not provided to our students and textbooks that were available were in a format that was extremely user unfriendly at the point where in fact, many of us teachers including myself did not use any of the textbooks at all because we felt that they were basically an embarrassment to our professionalism in terms of what we present and how we present it.* (Extract from interview 1 with Nancy)

Frank felt that his professionalism was being impacted negatively because he was being asked to do things that, in his eyes, were fundamentally wrong and against good teaching practice:

……. did it impact on my identity? Yes, it did because from the institution it was all things iPad are good therefore, I think there was an overwhelming feeling that if it can be done on an iPad it can be done better and I don't necessarily think that's true. There are some things that you do on an iPad that are just desperately difficult, like, you know, when you have students typing away on the iPad it's ridiculous.

There were many things that went against my beliefs as a teacher, as a professional, I guess. I did it because there was an institutional policy that you had to do it and I mean in honesty, when they were doing their exams on the iPad, I think it was ludicrous. I mean it was technologically difficult, it was technologically pointless, I mean watching them typing away on that thing… (Extract from interview 2 with Frank)

Sid decided that he wouldn't let the iPad impact on him by simply not using it:

I know I'm a good teacher, at least I think I am. It's hard to be a good teacher though when everything is going wrong and you just don't have time. That's why I didn't use it much – I shouldn't say that, should I ?! (Extract from interview 2 with Sid)

Bing didn't feel that it impacted on him personally, but he did feel that it impacted on his colleagues and the community in which they were all working:

It didn't impact on the professional identity, no. But certainly, on the community of practice, yes. On the professional identity, I expect, we expect that we have a certain acceptable methods and among the methods we'll be using tools and it just became another tool, but in this case, it was forced upon us so no, I don't think it erm, impacted on my professional identity I think it impacted on our community of practice. (Extract from interview 2 with Bing)

5. 4. 5. Summary of findings for Research Question 2

The change in teaching methodology and methods affected the teachers' professional identities to varying degrees and this impact also varied throughout the different stages of the project. One participant felt that her professional identity had been completely shaken as she was no longer the expert in the classroom. Another still believed in herself but felt

that her professionalism was being damaged by the quality of the materials she was being asked to use and because she was being asked to use the device without appropriate training, which left her unprepared. Another teacher stated that some of the things they were being asked to do went against what he knew (through years of experience) to be good teaching practice and that this impacted on his professional identity as he believed them to be pedagogically wrong. It also emerged that the project not only impacted the individuals involved in the project but it also affected the community of practice within the group of teachers.

As mentioned in Chapter 4, the first interviews were also analyzed using phenomenological reduction and a synthesis was constructed to capture the essence of the participants' responses. It can be used to support and provide thick description to the cross thematic analysis of the teachers' experiences.

5. 5. Coping strategies identified in narrative accounts

After the survey, first interviews and the email exchanges, it became apparent that the participants were using many coping strategies in order to deal with the difficult experience that they were living through. These strategies are listed below:

spending time alone researching and experimenting
attending PD sessions with professionals
working with colleagues in small groups
working with colleagues with more knowledge
informal lunches and coffee sessions
online groups with colleagues from other colleges
asking the students

These strategies taken together, could be formalized as 'working in a community of practice'. The second interviews sought to understand how Communities of Practice can help to evolve teachers' professional identities and accommodate educational change. The first strategy of spending time researching alone does not seem to be part of working as a community. However, it was mentioned by at least one participant as being an important precursor to sharing ideas with colleagues.

5. 6. Using communities of practice to help teachers evolve their professional identities and accommodate educational change.

Wenger and Snyder (E. Wenger & Snyder, 2000) maintained that professional learning communities "are about knowing, but also about being together living meaningfully, developing a satisfying identity, and altogether being human" (p. 134). When a teacher feels that he or she is doing meaningful work as a part of a group that is trying to make a difference in improving student learning outcomes, they feel a sense of belonging and this, in turn, will have a positive effect on their sense of wellbeing.

All five of the participants cited Communities of Practice as playing a part in their experience of the iPad project. How the Communities impacted on them and they support they found in them varied from person to person, but the theme of involvement in such communities was common to all the teachers. This section demonstrates the aspects that each participant describes and also proposes how formalized Communities of Practice could help other teachers who find themselves in a similar situation.

5. 6. 1. Nancy's narrative – I never doubted myself

Nancy defined Communities of Practice as being:

> *the professionals with whom I'm working, that would be my understanding. The people who are trying to gather the same skill sets trying to share experience, working together to improve the collective skill set abilities, the collective abilities, so working together to increase the erm professionalism. (Extracts from Nancy's Interview 2, Reflection)*

Nancy thought it could be any form of group as long as there were some shared aim or outcome:

> *…… I guess if there is an outcome that is the aim of the group. There mightn't even be an official group, now this is just my perspective, it could just be teachers sitting around having lunch, or a coffee and issues to do with the practice comes up and is discussed and people are helping each other informally so yes, I would say any group of professionals that are discussing anything of relevance would be a community of practice.*

She also felt that if there were negative feelings within the group this would not detract from it being a CoP:

> *criticism is a vital part of understanding what works, what doesn't work and is a first step in identifying that maybe you need to move in a different direction.*

Nancy felt that CoPs played an important part in helping her to deal with the implementation of the new technology, but she also stressed that time on her own experimenting and learning was also important. She was able to contribute to the CoPs because she took the time to become proficient with the iPad.

> *Examining it critically, not just taking everything on board that was being fed through PD. A lot of it, I felt was not appropriate for my students and so, yeah, critical analysis and critical culling of various apps. I hope I helped some of the others. I think I did.*
>
> *They've (CoPs) certainly played a part, they were certainly important and indeed they still are as an ongoing informal PD.*

Nancy also makes the point that she felt the students themselves played an important role:

> *…… of course it helped that I had really lovely students. They were so good and some of them were so tech savvy. I mean, when we had to download apps and stuff, they were so good, they helped the others. And then on other days other students knew how to connect to wifi and that kind of stuff. They're a different generation – it doesn't faze them. I guess that was another community, the students, we were all learning together.*

Nancy situated herself in two communities – one with her colleagues and another with her students. The combination of the two kept her secure in her belief that she is a professional and stopped her from doubting herself:

> *No, I never doubted my abilities as a teacher.*

(All above extracts from Nancy's Interview 2 or her reflection)

5. 6. 2. Shirley's narrative – sharing is caring

Nancy found the implementation of the iPad highly stressful, but she became very proficient at using the iPad in her teaching practice (as evidenced in her teaching observation) and in the end she felt that the stress and the unhappiness had, in a way, helped her to push herself as far as she had. She endured and excelled because she found ways of coping. The Community was very important to her and she saw it as being a group of people working at something until they got it right. She saw the communities that she situated herself in as being a union of people striving together to get better at using the iPad in the classroom.

> *I look at the term community as meaning a group of people living together or working together, living together in that sense and practice as being something you do till you get it right. So, I guess putting it together is so communities of practice might mean a group of people working together to get better at a certain task or job or using a certain object.*

Like Nancy, she also viewed her classroom as a community where she could find help and support.

> *One of things I ended up having to do, in order to feel comfortable, you er…, you seek someone out in the room, erm a student, who is able to help you erm, so you make it look like a learning activity that way. You take elements of your teaching, how you learned how to teach, and it all went now towards the iPad.*

However, unlike Nancy, she admitted to doubting herself and losing confidence, but again she found strategies to deal with this. She highlighted how overwhelming the experience was and stated that the iPad became the object of learning. It was all about the iPad.

> *Everything got put aside, you now, the reading strategies, that kind of thing and the learning became, how to use the iPad. I did lose my confidence, but I used my humour a lot to be able to keep going so when things didn't work, you know, you joke about it or you laugh about it and different things like that.*

Shirley also realized early on in the project that she needed to align herself with people who had knowledge, or at least more knowledge than she did. She found people on her team to be a support and also the one particular person in the IT team who had familiarized himself with the iPad.

Erm, getting to know the people on your team who are really comfortable with it. So, learning who those people were that you could go to when you were really frustrated, spending a bit of time with it, I guess and to try and be more comfortable and to try and look less stupid when you were in front of the room pressing the wrong buttons, for example. Erm getting to know the person xxxxxx (Educational Technology technician) I had him on speed dial, and I would send him instant messages from the classroom, like: "Help, I'm in room whatever!" and he was brilliant.

For Shirley, the community of practice was composed of her colleagues and her students - two different communities but each one affecting the other.

But again, the guys became my biggest asset because there were always one or two…

Yeah, the guys in the class…. who were savvy enough to say this is how you do this, you touch that, you do this, you move it this way. Whatever.

Definitely, they became part of it, for sure. I think in that way they became one element of it at one level and your team became another element of it at another level and so outside the class your team was your Community of Practice and inside was the students, was another

For Shirley, the communities of practice that she felt herself to be part of played an important affective role in helping her cope. She found them invaluable, not only because of the technological help she received but also from a personal point of view.

The communities completely reduced the anxiety about it. I think if you were on your own trying to use it and you had no-one around you who was a valuable resource then it would be even more disastrous than I think the introduction of this was.

……. . not so much the technological aspect of it but the sanity part of it. Just the fact that you were so frustrated oooohhhh, work through a problem together with someone who was just as frustrated as you were so you kind of vented, plus you got the problem solved.

5. 6. 3. Sid's narrative – the anti-community

Sid had a different perspective on coping and using communities of practice. Throughout the interviews, email exchange and his reflection he stated that he thought the project was ill advised and advocated small scale piloting and dedicated professional development before the iPads were brought into the classroom. He didn't appear to attach the same importance to the directives that were issued as many of the other teachers did. As he said, he didn't get involved very much.

> *Well, of course, I could see all the others getting really stressed out. I mean, it was stressful, but it wasn't worth having a nervous breakdown over. I didn't get involved too much. Actually, I never really get involved too much. Generally speaking, if I HAD to do something, like proctor the exams when we had to do all that lock down browser stuff then I asked the people who sat next to me.*
>
> *There was Brian, he doesn't know much about technology, but he chatted to people and he found out what to do and then he showed me. I think we had a formal session for that actually, but it was one of those ones with about 40 people in the room and it was hard to keep up and if you missed a step you weren't going to say so in front of 40 people.*

Although he didn't appear interested in the project, he realized that there were certain aspects of it that he couldn't avoid. It appeared that he formed a community with others who were less keen but still professional enough to know that they needed to achieve a certain level of competence. As he called it – an anti- community, but nonetheless it was a group of likeminded people working towards a unified goal and Sid attributes this group to getting him through the implementation.

> *I guess actually, we did have a kind of group, a kind of community. A kind of anti-community if you like – those of us who weren't really interested but knew we had to do something. I suppose, looking back on it, I wouldn't have got through it without them. I mean, you know, I didn't use it in class, like I said, because I didn't think it was right but when we had the SWAs, system wide assessments, we had to do it and people would have known if you couldn't. They would have known if you didn't know how to set up the exams. So, yeah, maybe I did. Maybe I did work with a community of practice – if that's what you want to call it.*

5. 6. 4. Frank's narrative – I did it my way

Frank's approach to the implementation was open minded, he used the iPad in situations where he felt it was appropriate and in situations where he didn't, he made a conscious decision to use more appropriate methods. He felt he belonged to a number of communities and he made use of online communities within the wider college system as much as he relied on the people with whom he worked closely in the college.

> *A CoP I think, is a group of likeminded professionals that you share with and they share with you equally and you share ideas and you also share a certain level of competence.*
>
> *It doesn't have to be a formal group and I think we are all members of a variety of CoPs, you have your, within the institution communities and more and more we have erm online communities that we belong to for various reasons. Here for example, all of the institution is a community of practice and then you've got the communities within each of the colleges. And then there's the whole wide EFL community that I think we all belong to.*

He positioned himself in quite neutral territory regarding the use of the iPad in the classroom and was prepared to adopt new practices when they seemed to be relevant to what he was teaching and when he thought his students would benefit from their use.

> *I mean I did use it to the best of the abilities that the device has and that I have to teach with it. And then I think some people embraced it more than I did and that I embraced it more than maybe others did. You know, I was somewhere in the middle and you know….*
>
> *If anybody had any good ideas, I listened to them erm and I used the apps that were applicable. I mean I was teaching mostly IELTS and some of them were good, the vocabulary ones were ok, were quite usable.*

He felt that the community of practice was useful and encouraged him to try approaches that he otherwise might not have done. He also was not influenced by the more negative feelings that some of his colleagues expressed.

Well, I think, yes, had I just been on my own with it I probably would have used it less. You know, it's like anything, if you are sitting with likeminded people you will influence each other to use different techniques and strategies that you may not use if, erm, so I think it's the same with teaching in general. I think if you're around people who teach the same thing as you're likely to be influenced….

No, I don't think so, I mean if everyone had said it was hopeless…. actually, a lot of people didn't like it, a lot of people moaned about it, I don't think that really influenced me that much. I think I just looked at it as what it is and said can I use this for this application? And if the answer was yes, then I did. If the answer was no, I didn't……. Yes, I think the iPad is great for certain applications.

5. 6. 5. Bing's narrative – learning from your peers

Bing's notion of Communities of Practice was similar to that of the other participants and like Shirley and Nancy he felt that the community that he had with his students was as important as the one he shared with his colleagues.

…. . they're groups set up by professionals erm with common interests. Sometimes they're set up by outside forces sometimes they're set up internally because they have similar needs or interests, they have a purpose to gain or share information, experiences, could be done personally one to one or could be done through discussion boards or PD sessions or whatever. So, it's a group that is a community with certain set up goals and yeah, common interests.

Well, I think, of course, we work in a community of practice all the time. The people we work with, we share that, yes.

Although he had reservations about the value of using the iPad, especially in the place of laptops, he was quick to show that he could see that there had been positive impacts as a result of the project. He felt that by drawing on the community of practice in the classroom it made his teaching more student-centred and changed the focus of the lessons from him to the students themselves:

Let's see. I guess there's two types professionally, it made us move away from the cognitive ones which are basically informing, telling, showing and move to the affective ones which is like discovering, observing, experimenting and learning by

doing and I think in that way professionally it made it more of a student centred classroom

Like Shirley, Bing found the emotional support that he gained from the community to be extremely helpful.

……. . well, first of all, accepting it, we all had to accept it and get rid of the idea of wishful thinking, wish it didn't happen, wish we didn't have to do it, erm had to prepare for the change as best we could, expect it to be hard and just get on with it basically erm, talk to people, we definitely had to talk to people and get a social support system. We had to be pro-active and ask for news and ask for help erm we had to keep up to date with colleagues and we had to try and be positive about the whole thing.

Bing felt that without the communities of practice that were present he would not have been as successful as he had been.

Ok. Learning from peers, I guess that comes back to the other one, the professional one. The affective… we had to learn from peers, learn from students, and we learnt from doing a project and we learnt a lot from doing that project. We learnt more about the limitation of the iPad than we learnt anything else.

Yep, from peers, from students, learning by doing, that kind of thing, yeah. So that was changing to the affective way of that, yeah.

Oh, a great deal. Absolutely, you speak to one person and they say this works and then you try it and maybe it works for you and maybe it doesn't so you learn a lot from your peers and you learn a lot from the students erm and then you learn whether or not it works for you because some people are very technologically bent and they just love it and I think for them they go much more deeply into it you know, so even being on the peripheral of a community of practice is beneficial, yeah.

Oh, I would have failed. I think for sure, absolutely.

Bing, like the other participants, found ways to cope with the situation in which he found himself, but he did make the point at the end that although they did cope, they shouldn't have had to.

I mean erm, we all feared what you came up against, erm, invasion of the classroom and condemnation of what you were doing. We all feared that and of course, you didn't get booted but that's what could have happened. We were all afraid of that. And that's not a real way to go into a classroom. Is it?

5. 6. 6. Summary of findings for Research Question 3

The participants had different views on what a community of practice is, but they all agreed that the communities that developed as a result of the iPad implementation played an important role in helping them navigate their way through the project. For some they were a safe haven where they could go and vent their frustration and then work through some of the technical problems they were facing with colleagues. For others, they became more formalized groups who met regularly to try to find solutions to the more long- term problems of curriculum and assessment. Some of the teachers viewed their students as a community of practice and found support in the classroom with more technically adept students able to help them and their colleagues. These teachers turned the situation around and made their lack of expertise a learning opportunity for the students. Another community that is mentioned is almost an anti -community in that it did not support the use of the iPad, but the participants gravitated towards like- minded members of the faculty to ensure that they had the information and skills they needed to get by. The findings show that the communities were not only important because of the role they played in giving the teachers the information and practical support they needed, but also because of the emotional support the members provided to each other. The findings show that the participants believe that communities of practice were fundamental in helping them succeed to the best of their abilities during the iPad implementation.

Chapter 6 – Discussion and Implications

The purpose of this chapter is to discuss the results presented in Chapter 5 and to consider the implications of these for an understanding of the relationship between teachers' professional identities and change and how Communities of Practice can be used to support teachers during times of educational innovation. The findings support those found in existing studies in the literature. Teachers' professional identity is impacted by change and Communities of Practice are invaluable in helping teachers adapt to change and strengthen their belief in their professional selves. An unexpected finding that is present in the narratives is that not being in possession of all the relevant information about a technological innovation is not always negative and can lead to positive outcomes.

The discussion will be organized around the research questions presented in section 1.3. Themes that were identified from the participant data in Chapter 5 will be discussed with respect to the existing literature presented in Chapter 3.

In the first part of this chapter I will reflect on the results regarding the participants' experiences of the introduction of the iPad to their teaching context and the part their professional identities played in assisting them to adapt to the change (the focus of research questions one and two) with respect to the literature on professional identity, theories of education, teachers' perceptions of e-learning and associated philosophies and change. This will be followed by a discussion of how teachers' perceptions of Communities of Practice and their willingness to participate in them assist them to navigate changes in their teaching contexts (the focus of my third research question) and how this reflects or extends the existing work on Communities of Practice reported in Chapter 3.

I was the researcher in this study, but I was also a participant in the implementation of the new technology. I agree with Allred (2010) and I constantly seek to address gaps in my knowledge and abilities. I position myself in the scope of social constructivism and believe that the most successful learning takes place when learners are interacting with their environment and other people (Cannella & Reiff, 1994; Richardson, 1997).

The phenomena found in the data provide three main areas of interest. (1) Teachers need to feel a sense of identity and to have belief in their professional worth. Uncertainty and sudden change can weaken their sense of identity, but if they can overcome the challenges,

their sense of worth can ultimately become stronger. (2) Learning occurs when people are given opportunities to learn by doing and from interaction with their colleagues and students. The lack of formal instructions, information and professional development can lead to learning occurring if the repercussions of any mistakes made in the process are not too costly. (3) Teachers can learn from working with their peers (and students) and from sharing information.

6. 1. Research Question 1

In what ways do teachers' accounts of change (such as the sudden introduction of a new educational technology) help explain their perceptions of their professional identities?

Chapter 5 narrates the stages of concern that the teachers experienced. Before the summer of 2012 the teachers were unconcerned about the iPad implementation because they knew little or nothing about it. However, as the rumours began to spread and the teachers began to realize that the project was going to happen, anxiety levels rose. Anxiety reached a peak around August/September 2012 as the teachers began to attend PD sessions and discovered the task that was ahead of them. They began to worry how the project would affect them and showed real concern about the length of time it was taking them and would take them to prepare for class. They worried about how it was impacting the students. Sid didn't use it except when it was strictly necessary (in the System Wide Exams) and Nancy and Frank didn't use it for extended reading practice as they felt it was totally unsuitable for that task. They felt this was the best way not to negatively impact the students. The teachers also talked about the positive impact on the students although views on this differed. Shirley commented that the students did seem slightly more focused with the iPad and all the teachers commented that the students did, at least, bring the device to class with them which had not always been the case with the traditional textbooks. The teachers did not have concerns about relating what they were doing to others. Quite the opposite, the sharing of ideas was seen to be one of the most positive aspects of the project.

The CBAM Levels of use (see section 3.5) were also used to structure the interviews and provided a framework for constructing the narrative accounts. Early in September, the teachers began to work in smaller groups and communities to plan how they were going to

use the device to deliver the curriculum. They reported concerns about the mechanics of using the device and delivering the content of the courses. It was at this level of use that some of the teachers plateaued, although others began to use the iPad routinely in their teaching and worked towards refinement and integration. There was no evidence in the interviews with the teachers, the classroom observations or the reflections that new and different ways of using the iPad were being employed. The teachers' narratives show the stages that they went through in relation to working with the technology and Puentedura's model can be used to illustrate the findings:

According to Cennamo, Ross, and Ertmer (2010), teachers must undergo a series of developmental stages of technology integration as they move from novice user to teacher facilitator of student use. I have chosen to use Puentedura's SAMR model (2006) to illustrate this. The goal of the SAMR model is to transform learning experiences so that they result in higher levels of achievement for students.

Table 8: Puentedura's SAMR model

STAGE	EXPLANATION	FINDINGS
Redefinition	Tech allows for creation of new tasks, previously inconceivable	There was no evidence from the participants' responses that they had created previously inconceivable learning experiences
Modification	Tech allows for significant task redesign	There was no evidence from the participants' responses that they had significantly redesigned tasks
Augmentation	Tech acts as a direct tool substitute with functional improvement	Participants reported that eBooks, once they had been created (in house, not the e text books supplied by the publisher), offered functional improvement. Individual apps were highlighted as adding value to the language learning experience, especially in vocabulary acquisition. The use of iPads for extensive reading was commented on but, with regard to this skill, no functional improvement was noticed, and traditional methods of delivery were believed to be far preferable.

Substitution	Tech acts as a direct tool substitute with no functional change	In 1 out of 5 cases, the use of the iPad went no further than this stage. However, it was noted by the teacher that the students did not forget to bring their iPads to class as they used to forget their textbooks, so this was seen as quite a considerable improvement.

At the beginning of the implementation of the iPad into the Foundations classes, the teachers were using the iPad at the lowest level of the continuum, as a direct substitute for books, handouts or notepads. They had the textbooks as PDF files and the students used Apps such as iAnnotate or Notes to write their answers. Some teachers never moved on from this stage although some did manage to move up to augmentation. Elements of modification and redefinition were noted, but the majority of the use of the iPad was firmly rooted in the substitution sector. This shows that there were no significant benefits gained from removing paper from the classrooms and insisting on 'iPads only'. The level of anxiety that caused was high and on reflection, a shortcoming of this study is that these levels of anxiety were not further investigated to see if there were any direct effects of the anxiety on the teachers. It might have been interesting to see if there was a higher incidence of sick days being taken, for example.

According to Allred (2010), "the most effective teachers realize that the world and students have changed since they completed their undergraduate work, and they look for opportunities to address the gaps in their knowledge and ability." Until such gaps are addressed, some teachers will continue to exhibit behaviors associated with those found at the lowest stage of the SAMR model. It is true that the teachers in the study remained at the lower end of the SAMR scale. However, I suggest that with more effective professional development it is possible that some of them may have been able to move up to modification and redefinition. It is also possible that if they had had more time to reflect on what they were doing, or if a pilot had been carried out then the upper levels of the scale might have been reached.

Of all the theories that I read while researching for this thesis, the one that captivated me the most was that of the paradox of positive value and negative experience (Griffith & Northcraft, 1996). As a participant in the implementation of the iPad I witnessed the very positive presentations by the teams from Apple and felt the frustrations from the teachers

as they struggled to get basic information that they believed would make their lives easier. This theory, in line with other constructivist theories, proposes that great learning can occur when people learn from trial and error rather than from formal instruction. The important caveat is that the negative surprises that participants encounter along the way should not be too costly. In section 5. 2. 1 'How it became reality' all five of the participants mention that there was no final announcement about the implementation of the project and Bing and Shirley remember that rumours started before there was any announcement. Sid thinks he might have found out in an email and Nancy states that she found out before her supervisor as she was to be part of one of the working groups. There was a divide between those who knew what was happening and those who had to make it happen. This led to feelings of insecurity as it seemed that some people were more favoured than others. Chapter 5 illustrates how the feelings of insecurity impacted on the teachers' professional identities.

Subconsciously, implementers may emphasize the benefits (positive descriptions) of a technology in order to insure users' initial interest or to rationalize their implementer role (e.g., Festinger, 1957). The implementers did this and the Apple representatives who came to do the training sessions did, perhaps not surprisingly, emphasize the benefits of using the iPad in the classroom. As recounted by the majority of the teachers who completed the initial survey, the overwhelming feeling was one of anxiety as they perceived they were not in possession of enough information to allow them to enter the classroom and teach successfully with the new device. This also impacted on their professional identities as they felt insecure about what they had to do whereas before, they had known what to teach and how to teach it.

By focusing only on the benefits of the technology, implementers seem destined to disappoint users - not fulfill users' informational needs - and thus, increase the likelihood of implementation failure (Sproull and Hofmeister, 1986). Users who are underprepared by a positively biased introduction to a technology will encounter negative surprises, operational difficulties and unanticipated costs. Such negative surprises doom implementation to failure (Louis, 1980). However, what is pertinent to the findings in this study is what Griffith and Northcraft (1993) have suggested. They suggest that within this problem there is a surprising opportunity - the paradox of negative experience. At the start of the project the teachers were concerned about how they could share materials, and some commented on

how they thought management should be offering guidance rather than leaving it to the teachers to find a way themselves. However, as time went on and as teachers experimented, they found a variety of ways to share materials and to cope with other challenges that confronted them. The Communities of Practice that were formed gave them the confidence to share ideas and, out of a lack of information and guidance, creativity flourished. Users should be discouraged by a technology's negative surprises only when those surprises are costly. If the discovery of negative surprises is not costly to users, negative surprises offer opportunities for trial-and-error learning that instill in users the prospect that there is more to learn. As everyone, including the students, were learning together, the mistakes that were made were not too costly to the users. Nobody was an expert. This could be seen to be an advantage as these negative events became valuable positive learning experiences for the users. The paradox of negative experience is built on the idea of exploration-based (rather than instruction-based) learning.

Exploration-based learning entails providing novices only enough understanding of something, in this case a new technology, to begin using it and to begin discovering the limitations of that understanding (Davis & Bostrom, 1993). Comparisons can be drawn between this theory and Vygotsky's constructivist Zone of Proximal Development theory. If learners are presented with challenges that are one step ahead of their current level of learning, then they are able to deal with the challenges and subsequent learning occurs. As can be seen from Chapters 5 this is what occurred for 4 of the five participants in the study. Sid decided early in the project that he was not going to use the iPad and consequently he did not develop his skills with the new technology.

Through the interviews and other interactions with the teachers it became apparent that they all had specific philosophies of teaching as well as philosophies about where and how teaching with technology fitted into their teaching. As they narrated their experiences throughout the change in the institutional culture of instruction, they revealed what they thought about their professional identities and what impact the experience had had on them as professionals.

The teachers who were the focus of the study had varying levels of competence and interest in these developing technologies. However, the average age of the students they were teaching was approximately 18, and they were of the generation who adopts each

new technology almost without thinking. The ease with which the younger generation adapts to using new technologies such as the iPad could be seen to be an advantage by the teachers but could also be seen as a threat. It could be advantageous if the teachers were happy to admit their lack of knowledge and accept help from the students. However, for those teachers who like to be the authority figure in the classroom such a switch in the dynamics could be uncomfortable. Shirley embraced the expertise of her students and turned her lack of knowledge in the use of the iPad into a learning opportunity for the students.

"Even changes that appear to be 'positive' or 'rational' involve loss and uncertainty" (Kotter and Schlesinger 2008, p. 132), so it is possible that staff feel threatened by the pressure of learning a new system. According to Carney, 'it is not the change that causes the problem, rather it is the transition from the pre-change to the post-change situation' (Carney, 2000, p. 266). It is this transition from working within the confines of a 'comfort zone' to trying something new that can be the biggest challenge of all (Sembi, 2012). Kanter's Model of Change (Kanter, 2003, 2012) can provide a lens through which to consider how the participants reacted to the experience. A summary is provided below:

Loss of control: People can be territorial in change thus they can feel the power lost when they no longer have control (Sid and Frank)
Excess uncertainty: Change can make someone feel as if they are walking off a cliff blindfolded (Nancy, Shirley and Bing)
Everything seems different: Routine work is like a habit, when habit needs to be changed it can be uncomfortable (Nancy, Shirley, Bing, Frank and Sid)
Concerns about competence: People feel skeptical and constantly worry if they are doing it correctly (Nancy, Shirley and Bing)
More work: Change creates extra tasks as compared to your daily norm (Nancy, Shirley, Bing, Frank and Sid)

The change in this study was immense and sudden and it is not surprising that it had an impact on the teachers. What is perhaps surprising is how quickly the teachers adapted and this can possibly be explained by reference to the paradox described in section 3.6.3. They did encounter negative surprises and they did appear to feel threatened in some ways (job security) yet they turned the negatives into learning opportunities. As can be seen in their

narratives, their sense of professional identity can possibly explain why they were able to do this. Over the years and throughout their careers the experience and the knowledge they had acquired had prepared them to deal with negative surprises.

6. 2. Research Question 2

How did the change in teaching methodology and methods affect the teachers' professional identities?

It is clear from the teachers' narratives that they were not consulted about how the iPad should be used in class or the extent of the use. Their understanding of how and when technology should be used in class contributed to their sense of professional identity. Their use of technology in the past had contributed to how they saw themselves as teachers and was one of the skills that they had acquired over their teaching careers. As mentioned in Chapter 4, they were all experienced users of technology and had been required to use it in the past at the college as the students were all issued with laptops and many of the courses had been delivered with the assistance of BBLearn. None of them were averse to the use of technology nor were any of them unable to use it.

In order to answer research questions two, it was necessary to unpack the teachers' perceptions about technology and its use in the classroom. Draper (1993) asserts that an examination of our opinion, or philosophy-in-practice, is more than an academic exercise. Our philosophy determines how we perceive and deal with our preferred teaching methods – which included how (or if) we choose and use e-learning technologies. However, the teachers in this study were in a slightly different position. The introduction of the new technology was imposed and their individual philosophies on the use of e-learning/m-learning were not taken into consideration. Kanuka (2008) suggests that this is not an unusual situation. She proposes that individual teachers can determine the content and scope of what they are going to teach and that they choose the e-learning technologies that will best suit their learners.

Kanuka goes on to say that these decisions are embedded in our philosophical views about both education and technology, underlying these views is our interpretation of the world and our actions within it. As such, knowing our philosophical views is important with Kanuka

noting that many educators' philosophies are "often unrecognized" by themselves and their management (2008, p. 92). If we pursue this line of thought, we can see that although the educators might be choosing what they are going to teach they are not basing their choices on philosophies or beliefs about teaching. The teachers' philosophies of e-learning were not taken into consideration by the management who decided to launch this project. The teachers' beliefs or teaching styles were not considered and everyone was required to use the same device for 100% of their teaching hours.

Knowing our personal philosophy helps us to understand why we act and think the way we do about using e-learning technologies, as well as why others think and act the way they do. Moreover, knowing our own and others' philosophies provides us with the ability to understand the consequences of our technological choices, as well as the effect that our philosophical orientation has on our learners. Further, it can facilitate effective communication with others when we can explain not only what we are doing, as well as why (Draper, 1993; Darkenwald & Merriam, 1982; Zinn, 1990).

The interviews, emails and observations helped to reveal the individual teachers' philosophies with regards to using technology in the classroom. I used Dahlberg's model (2004) to try to categorize the participants. Nancy, Bing and Frank showed affinity to 'Uses Determinism'. This orientation emphasizes technological uses and focuses on the ways in which we use technologies within learning and teaching transactions. In this approach, technologies are perceived as neutral tools and are simply devices that extend our capacities. As users, we determine the effects of technological artefacts.
"Technologies are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition." This orientation asserts that technology is neutral and is able to serve the aims and objectives of the educators employing them." (Clark, 1994, p. 445). (Ebersole, 2000; Fiske, 1987; G. Garramone et al., 1987; Harrison & Stephen, 1999; Katz & Rice, 2002; Sudweeks et al., 1998; Welchman, 1997).Nancy, Bing and Frank expressed the view that the iPad was not a great panacea that would solve all the problems in the classroom and that a variety of means and methods would be a more reasonable solution.

Shirley demonstrates affiliation with the orientation of 'Social Determinism' as she was concerned about the fact that the teachers and students were not given autonomy to

choose the form that the teaching and learning took. In this orientation educators are concerned with the integration of technological artefacts within social systems and cultural contexts. This perspective emphasizes the way our uses of technologies are affected by the social structures and the social construction of technological artefacts. Educators holding this view are concerned about the ways that social and technological uses shape the form and content of the learning experiences. Garnham (1990), Golding and Murdock (1997), Mosco (1996), and Schiller (1999).

'Technological Determinism' aims to provide a link between technology and a society's nature. Sid questioned the degree to which the thoughts and actions of the people involved in the project should be influenced by technological factors. Dubrovsky, Kiesler and Sethna (1991), Argyle (1996), Spears and Lea (1994), Lyotard (1984), and Castells (1999).

The findings in Chapter 5 show that the teachers struggled to work out what to do with the iPad. The fundamentals of connecting to Wifi and Apple TV were a daily inconvenience. They reported that it was not a useful medium for teaching extended reading such as that encountered on the IELTS test. The emphasis, certainly in the early stages was on what to do with the iPad rather than why they were doing it. As can be seen from the quotation below, the possibility that this might happen had been recognized:

> *"Planning is imperative for any technology initiative – iPad or otherwise. We need to ensure that we clearly understand and communicate how the technology integrates with our overall pedagogical objectives. Too many institutions purchase technology and then search for ways to utilize it …… or leave it collecting dust on the shelf. Planning needs to consider both infrastructure needs and the educational applications of the new technology. Without proper preparation, technology initiatives are liable to become expensive failures"* (Preparing our Institute for an iPad implementation, 2012, p. 2).

According to the literature, a common mistake in the attempt to integrate technology into teaching contexts is that the emphasis is put onto what to do with the technology rather than on why we are doing it. Zinn (1990), proposes that a philosophy of teaching and technology can be defined as a conceptual framework that embodies certain values from which we view the many aspects of education, including the field of e-learning. Draper (1993) and Elias and Merriam (1980) conclude that "a philosophy of e-learning technology is

necessary because too often educators are concerned with what to do with e-learning technologies without examining sufficiently why they should do it" (Elias & Merriam, 2004, p. 94).

The findings show that planning and professional development was an area that was lacking in this implementation. The initial survey shows the teachers dissatisfaction with the way the professional development was handled and an intensive three- day training session was referred to as "iPad hell" by Shirley. The narratives show that the sessions were delivered to too many people at one time and that the people offering the sessions were not in possession of the knowledge to deliver them, or if they were, they delivered them as if they were talking to other IT professionals, rather than teachers. The representatives from Apple were very enthusiastic but were seen by the teachers to ignore their concerns regarding delivery of the English course. However, this is quite a common phenomenon in the introduction of new technology (as is illustrated in section 3.6.3, The Paradox of Positive Value).

Teachers who are not given the opportunity to grow professionally in the use of technology will be disadvantaged in the future as students are becoming more and more used to having access to education remotely and they are coming to view teachers as facilitators who can direct them to the best sources of (online) education. According to Bonk, more students are being provided opportunities to select their own online teachers based on their interests and/or geographic location and the result is that the notion of a teacher will shift from a deliverer of content to that of a concierge who finds and suggests education resources (Bonk, 2010; Bonk & Bonk, 2016).

Research by Gaytan and McEwen (2007) examined 20 studies related to how professional development was commonly evaluated and devised a model for achieving effective professional development in technology. Their model described five levels of planning that are needed for successful teacher training and these are summarized in the table below with reference to the participants comments in the initial teacher survey, semi structured interviews and reflections.

Table 9: Levels of planning

Level of Planning	Interviews and Reflections
Professional development must be logistically planned	There was an overwhelming feeling that there was a lack of planning and that the professional development that was offered, especially before the roll out of the iPads, was inappropriate and confusing. As can be seen in section 2. 5., management had considered the issues of planning professional development. However, the teachers were not consulted about what would be relevant and appropriate. The groups were too large, and the sessions were too long and too frequent in too short a time frame.
What instructors need to know and be able to do must be identified before student learning outcomes can be established	The student learning outcomes were already set. The curriculum and assessment strategies were not changed, only the means of delivery. This caused a definite mismatch.
Internal support is needed for effective integration	The participants felt that they did have support but those giving the support themselves were not really in a strong position to do so as they were also lacking in information, knowledge and skills.
Changes to instructional practices must be identified and made measurable	The changes to instructional practice happened from day to day in knee jerk reactions.
Student learning outcomes related to technology must be identified	There was a strong feeling from some teachers that the student learning outcomes needed to be changed in order to give the students credit for the new technological skills they were learning.

Gaytan and McEwen (2007)

The professional development that was offered at the start of the iPad implementation in the college that is the focus of this study involved IT professionals and representatives from the Apple corporation lecturing to a group of around 40 individuals. As was noted in the data, this training was considered unsuccessful and, in some cases, counterproductive. The teachers reverted to working as a Community of Practice with a group of colleagues in order to find a way through the implementation. This approach is supported by Darling-Hammond

and McClauglin (1995) who suggest that a more effective model is to provide teachers with opportunities to show or share what they have learned with colleagues or peers, as well as apply new concepts and strategies within their own disciplines and unique contexts.

Chapter 3 illustrates that theories on what is the best and most effective way to introduce technology into classrooms differ, but one thread runs through most of them – the need for adequate support and training in the use of technology. If the teachers do not get adequate support, they may resist the new technology and revert to their traditional tried and tested methods for delivery. In this way, they miss out on the opportunity to learn new skills and enhance their teaching.

The change in the teaching methodology may have initially negatively impacted on the professional identity of the teachers in the study but the majority suggest in their narratives that their identities were strengthened as the project continued. Shirley, Frank, Bing and Nancy all state that they feel they learnt a great deal and very quickly. They learnt from the mistakes they made, from each other and from the students. The communities of practice that evolved were seen to be an invaluable source of information and support to the teachers. The community of practice within the classroom was seen to be as important as those that developed amongst the teachers and , in some cases, the students were seen to be a source of support for the teachers. Frank said that although being forced to use the iPad 100% in the class was stressful, he didn't think that they would have come as far as they had if they had been allowed to choose whether to use it or not. He thought some people would not have tried to use it at all.

6. 3. Research Question 3

To what extent did involvement in a Community of Practice help teachers in the study respond to change?

In Chapter 5 the teachers wholeheartedly agree that the Communities of Practice that they built during the project were invaluable in helping them respond to the quite drastic change. Social identity theory explains that part of a person's concept of self comes from the groups to which that person belongs. An individual does not just have a personal selfhood, but multiple selves and identities associated with their affiliated groups. A person might act

differently in varying social contexts according to the groups they belong to, which might include a sports team they follow, their family, their country of nationality, and the neighborhood they live in, among many other possibilities. When a person perceives themselves as part of a group, that is an ingroup for them. Other comparable groups that person does not identify with are called outgroups. We have an "us" vs. "them" mentality when it comes to our ingroups and their respective outgroups. As social identity theory can be applied to an individual's personal identity, so can it be applied to their professional identity (Tajfel & Turner, 1979).

A sociocultural theory of learning views learning as "involving social interaction and collaboration. It acknowledges mental processing as situated within the cultural, historical, social, and institutional contexts of a broader community" (Ramanair, 2016, p. 124). Ramanair used the lens of activity theory to examine the integration of technology in tertiary level English language programs. In this current research project, as in his, a sociocultural perspective of learning is relevant as it provides a basis for exploring teachers as 'on the job' learners as they integrate technology in their instructional practices. It is possible to draw parallels between Ramanair's research and this study as the teachers were very much 'on the job' learners. They received their iPads in July, went on annual vacation in August and started teaching exclusively with the iPad in September. The context and culture in which they were situated, their goal and their teaching community all had an impact on their shared experience and the effects of that experience. As mentioned earlier, participation in the practices of a particular community enhances the process of learning and development (Barab & Duffy, 2000; Lave & Wenger, 1991; Sfard & Prusak, 2005). All the participants felt that the Community of Practice supported them throughout the implementation:

> *"…they certainly played a part, they were certainly important…" Nancy (6. 1)*
>
> *"…they (the students) became part of it for sure……the communities completely reduced the anxiety about it..." Shirley (6. 2)*
>
> *"…we did have a kind of group, a kind of community. A kind of anti-community if you like – those of us who weren't really interested, but we knew we had to do something." Sid (6. 3)*

"…had I been on my own with it I probably would have used it less. You know, if you're around like-minded people you will influence each other to use different techniques and strategies. It helps……." Frank (6. 4)

"Absolutely, you speak to one person and they say this works and then you try it and maybe it works for you…. you learn a lot from your peers, I learnt a lot from my peers, from my community. Bing (6. 5)

A constructivist and sociocultural perspective of learning can be drawn on to narrate the social, cultural and community aspect of the learning experience of the group of teachers in this study.

I strongly believe that Communities of Practice are a positive force in teacher development.

The teachers reverted to working as a Community of Practice with a group of colleagues in order to find a way through the implementation. This approach is supported by Darling-Hammond and McClauglin (1995) who suggest that a more effective model is to provide teachers with opportunities to show or share what they have learned with colleagues or peers, as well as apply new concepts and strategies within their own disciplines and unique contexts.

"In plain terms—people learn from and with others in particular ways. They learn through practice (learning as doing), through meaning (learning as intentional), through community (learning as participating and being with others), and through identity (learning as changing who we are)" (Sachs, 2001, p. 227). The teachers reported that through interacting and learning from others in their communities they were able to learn new techniques and discovered ways to use the iPad in the classroom.

Developing communities is an increasingly popular trend among professional development initiatives because it encourages collaborative reflection- on-action, develops knowledge-of-practice, and builds on the sociohistorical, contextual experiences of participants (Butler et al., 2004). The introduction of the iPad changed the way of teaching and, to a certain extent, how the teachers viewed themselves and their teaching practices. They had to adapt very quickly, and the communities of practice helped them to do so.

A Community of Practice evolves through the preoccupations of its members. Their shared knowledge and interests are what bring them together and are also the basis of their

problem solving and learning experiences which they need to deal effectively with work-related changes and challenges they may face. In approaching learning as a social practice, the Community of Practice theory opens doors to a connection between organizational knowledge and collective action (Wenger 1998). The communities evolved through the teachers' preoccupation with having to survive in a new and threatening environment, one from which their traditional tools had been removed. Some of the teachers (and students) knew more about technology than others and they were a support to those who were struggling. However, it wasn't just the technological support that was important, the psychological and emotional support which the communities provided were equally important and cited by the teachers as being fundamental to their navigation of the project. Research has shown that teachers who engage in collaboration have improved perceptions of their own identities as well as satisfaction from their work (Day et al., 2006).

Fullan (1995) stated that a collaborative culture is a powerful learning and change agent in schools. When teachers participate in dialogue, they become aware of the many approaches and ways of doing things, are engaged with a range of resources, and share ideas so that they can locate themselves in current and potential practice (Coldron & Smith, 1999). "Starting with teachers' knowledge dignifies the 'wisdom of practice' and helps open teachers' classrooms to inquiry, breaks the isolation that keeps teachers from becoming colleagues and forms the basis for a professional learning community" (Lieberman and Mace, 2009, p. 469). The dialogue that the teachers participated in gave them technological, psychological and emotional support that they needed.

Wenger and Snyder (1998) maintain that professional learning communities "are about knowing, but also about being together living meaningfully, developing a satisfying identity, and altogether being human" (p. 134). When a teacher feels that he or she is doing meaningful work as a part of a group that is trying to make a difference in improving student learning outcomes, they feel a sense of belonging and this, in turn, will have a positive effect on their sense of wellbeing. The communities provided a safe environment in which the teachers could discuss and learn. They had to learn quickly as they had no choice.

Hannikainen and van Oers (1999) found the concept of togetherness in the context of a professional learning community. They maintained that group members tended to maintain

or even strengthen the sense of group togetherness in an attempt to counter any conflicts that may arise during the course of the collaboration activities. In the case of the context in which the teachers were working there was an external threat, a drastic change to the mode of delivery of the English course.

The formation of communities demonstrates a need and a desire on the part of the individual teachers involved in a professional learning community to protect the sense of belonging and positive well-being that is a product of collaborating with colleagues for a common purpose. In fact, following their work on teacher identity, Flores and Day (2006) found that "teachers who worked in collaborative cultures were more likely to develop and to demonstrate positive attitudes towards teaching" (p. 230). Through their collaborative work, some of the teachers in the study found ways to use the iPad successfully in the classroom and in their interview responses and reflections they were able to reflect on what worked well using the iPad. The teachers reported that they had maintained their professional identities and that they did not feel that they were worse teachers as a result of the project. Once teachers experience a feeling of belonging to something that matters and is making a difference for students, they have a tendency to want to continue working in that environment. This was not exactly the case in the context in which I was researching. The membership of the COP was seen as more of a survival tactic but nonetheless the COP was a powerful agent in the maintenance of the teachers' professional identity and was a factor in helping them respond successfully to change.

The phenomena found in the data provide three main conclusions:

1. Learning occurs when people are given opportunities to learn by doing and from interaction with their colleagues and students. The lack of formal instructions, information and professional development can lead to learning occurring if the repercussions of any mistakes made in the process are not too costly.
2. Teachers can learn from working with their peers (and students) and from sharing information.
3. Teachers need to feel a sense of identity and to have belief in their professional worth. Uncertainty and sudden change can weaken their sense of identity, but if they can overcome the challenges, their sense of worth can ultimately become stronger.

Chapter 7 – Conclusion and recommendations

The implied recommendations can be drawn from the themes that were gathered in the stages of data analysis. Firstly, the introduction of new technology should have its basis in a theory of education. The technology should be used, where appropriate, to fulfill the learning objectives rather than the use of the device becoming the aim. "Theory without practice leads to an empty idealism, and action without philosophical reflection leads to mindless activism" (Elias & Merriam, 2004) and Zinn (1990) states that a common mistake in the attempt to integrate technology into teaching contexts is that the emphasis is put onto what to do with the technology rather than on why we are doing it. Technology, in this case the iPad, should not be used for its own sake but as one tool among many that can be exploited to advance learning. Blended learning in conjunction with traditional teaching methods is suggested as being a more measured approach to the introduction of new technology.

There are also implied recommendations in relation to the way change is managed. Sembi (2012) suggests that a successful implementation of a new technology should involve informing all colleagues about the innovation early on and that no-one should be left out. Where possible, case studies of early adopters of similar technologies should be disseminated. It is accepted that this is difficult in this case as the iPad was still a relatively new phenomenon in higher education at the time of this study. It is also suggested that a pilot project would be beneficial rather than a blanket implementation involving all students and teachers.

The recommendations that arise from the initial survey are related to professional development and how teachers should be introduced to and trained in new technology. It was clear that sessions in large groups administered by IT specialists were not considered desirable. In preference, the teachers wanted hands-on sessions given by teachers or small working groups where they could exchange ideas and best practice.

The research question asked what perceptions teachers hold concerning the introduction of a new technology and the findings show many, varied perceptions regarding the process. The findings have implications for the success of the project as Parr (1999) suggests that teachers' perceptions of learning technologies are likely to be vital factors in the successful

integration of learning technologies. For successful integration leading to enhanced learning outcomes teachers need to perceive learning technologies as part of a student-centred/ conceptual change teaching approach. The learning technologies need to be perceived as tools in the learning context, but not the only tool. It is not enough to teach teachers how to use the technology. Carr-Chellman and Dyer (2000) state that research in this area shows that experienced teachers need professional development in modern research knowledge about the nature of learning and how learning technologies can be used to encourage enhanced learning outcomes in students.

The study is limited in that out of the initial 38 teachers who were surveyed, only five were interviewed and only three of the interviews were used in the phenomenological analysis. Although the findings from the interviews supported the findings from the survey, I believe the results would have been more powerful if the themes occurred in the responses from more teachers. Time constraints restricted me from carrying out and analyzing more interviews, but if I were to pursue this line of research I would make this a priority.

7. 1. Reflection on the research process and the role of the researcher

I believe that the methodology and methods used in this study were appropriate and relevant and that they served to answer the research question. The epistemology inherent in the theoretical perspective is that meaning is constructed and that an individual's perception of an event or phenomenon is fundamental to explaining it. The theoretical perspective of phenomenology serves to classify and describe phenomena rather than look for their causes or theoretical explanations for them. Further research involving teachers' perceptions of learning technologies and their implementation is warranted in a number of areas. The impact of relevant professional development programs on experienced teachers' perceptions of learning technologies and their implementation could be assessed. Other areas of interest might be the experience of effective technology integration from the perspective of the students and experiences with new technologies in the classroom from the perspective of both teachers and students.

The purpose of this thesis has been to report on a study into teachers' perceptions of their professional identities and to try to understand how communities of practice can help to strengthen their identities and deal with educational change. The narrative inquiry that I

used in conjunction with elements of phenomenology has allowed the participants' perspectives to be foregrounded and their accounts of the experience and its significance to reveal the importance of Communities of Practice in supporting teachers in times of change.

I conducted the interviews, collected the emails and transcribed and analyzed the data. This was a long and time -consuming process but it was invaluable as I became totally immersed in the narratives and this immersion enabled me to do justice to the analysis. I believe that I was able to put the participants at their ease and, as a result, the answers they gave in the interviews were full and frank. I made sure that all possible ethical procedures were followed and I believe that this also helped to instill confidence in the participants and consequently they were not worried about saying what they really felt.

7. 2. Recommendations offered in the light of the conclusions

The importance of fostering teachers' professional identities is highlighted in the literature and supported in this study. Communities of Practice are seen to be invaluable in supporting teachers through change and as a recommendation for institutions planning educational change, I would suggest that membership of such communities should be encouraged. In this study, the teachers formed communities themselves, but implementers could ensure that such communities are formed and in place before innovations are introduced.

The lack of information offered to the participants in this study did not always lead to negative consequences, and in fact, sometimes led to them learning very quickly and finding creative solutions to problems associated with teaching with the iPad. However, it did cause extreme levels of anxiety. Future implementations should consider ways to make sure that teachers are in possession of enough information so that they feel secure while at the same time allowing them the freedom to collaborate and experiment with the technology in a non- threatening environment.

Teachers should be encouraged to work in communities and given the opportunity and time to form such groups and they should be consulted about the kind of professional development that is useful for them. The kind of professional development that was considered most useful was small group sessions delivered by teachers to small hands-on working groups.

The iPad, and similar devices, should be treated as one of many tools and should be used in conjunction with other tools such as textbooks, laptops and paper and pens to deliver the curriculum in a blended approach and it should only be used for the kind of activities for which it is appropriate and where a more appropriate method is available, teachers should be able to choose to use that method.

In future implementations, the curriculum should be considered first, and educational technology used as and where it is appropriate rather than choosing an educational technology and making the curriculum fit in with it. The curriculum and assessment need to take into consideration the skills that the students are learning with regards to technology and they should be given credit for the new skills.

7. 3. Contribution to knowledge

This study contributes to the body of knowledge on the use of the iPad in higher education in the Middle East. It also adds to the literature which discusses the importance of teachers' professional identity and the impact that Communities of Practice can have on supporting these identities. However, the most important contribution comes from the finding that from negative experiences, positive outcomes can develop. The teachers in this study were faced with a difficult task and were given limited means and information with which to embark on it. However, despite this some positive outcomes were reported. The teachers felt that if they had not been under such pressure to use the iPad they would possibly not have learnt and developed as much as they felt they have and they grew as a community. I believe that the findings in this study support the existing literature (e.g. on Communities of Practice and Professional Identity) and they also contribute towards filling a gap in the literature with regards to the application of the Paradox of positive Value and negative experience (Griffiths & Northcraft, 1996). This study highlights the positive aspects of a constructivist approach to learning in which learners discover what they need to know through collaboration and experiment. Despite not having the information and the skills at the start of the iPad project and not receiving appropriate professional development, the teachers were able to navigate their way through the introduction of the new technology and achieve positive outcomes. Although I cite the absence of data about the students as a limitation in the next section, I

feel that my focus on the teachers can also be seen as a contribution to knowledge. Studies have been carried out on the effect of the implementation of the iPad and other educational technologies on students, but few have been carried out focusing on the effect on teachers.

7. 4. Limitations of the study

One limitation of this study is that it deals with the responses of only five participants. Although there were 35 teachers teaching in the preparatory programme at the time and many of them answered the initial survey, it was not feasible because of time constraints to include them all in the later stages of the project.

This study deals with the experiences of teachers working in a men's college in the Middle East. The college is part of a much larger institution with a network of 17 colleges across the country. The study does not deal with the experiences of teachers at a women's college or indeed at any of the other colleges in the system. Thus, the study is limited in its scope. However, as its aim is to tell the narrative of a particular group of teachers it is successful, and it is possible that other groups of teachers in the Middle East will be able to relate to the narrative and find similarities to their own shared experiences. The participants give their view of the shortcomings of the project as well as the successes and positives and so other higher education institutions considering introducing iPads could learn lessons from the experiences and insights of the teachers.

I carried out all the interviews and data analysis and it is possible that there might be some bias as a result of this. It would have been interesting to have another researcher carry out some of the process, but unfortunately it was unfeasible to have someone else participate due to their time constraints and work and study commitments.

The study focuses on the teachers although they were not the only people involved. Some of the teachers talk about the students in their interviews and how they dealt with the implementation of the new technology and it is clear that they played a significant part in how the project affected the teachers. In hindsight, it would have been very interesting to include some students in the research in order to understand how they were impacted and how this contributed to the impact on the teachers.

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Appendices

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Appendix 1: Horizontalization

Horizontalization

Participant 1

Erm,it must have been last April. April 2012.Erm, it was told to me that we would be given iPads and that was the first I heard of it.

No, she was eh, setting up a group, an initial group to learn about the iPads and to cascade that information out to other faculty members so April was probably the first time erm and it was possibly another month after that before the rest , most of the faculty became aware of this new technology (laughs)

It wasn't , it was just told that we were to be using iPads and really at that point nothing further was said about it. That was it so it was very erm unrevealing I guess at that point as to where this was going.

I thought, er, great, I'm going to have a new device. I'm not hugely, I'm not a technophile so an iPad is not something I'd had or ever contemplated having. I don't even have a Smartphone. It's not something that excites me enormously but at the same time I thought, heh, it's something new, why not? Why not give it a go?

Yes, I do remember because I was actually part of that. Not by choice but I guess when the information came to me that I was being asked to lead or form and to lead a team that would learn and consequently cascade this information erm, I was delegated the task of finding other faculty members to participate with me. So, those other faculty members found out from me and when we were on board with the project for maybe two or three weeks we were asked to cascade out what we had learnt to the others and were responsible for passing that information out ourselves. So, it never actually at any point came from a higher authority to the teachers en masse.

Not well, erm I think it was a poor strategy. I think these things always need to come from the top.erm, people are suspicious of their peers erm, passing out this information, they're not sure if it's a rumour. They don't know if it's somebody who's too big for their boots. Erm, so, generally it doesn't go down well and I think in this case that was true of that.

No. The supervisor at that time in fact knew nothing so the dean had kind of gone directly to me and bypassed the supervisor, erm, on that one, and I think the supervisors themselves were finding out through the grapevine rather than having any official information handed to them. That was my understanding of how it was at the time.

Erm, how I felt at that time was..it was very overwhelming. We had been, erm, how shall I say..our introduction to the iPads was very techno heavy. We launched straight in without creating resources on the iPad when we were really struggling to turn it on and turn it off. Many of us didn't even know what an iPad was. Erm, it was very overwhelming, erm, so, that created, erm, I guess an element of anxiety, erm, with using the iPad. Erm, looking back, it was absolutely an inappropriate way to go about it, erm, we were almost expected to do what publishers do. Well, publishers spend huge amount of money and resources developing and time and it appeared at that time that we were expected to cover their job as well as our own with the device we didn't even know.

Appendix 2: Units of Meaning

Participant 1

and it was possibly another month after that before the rest , most of the faculty became aware of this new technology (laughs)

It wasn't , it was just told that we were to be using iPads and really at that point nothing further was said about it

That was it so it was very erm unrevealing I guess at that point as to where this was going.

I thought, er, great, I'm going to have a new device.

I'm not hugely, I'm not a technophile so an iPad is not something I'd had or ever contemplated having.

I don't even have a Smartphone. It's not something that excites me enormously

but at the same time I thought, heh, it's something new, why not? Why not give it a go?

Not by choice but I guess when the information came to me that I was being asked to lead or form and to lead a team that would learn and consequently cascade this information erm,

So, those other faculty members found out from me and when we were on board with the project for maybe two or three weeks we were asked to cascade out what we had learnt to the others and were responsible for passing that information out ourselves.

So, it never actually at any point came from a higher authority to the teachers en masse.

Not well, erm I think it was a poor strategy.

I think these things always need to come from the top.erm,

people are suspicious of their peers erm, passing out this information, they're not sure if it's a rumour.

They don't know if it's somebody who's too big for their boots.

Erm, so, generally it doesn't go down well and I think in this case that was true of that.

Erm, how I felt at that time was..it was very overwhelming.

Erm, it was very overwhelming, erm, so, that created, erm, I guess an element of anxiety, erm, with using the iPad.

Erm, looking back, it was absolutely an inappropriate way to go about it, erm,

Well it went up and down. We were certainly, I would say excited.

Appendix 3: Narrative for Synthesis

Narrative (for synthesis)

Participant 1

(I heard about it first)and it was possibly another month after that before the rest the faculty became aware of this new technology (said laughing) (There was very little information)That was it so it was very erm unrevealing I guess at that point as to where this was going.(When I knew I was getting an iPad)I thought great, I'm going to have a new device. I'm not a technophile so an iPad is not something I'd had or ever contemplated having.I don't even have a Smartphone. It's not something that excites me enormously but at the same time I thought, heh, it's something new, why not? Why not give it a go? (I didn't volunteer)Not by choice but I guess when the information came to me that I was being asked to lead or form and to lead a team that would learn and consequently cascade this information (we didn't know what we were doing)The other faculty members found out from me and when we were on board with the project for maybe two or three weeks we were asked to cascade out what we had learnt to the others and were responsible for passing that information out ourselves.(That's how the project was disseminated)So, it never actually at any point came from a higher authority to the teachers en masse.
(the implementation wasn't handled well) I think it was a poor strategy.I think these things always need to come from the top. (because) people are suspicious of their peers passing out this information, they're not sure if it's a rumour (or if) it's somebody who's too big for their boots. (The pressure) was very overwhelming.(so that created) an element of anxiety with using the iPad (and) looking back, it was absolutely an inappropriate way to go about it.(Things kept changing) so that of course brought the morale and the feeling about the iPads right down (and people) were feeling despondent, feeling frustrated(and) wondering who was really coordinating this. I think that's what was mainly lacking was that that there was no strategic plan at the time of how to do this. And it's not that anybody set out to frustrate us, but it was that nobody had sat down and made any kind of a plan as to how best to introduce this to work in a scaffolded way. The initial PD had been atrocious, had been unstructured, had been pitched at a level that was for a computer programmer, rather than for teachers .The introduction was very very poorly handled because of the pitching, because there was no central coordinator who might have a plan. (The training) was delivered by people who were frustrated to people who were frustrated (and) there's really very little positive I can think of from that introductory period. We were under very strict instructions that absolutely no paper was allowed at that time and I followed those instructions. (Even so) an average day wasn't bad (but) I don't feel that there was much value added to what I had previously been doing in terms of paper pencil based classroom. One (negative)aspect was certainly the frustration with technology. I was doing what I was told to do (and) I was following the instructions and I was fine about that and I did not feel that the disruptions and the frustrations were in any way connected to me as a teacher (so) I disowned that and so that left me feeling quite neutral and I felt good that I was keeping afloat. There were certainly people who were absolutely committed to never using the iPad even before they really had done it. There were people who absolutely loved it and had 50,000 apps that they were just hanging out to bring in to the classroom and there were people like me who were hoping to stay afloat and do this in the best way possible (by)not getting themselves burdened down with excessive app use. I think some of the students were pleased to have the iPad, some of them were not. (There was) a feeling amongst the staff that we have been given directives that were contrary to good teaching practices and so we were caught between a rock and a hard place. (And) there was a feeling that management were not listening to the teachers who try to explain this (and) our voice was not wanted. I think what the college needs to do is to say 'Yes, let's have iPad and let's give our

Appendix 4: Interview 1 Questions

Research title: The impact on teachers of the introduction of the iPad

Your responses will be recorded and transcribed and will be used as the basis for part of the research for my Doctoral thesis. All answers you give will be treated in confidence and your name will not appear.

Please read the questions below before we meet for the interview.

1. Please tell me where you work and what you do.
2. When did you first hear about using iPads in the classroom?
3. Do you remember how you felt?
4. What happened in the weeks/months before you started using the iPad in the classroom?
5. Do you feel the introduction was handled well? Why/why not?
6. In hindsight, what could have been done better in the introduction of the iPad?
7. Can you describe to me an average day in class in September or October last year (2012.) Do you remember how you felt going into class in those days?
8. Now we're six months on, can you describe an average day in class now? Or at the end of last semester? How do you feel? What's changed (or not?!)
9. How do you feel about the iPad now? Has it improved your teaching? Have you seen a difference in your students?
10. If the college were to say 'no iPads in the classroom', how would you feel?

I agree to participate in this research. I understand that I can have access to the completed research and that I can withdraw from the project at any time.

Signature of participant .....Date.....

Appendix 5: Interview 2 Questions

1. What do you understand by the term Professional identity?

2. What do you understand by the term Community of Practice?

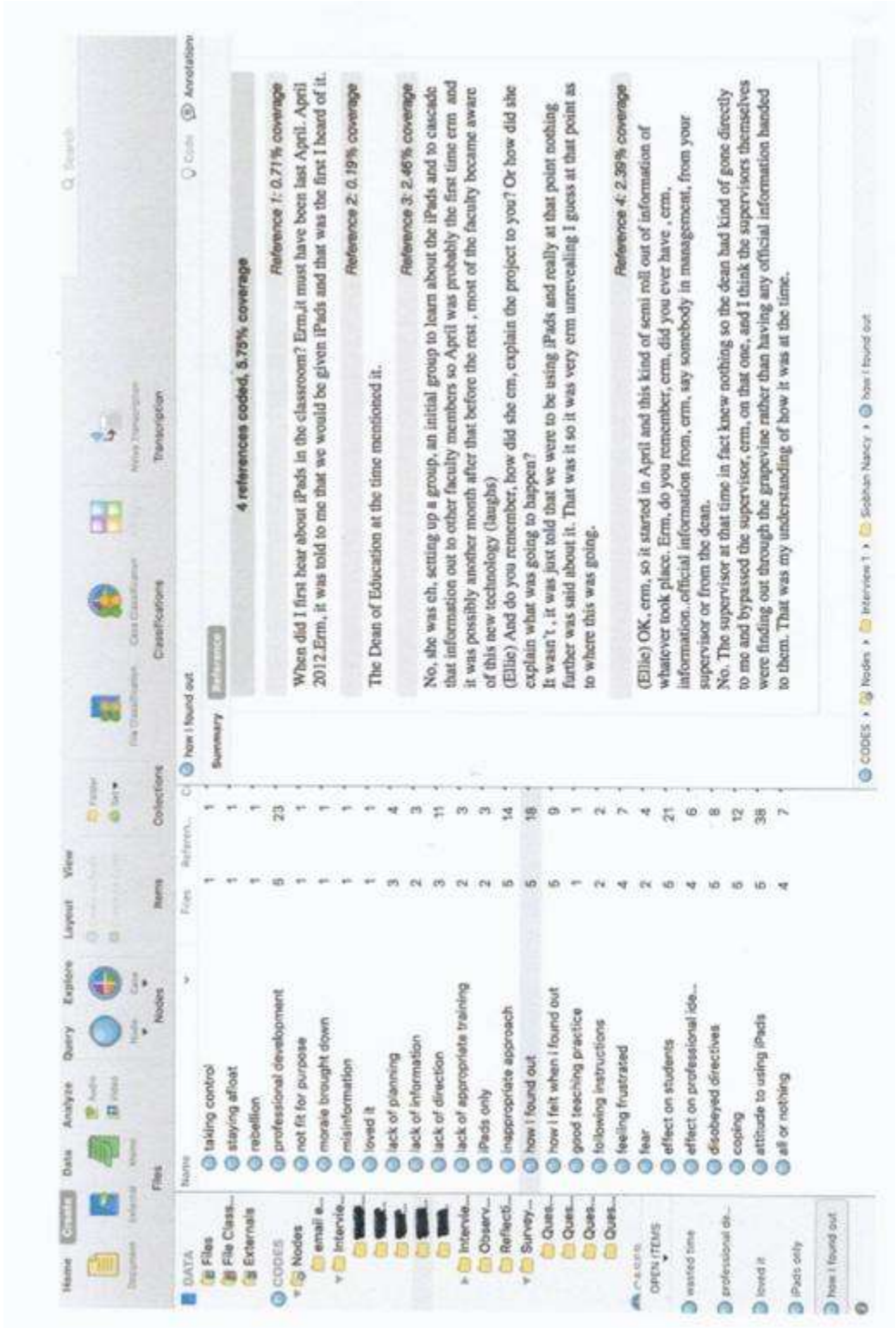
3. Do you think the introduction of the iPad impacted on your Professional Identity?

4. What strategies did you put in place to deal with the change in the way you teach?

5. How has being involved in CoPs contributed to your use of iPads

   (ask number 5 if the participant mentions CoPs in 4)

Appendix 6: NVivo Sample Analysis



Appendix 7: Prompts for Reflection

Thank you for your ongoing support for this research project. Please could you think back over your involvement in implementation of the Apple iPad to your classrooms and write a reflection based on what you can remember about how you felt.
You can write about anything that was important to you. There are no right or wrong answers, but the following prompts might help you to get started:

- How did you first find out about the project? (it was introduced to the classrooms in September 2012)
- How did you feel about the prospect?
- When did you first receive an iPad?
- Did you receive adequate training?
- Can you remember the training sessions?
- Who trained you?
- Did you have adequate materials?
- Were the curriculum and syllabus suitable for use with the iPad?
- What was the atmosphere like?
- Were people supportive of each other?
- What happened when you went into the classroom with the device?
- How did you cope?
- Did you cope?
- Did you find the support of your colleagues helpful?
- What support networks were in place?
- Were support networks put in place by the management ?
- Was support available if you couldn't cope?
- As the semester progressed how did your teaching change?
- Did you adapt?
- How was the second semester?
- What happened over the next couple of years?
- To what extent do you use the iPad in your classes now?
- What do you think you gained from the experience?
- Are you glad you were part of it?
- Do you think it helped you to grow as a teacher?
- If you had been in charge of introducing the iPad to the classroom, how would you have gone about it?
- Were there any glaring mistakes made in the project?
- Did you feel you were being asked to do something unreasonable?
- What positives did you get from the experience?

Please do not feel that you have to reflect on all (or any) of these points. Anything you write will be very useful and gratefully received.

Appendix 8: Survey Monkey Questionnaire

VOLUNTARY INFORMED CONSENT

RESEARCH TITLE AND DESCRIPTION
This research is entitled The Impact on Teachers of the Introduction of the iPad and aims to investigate the planning stages and rollout of the iPad Project at Abu Dhabi Men's College. In particular, the research will focus on the impact that the project had on Foundations English teachers.

VOLUNTARY PARTICIPATION
Your participation in this project is anonymous and entirely voluntary. If you do agree to participate, you can withdraw from the project at any time without comment or penalty. Your decision to participate, or not participate, will in no way impact upon your current or future relationship with HCT.
Your participation will involve answering open ended questions in an online, anonymous survey. You will be asked about how you feel about teaching with the iPad.

EXPECTED BENEFITS
It is expected that this project will benefit faculty and ADMC by informing us of how the introduction of new technology could be planned and carried out.

RISKS
There are no risks beyond normal day-to-day living associated with your participation in this project.

PRIVACY AND CONFIDENTIALITY
All comments and responses will be treated confidentially. Any data collected as part of this project will be stored securely as per HCT's Management of Research Data policy.
Any information obtained in connection with this project that can identify you will remain confidential. Comments made will be anonymous and information will only be provided in a form that does not identify individual respondents. The researcher plans to use the information obtained to write my Doctoral Thesis.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT
Should you have any questions about the research or any related matters, please contact the researcher at


Upgrade
ellie-exeter
Sign Out
Help
Home
My Surveys
Survey Services
Plans & Pricing
+ Create Survey
You have a BASIC account | To remove the limits of a BASIC account and get unlimited questions, upgrade now!
Impact on teachers of the introduction of iPads
Education
Design Survey
Collect Responses
Analyze Results
View Summary
Browse Responses
Filter Responses
Crosstab Responses
Download Responses
Share Responses
Default Report
+ Add Report
Response Summary
Total Started Survey: 30
Total Finished Survey: 24 (80%)
Select a page to view below or view all pages:
#1.
PAGE: 1
1. VOLUNTARY INFORMED CONSENT RESEARCH TITLE AND DESCRIPTION
Create Chart
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This research is entitled The Impact on Teachers of the Introduction of the iPad and aims to investigate the planning stages and rollout of the iPad Project at Abu Dhabi Men's College. In particular, the research will focus on the impact that the project had on Foundations English teachers. VOLUNTARY PARTICIPATION Your participation in this project is anonymous and entirely voluntary. If you do agree to participate, you can withdraw from the project at any time without comment or penalty. Your decision to participate, or not participate, will in no way impact upon your current or future relationship with HCT. Your participation will involve answering open ended questions in an online, anonymous survey. You will be asked about how you feel about teaching with the iPad. EXPECTED BENEFITS It is expected that this project will benefit faculty and ADMC by informing us of how the introduction of new technology could be planned and carried out. RISKS There are no risks beyond normal day-to-day living associated with your participation in this project. PRIVACY AND CONFIDENTIALITY All comments and responses will be treated confidentially. Any data collected as part of this project will be stored securely as per HCT's Management of Research Data policy. Any information obtained in connection with this project that can identify you will remain confidential. Comments made will be anonymous and information will only be provided in a form that does not identify individual respondents. The researcher plans to use the information obtained to write my Doctoral Thesis. QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT Should you have any questions about the research or any related matters, please contact the researcher at ecavalcanti@hct.ac.ae If you have questions regarding your rights as a research subject, or if problems arise which you do not feel you can discuss with the researcher, please contact the Abu Dhabi Men's College Research Office at admcresearch@hct.ac.ae
Response Percent
Response Count
I consent.
100.0%
26
I do not consent and will exit survey now.
0.0%
0
answered question
26
skipped question
4
Select a page to view below or view all pages:
#1.

Impact on teachers of the introduction of iPads

Education

Design Survey Collect Responses Analyze Results

View Summary
Browse Responses
Filter Responses
Crosstab Responses
Download Responses
Share Responses

Default Report + Add Report

Response Summary

Total Started Survey: 30
Total Finished Survey: 24 (80%)

Select a page to view below or view all pages:

#2

PAGE: 2

1. How do you feel about teaching with an iPad this semester? Download

	Response Count
Show Responses	22
answered question	22
skipped question	8

2. Do you feel you have been given adequate support to prepare for the rollout of the iPad? Download

	Response Count
Show Responses	22
answered question	22
skipped question	8

3. Please tell me what you have found most helpful: Download

	Response Count
Show Responses	21
answered question	**21**
skipped question	**9**

4. Please tell me what you found least helpful: Download

	Response Count
Show Responses	21
answered question	**21**
skipped question	**9**

5. Would you be prepared to be involved with further research on this subject? Create Chart Download

	Response Percent	Response Count
Yes	**50.0%**	**11**
No	**50.0%**	**11**
answered question		**22**
skipped question		**8**

6. If you are willing to participate in further research on this subject, please email (or speak) to Ellie OR add your name below. Download

	Response Count
Show Responses	9
answered question	**9**
skipped question	**21**

Select a page to view below or view all pages
#2

Question 1

It's a wonderful tool for projects and presentations but unsuitable for most language learning activities, especially listening and reading. I have to say I find it ridiculous to have a group of people in front of me and exchange material via email and f drives!

9/16/2012 7:17 PM View Responses

So far, ambivalent. Open-minded to see how things turn out (will students' English proficiency benefit , or remain the same, or suffer? Time will tell.)

9/16/2012 3:39 PM View Responses

I think once everything settles down and we have access to the texts it will be fine.

9/16/2012 2:41 PM View Responses

It is a tool and should be included with other tools and not made the only technology available for teaching. It is difficult to get ordinary things done in a timely manner. We should incorporate it but not throw out other useful tools.

9/16/2012 2:38 PM View Responses

Excited but worried about how to share materials with ss.

9/16/2012 1:59 PM View Responses

Depends on how you define "teaching". It's too early in the semester to gauge opinion (in my opinion) :)

9/16/2012 1:28 PM View Responses

The iPad is a useful tool in the classroom and will enhance learning in certain setting

9/16/2012 1:09 PM View Responses

Apprehensive

9/16/2012 12:17 AM View Responses

apprehensive

9/16/2012 11:50 AM View Responses

Ok. For now the students are enjoying their lessons and that is the most important thing. It is still a new method of teaching and will take time. Sometimes there are technical problems with mirroring or no wifi which slows down the lesson.

9/16/2012 11:01 AM View Responses

Mixed feeling

9/16/2012 10:34 AM View Responses

Challenged

9/13/2012 11:07 AM View Responses

It would be fine if they were used when and where appropriate. Integrated and not as the missing link in education...and if things were set up properly in the college.

9/11/2012 4:13 PM View Responses

Positive, but apprehensive.

9/11/2012 1:09 PM View Responses

Confident, happy and relieved.

9/11/2012 12:49 AM View Responses

Frustrated and altogether not good. This project should have been piloted first. Also, adequate hands-on training given by experts should have been provided well in advance of start-up of the fall semester.

9/11/2012 12:16 AM View Responses

I like the idea of having the iPad as a tool, but am not happy that it has been deemed more important than paper/textbooks.

9/11/2012 11:56 AM View Responses

Ok. However too little thought has been given to content and classroom procedures. Technical issues dealt with as they arise, rather than planned ahead.

9/11/2012 11:32 AM View Responses

Nervous but I will do my best to make it work in class

9/11/2012 11:12 AM View Responses

It's a wonderful learning experience and a great opportunity for professional development & research. It has its challenges and I do feel nervous about things like the possibility of technology letting me down (projector not working etc) and finding the right platform to collaborate with colleagues and students on iPads.

9/11/2012 9:51 AM View Responses

Irritated.

9/11/2012 9:44 AM View Responses

x

9/10/2012 3:05 PM View Responses

Question 2

Absolutely not! We basically had to figure things out for ourselves after being forced to attend unintelligible sessions in which we were bombarded with app after app ...this almost caused several colleagues to have a nervous breakdown!

9/16/2012 7:17 PM View Responses

No. There was a lot of training, but much of it was rushed and without overall direction.

9/16/2012 3:39 PM View Responses

I joined the team late so I missed some of the earlier training.

9/16/2012 2:41 PM View Responses

There was a lot of support ,but many supporters are non teachers. Our needs weren't addressed.

9/16/2012 2:38 PM View Responses

No anyone's fault- we are all new to this, but people all around the world do not know how to really provide a whole course, share material etc.

9/16/2012 1:59 PM View Responses

inadequate.

9/16/2012 1:28 PM View Responses

Yes, to some degree though certain issues have not been resolved.

9/16/2012 1:09 PM View Responses

Yes, but it felt rushed and too much information to absorb in too short a time.
9/16/2012 12:17 AMView Responses

no
9/16/2012 11:50 AMView Responses

It was ok. Could have had more training on actually teaching with different apps.
9/16/2012 11:01 AMView Responses

Yes in terms of training
9/16/2012 10:34 AMView Responses

yes
9/13/2012 11:07 AMView Responses

Not really. A lot of wasted time at conferences with publishers etc.
9/11/2012 4:13 PMView Responses

Yes.
9/11/2012 1:09 PMView Responses

Absolutely.
9/11/2012 12:49 AMView Responses

Absolutely not. The iPad rollout, sadly, has been clumsily managed.
9/11/2012 12:16 AMView Responses

I think we were given as much support as the people chosen to roll it out had to offer. Unfortunately, I believe that no one was prepared for the amount of work, and challenges that went into a roll out that should have been done in stages, over the course of 1 year, not 1 month.
9/11/2012 11:56 AMView Responses

Yes,in some ways.
9/11/2012 11:32 AMView Responses

I would have been a lot happier if I had a few more months of training
9/11/2012 11:12 AMView Responses

I feel that the training would have been much more useful if the IT team had had enough time to figure out the basics to teach us, like iFiles and BbLearm. The training we received before summer was not very helpful as the content and the level of the training was not suitable for beginners and it created more frustration withing in the team. The hands-on training we got before the start of the semester was very useful.
9/11/2012 9:51 AMView Responses

No.
9/11/2012 9:44 AMView Responses

x
9/10/2012 3:05 PMView Responses

Question 3

The two days at the end of the iPad session torture! We all got together and helped each other to figure things out...we are still doing this!
9/16/2012 7:17 PMView Responses

Networking with other teachers.
9/16/2012 3:39 PMView Responses

Question 4

The fact that nothing was piloted before being presented to us...that we had to be technicians as well as teachers, setting up email accounts etc....the pressure of being forced to attend a session then 'cascade' the info to our colleagues when most of the time we barely understood it!

9/16/2012 7:17 PM View Responses

First we were to make our own apps with "App Furnace". Then, we were to publish our own ibooks using Macs. Then we were to publish our own books using Creative Book Builder. In the end, we were introduced to a number of educational apps, and we are now awaiting the arrival of ebooks. Lots of time was spent (wasted?) learning how to create apps and create ibooks, all for naught :(

9/16/2012 3:39 PM View Responses

Having too many apps to review. Ideally, I would have preferred a selection grouped by skill set e.g. for vocabulary (A+pro, Quiznet, numbers & Dict Box)

9/16/2012 2:41 PM View Responses

The intense pressure and the confusion over the different apps. There were too many things demonstrated and the questions of their usefulness was not addresses.

9/16/2012 2:38 PM View Responses

how to create CBB books when people did not really know how to do it effectively themselves.

9/16/2012 1:59 PM View Responses

the sessions

9/16/2012 1:28 PM View Responses

Session in Al Ain

9/16/2012 1:09 PM View Responses

workshops given by IT

9/16/2012 11:50 AM View Responses

So many apps. Would be better if students were given a few apps at one time and slowly introduce them to more apps through the semester.

9/16/2012 11:01 AM View Responses

The gung-ho approach to wanting 100% ipad is contrary to sound pedagogy whicj advocates a diversity of tools and techniques

9/16/2012 10:34 AM View Responses

Helping students set up their emails and y drives especially when the connection is very slow. This should be the IT's work

9/13/2012 11:07 AM View Responses

Al Ain conference at the end of August and at ADWC City campus in June.

9/11/2012 4:13 PM View Responses

Teachers showing alternative methods to the ones suggested by HCT and then being confused about which methods to use.

9/11/2012 1:09 PM View Responses

The introduction of BB Learn.

The prep week where we worked in teams on apps to be introduced to the students.
9/16/2012 2:41 PM View Responses

The week before classes the supervisors took charge and the teachers worked out what we needed to do in the first week. However, we are facing practical problems in the classroom.
9/16/2012 2:38 PM View Responses

Working things through with other teachers who actually know what our learning outcomes are and the challenges we face.
9/16/2012 1:59 PM View Responses

tariq in IT
9/16/2012 1:28 PM View Responses

Session with other teachers using the iPad for practical application.
9/16/2012 1:09 PM View Responses

Apps specific to actual teaching. Working in groups and helping each other.
9/16/2012 12:17 AM View Responses

workshops given by teachers
9/16/2012 11:50 AM View Responses

Everything is in one place. Students are able to access the YDRive. Note: IT has been most helpful...especially [redacted]
9/16/2012 11:01 AM View Responses

Preparation for the first week as it was administered by [redacted]
9/13/2012 11:07 AM View Responses

Actually working in groups with concrete aims for the first two weeks of teaching.
9/11/2012 4:13 PM View Responses

The ibooks prepared by IT.
9/11/2012 1:09 PM View Responses

The ongoing workshops held at the different campuses and conducted by Apple experts as well as experienced educators.
9/11/2012 12:49 AM View Responses

My own personal hands-on time with an expert at my side. This has rarely occurred.
9/11/2012 12:16 AM View Responses

The team. Once someone learned how to do something with relative ease, they shared. Also just having time to play with the iPad on its own, and NOT sit through endless meetings..actually explore it, get comfortable using it myself, and trying to fix issues with it myself.
9/11/2012 11:56 AM View Responses

Talking to other people who face the same problems / concerns.
9/11/2012 11:32 AM View Responses

Working in small groups
9/11/2012 11:12 AM View Responses

Presenting the 'days' in groups..Learning from each other.. It does make a difference when the session is given by an ELT teacher rather than an IT teacher as we get more teaching ideas.
9/11/2012 9:51 AM View Responses

Having the device over the holiday to experiment with.
9/11/2012 9:44 AM View Responses

9/11/2012 12:49 AM View Responses

The way training and training sessions have been managed has been frustrating and unhelpful. Far too many people in a session with far too much noise. Trainers conducting the sessions were NOT experts.

9/11/2012 12:16 AM View Responses

Sitting in meetings with 40 other people being 'talked at' about the iPad..Most of the time, the person sharing the information knew it too well to share effectively, as we were so far behind in knowledge.

9/11/2012 11:56 AM View Responses

Hours, days and weeks of being lectured at. Tedious large group sessions about things that were trivial or in the long run proved irrelevant.

9/11/2012 11:32 AM View Responses

Being in a very large group

9/11/2012 11:12 AM View Responses

Training before summer on iBooks author and AppFurnace!

9/11/2012 9:51 AM View Responses

The fanaticism that claims that this device is going to revolutionize education.

9/11/2012 9:44 AM View Responses

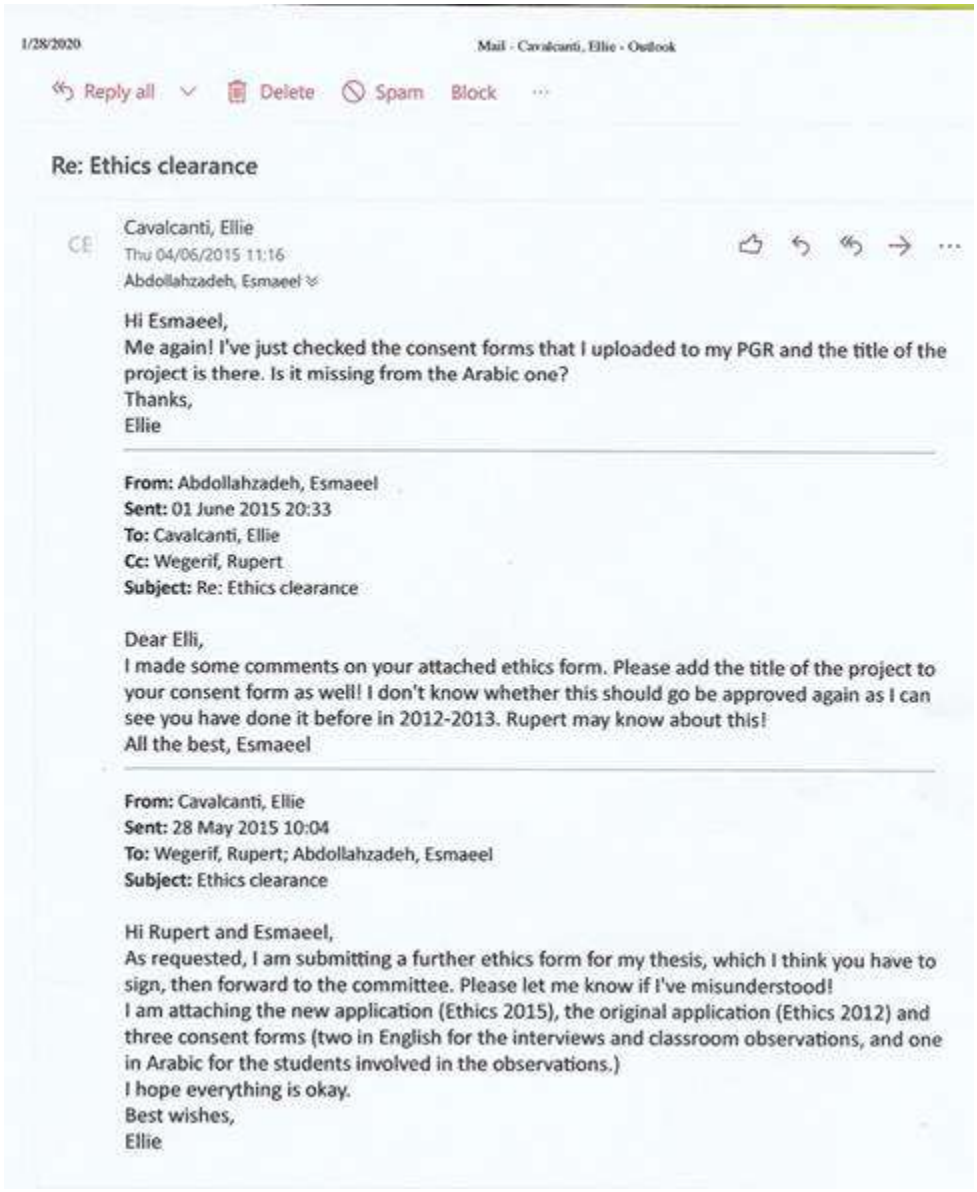
x

9/10/2012 3:05 PM View Responses

Would you be prepared to be involved with further research on this subject?

answered question	**22**
skipped question	**8**

Appendix 9: Email 28.05.2015 re: ethics approval



1/28/2020 Mail - Cavalcanti, Ellie - Outlook

Reply all | Delete | Spam | Block | ...

Re: Ethics clearance

CE Cavalcanti, Ellie
Thu 04/06/2015 11:16
Abdollahzadeh, Esmaeel

Hi Esmaeel,
Me again! I've just checked the consent forms that I uploaded to my PGR and the title of the project is there. Is it missing from the Arabic one?
Thanks,
Ellie

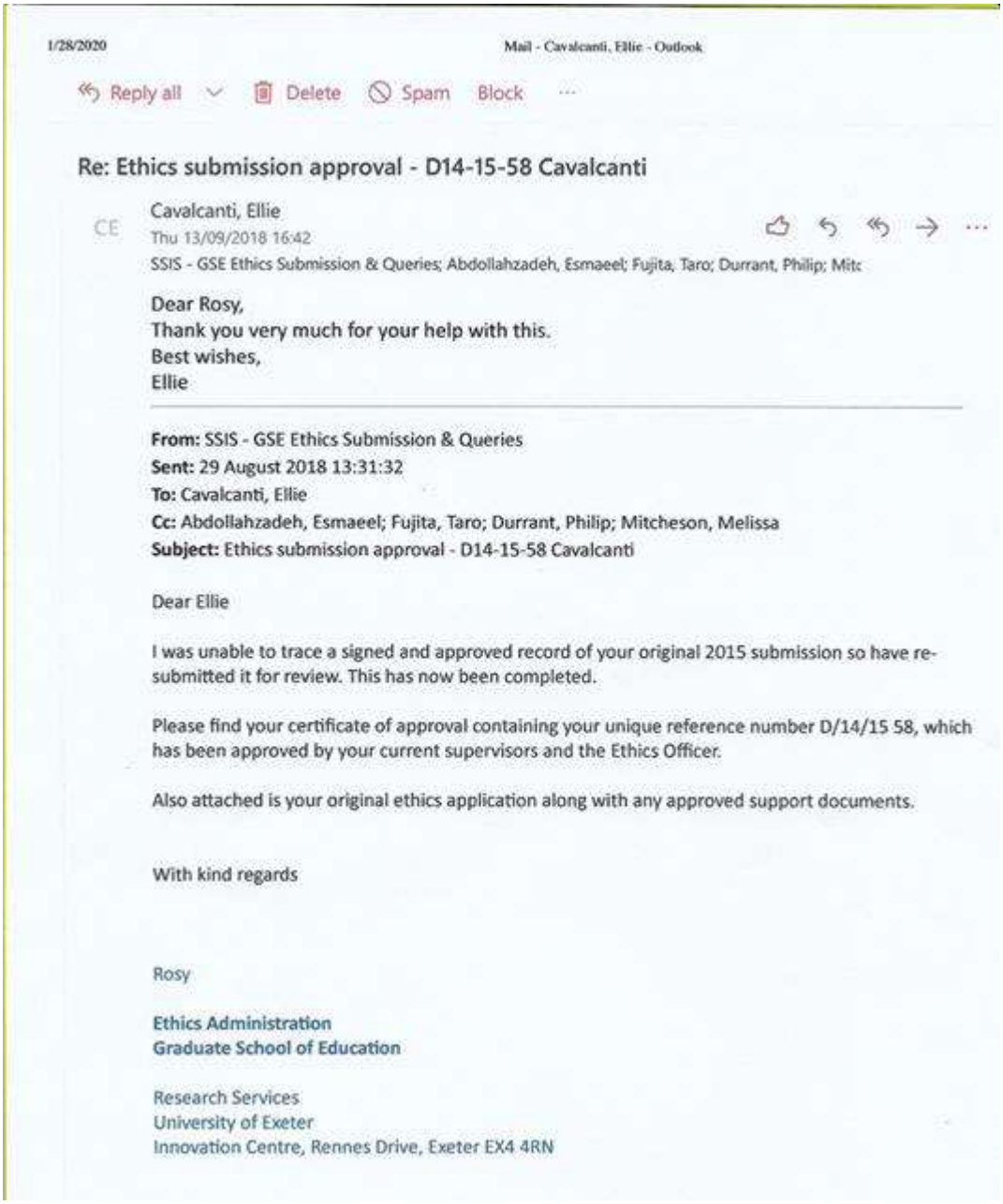
From: Abdollahzadeh, Esmaeel
Sent: 01 June 2015 20:33
To: Cavalcanti, Ellie
Cc: Wegerif, Rupert
Subject: Re: Ethics clearance

Dear Elli,
I made some comments on your attached ethics form. Please add the title of the project to your consent form as well! I don't know whether this should go be approved again as I can see you have done it before in 2012-2013. Rupert may know about this!
All the best, Esmaeel

From: Cavalcanti, Ellie
Sent: 28 May 2015 10:04
To: Wegerif, Rupert; Abdollahzadeh, Esmaeel
Subject: Ethics clearance

Hi Rupert and Esmaeel,
As requested, I am submitting a further ethics form for my thesis, which I think you have to sign, then forward to the committee. Please let me know if I've misunderstood!
I am attaching the new application (Ethics 2015), the original application (Ethics 2012) and three consent forms (two in English for the interviews and classroom observations, and one in Arabic for the students involved in the observations.)
I hope everything is okay.
Best wishes,
Ellie

Appendix 10: Email 29.08.2018 re: ethics approval



1/28/2020 Mail - Cavalcanti, Ellie - Outlook

Reply all | Delete | Spam | Block | ...

Re: Ethics submission approval - D14-15-58 Cavalcanti

CE Cavalcanti, Ellie
Thu 13/09/2018 16:42
SSIS - GSE Ethics Submission & Queries; Abdollahzadeh, Esmaeel; Fujita, Taro; Durrant, Philip; Mitc

Dear Rosy,
Thank you very much for your help with this.
Best wishes,
Ellie

From: SSIS - GSE Ethics Submission & Queries
Sent: 29 August 2018 13:31:32
To: Cavalcanti, Ellie
Cc: Abdollahzadeh, Esmaeel; Fujita, Taro; Durrant, Philip; Mitcheson, Melissa
Subject: Ethics submission approval - D14-15-58 Cavalcanti

Dear Ellie

I was unable to trace a signed and approved record of your original 2015 submission so have re-submitted it for review. This has now been completed.

Please find your certificate of approval containing your unique reference number D/14/15 58, which has been approved by your current supervisors and the Ethics Officer.

Also attached is your original ethics application along with any approved support documents.

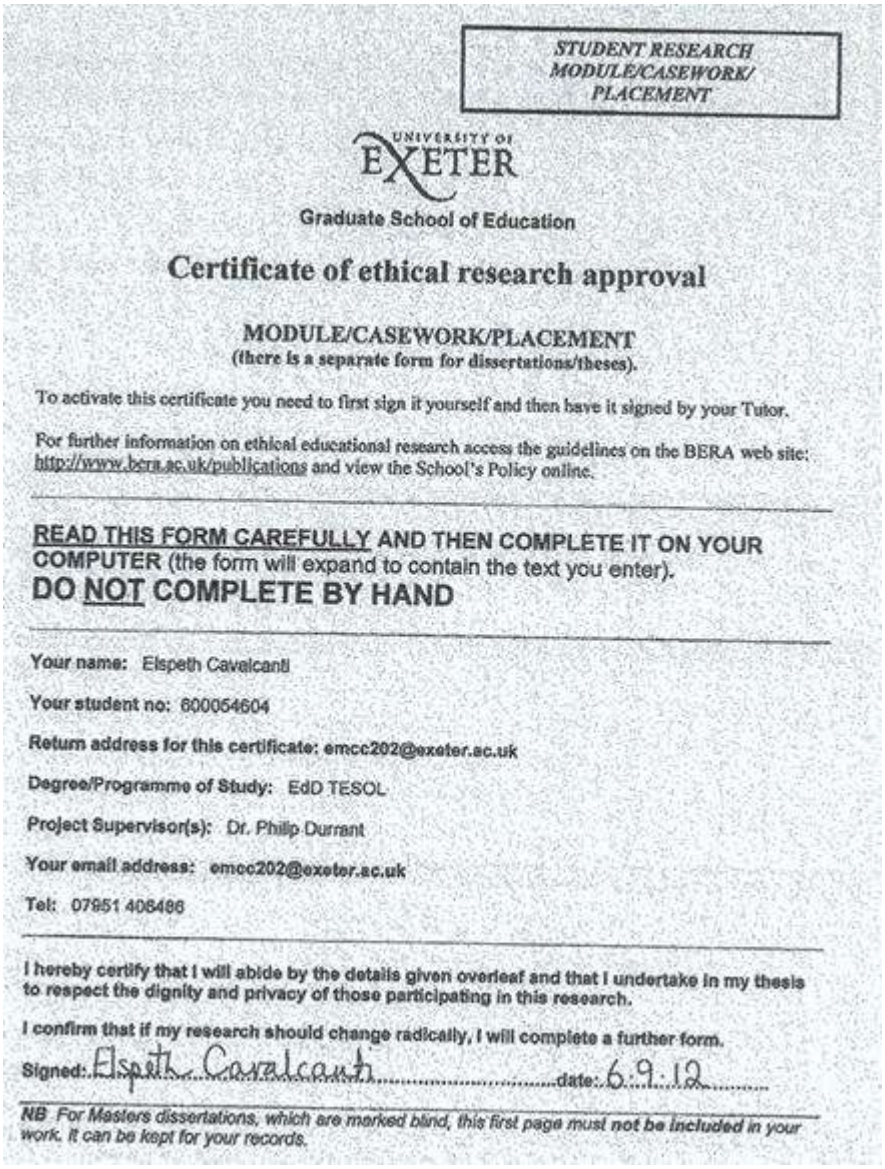
With kind regards

Rosy

Ethics Administration
Graduate School of Education

Research Services
University of Exeter
Innovation Centre, Rennes Drive, Exeter EX4 4RN

Appendix 11: Ethics approval form 6.9.12



STUDENT RESEARCH MODULE/CASEWORK/ PLACEMENT

UNIVERSITY OF EXETER

Graduate School of Education

Certificate of ethical research approval

MODULE/CASEWORK/PLACEMENT
(there is a separate form for dissertations/theses).

To activate this certificate you need to first sign it yourself and then have it signed by your Tutor.

For further information on ethical educational research access the guidelines on the BERA web site: http://www.bera.ac.uk/publications and view the School's Policy online.

READ THIS FORM CAREFULLY AND THEN COMPLETE IT ON YOUR COMPUTER (the form will expand to contain the text you enter).
DO NOT COMPLETE BY HAND

Your name: Elspeth Cavalcanti

Your student no: 600054604

Return address for this certificate: emcc202@exeter.ac.uk

Degree/Programme of Study: EdD TESOL

Project Supervisor(s): Dr. Philip Durrant

Your email address: **emcc202@exeter.ac.uk**

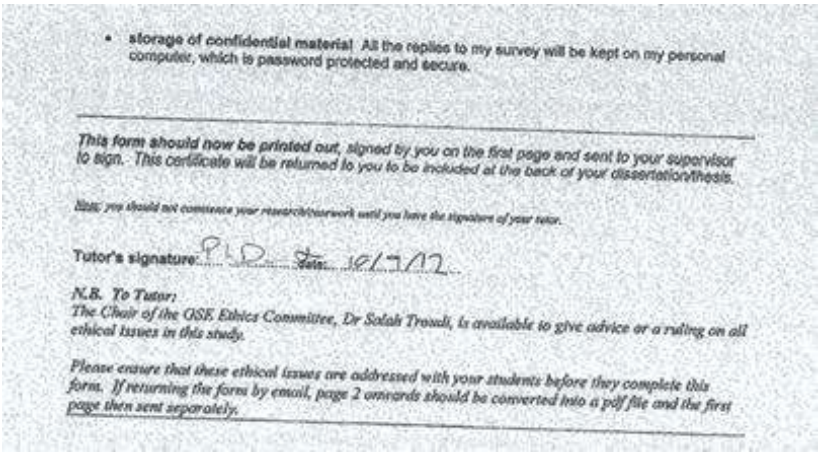
Tel: 07951 406486

I hereby certify that I will abide by the details given overleaf and that I undertake in my thesis to respect the dignity and privacy of those participating in this research.

I confirm that if my research should change radically, I will complete a further form.

Signed: Elspeth Cavalcanti **date:** 6.9.12

NB For Masters dissertations, which are marked blind, this first page must not be included in your work. It can be kept for your records.



- **storage of confidential material** All the replies to my survey will be kept on my personal computer, which is password protected and secure.

This form should now be printed out, signed by you on the first page and sent to your supervisor to sign. This certificate will be returned to you to be included at the back of your dissertation/thesis.

Note: you should not commence your research/casework until you have the signature of your tutor.

Tutor's signature: PD **Date:** 10/9/12

N.B. To Tutor;
The Chair of the GSE Ethics Committee, Dr Salah Troudi, is available to give advice or a ruling on all ethical issues in this study.

Please ensure that these ethical issues are addressed with your students before they complete this form. If returning the form by email, page 2 onwards should be converted into a pdf file and the first page then sent separately.

Appendix 12: Ethics approval form 11.5.15

MSc, PhD, EdD & DEdPsych theses.

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Graduate School of Education

Certificate of ethical research approval

MSc, PhD, EdD & DEdPsych theses

To activate this certificate you need to first sign it yourself, and then have it signed by your supervisor and finally by the Chair of the School's Ethics Committee.

For further information on ethical educational research access the guidelines on the BERA web site: http://www.bera.ac.uk/publications and view the School's Policy online.

READ THIS FORM CAREFULLY AND THEN COMPLETE IT ON YOUR COMPUTER (the form will expand to contain the text you enter). **DO NOT COMPLETE BY HAND**

Your name: Ellie Cavalcanti

Your student no: 600054604

Return address for this certificate: emcc202@exeter.ac.uk

Degree/Programme of Study: EdD TESOL

Project Supervisor(s): Professor Rupert Wegerif and Dr. Esmaeel Abdollahzadeh

Your email address: emcc202@exeter.ac.uk

Tel: 07951 406486

I hereby certify that I will abide by the details given overleaf and that I undertake in my thesis to respect the dignity and privacy of those participating in this research.

I confirm that if my research should change radically, I will complete a further form.

Signed: Ellie Cavalcanti **date:** 11th May 2015

Appendix 13: Ethics approval form ref: D/14/15/58

UNIVERSITY OF EXETER

GRADUATE SCHOOL OF EDUCATION

St Luke's Campus
Heavitree Road
Exeter UK EX1 2LU

http://socialsciences.exeter.ac.uk/education/

COPY CERTIFICATE OF ETHICAL APPROVAL

Title of Project: Dealing with change - the impact on teachers of the introduction of a new technology

Researcher(s) name: Ellie Cavalcanti

Supervisor(s): Rupert Wegerif/Esmaeel Abdollahzadeh

This project has been approved for the period

From: 11/05/2015
To: 28/8/2018

Ethics Committee approval reference: D/14/15/58

Signature: Justin Dillon Date: 28/8/18
(Professor Justin Dillon, Professor of Science and Environmental Education, Ethics Officer)

Appendix 14: Consent form for interviews

UNIVERSITY OF EXETER

GRADUATE SCHOOL OF EDUCATION

Title of Research Project:

Dealing with change – the impact on teachers of the introduction of a new technology

CONSENT FORM FOR INTERVIEWS

I have been fully informed about the aims and purposes of the project.

I understand that:

there is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation and may also request that my data be destroyed

I have the right to refuse permission for the publication of any information about me

any information which I give will be used solely for the purposes of this research project, which may include publications or academic conference or seminar presentations

if applicable, the information, which I give, may be shared between any of the other researcher(s) participating in this project in an anonymised form

all information I give will be treated as confidential

the researcher(s) will make every effort to preserve my anonymity

....
(Signature of participant) (Date)

.....
(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher

Contact phone number of researcher 00971 50 536 4972

If you have any concerns about the project that you would like to discuss, please contact:

Ellie Cavalcanti at

emce202@exeter.ac.uk
OR
cavalcantiellie@gmail.com

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

Appendix 15: Consent form for classroom observations

UNIVERSITY OF EXETER

GRADUATE SCHOOL OF EDUCATION

Title of Research Project:

Dealing with change – the impact on teachers of the introduction of a new technology

CONSENT FORM FOR CLASSROOM OBSERVATIONS

I have been fully informed about the aims and purposes of the project.

I understand that:

there is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation and may also request that my data be destroyed

I have the right to refuse permission for the publication of any information about me

any information which I give will be used solely for the purposes of this research project, which may include publications or academic conference or seminar presentations

if applicable, the information, which I give, may be shared between any of the other researcher(s) participating in this project in an anonymised form

all information I give will be treated as confidential

the researcher(s) will make every effort to preserve my anonymity

....
(Signature of participant) (Date)

.....
(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher

Contact phone number of researcher 00971 50 536 4972

If you have any concerns about the project that you would like to discuss, please contact:

Ellie Cavalcanti at

emcc202@exeter.ac.uk
OR
cavalcantiellie@gmail.com

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

Appendix 16: Consent form for classroom observations (Arabic)

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عنوان مشروع البحث

التعامل مع التغيير - التأثير على المعلمين من إدخال تكنولوجيا جديدة

استمارة الموافقة

لقد أعلمت تاما بشأن أهداف وأغراض المشروع.

أفهم أن:

ليس هناك إكراه بالنسبة لي للمشاركة في هذا المشروع البحثي، وإذا كنت قد اخترت للمشاركة، من حقي في أي مرحلة سحب مشاركتي. ومن حقي أيضا أن أطلب أن يتم تدمير البيانات الخاصة بي

لدي الحق في رفض الإذن لنشر أية معلومات علي

أي معلومات أعطي سوف تستخدم فقط لأغراض هذا المشروع البحثي، التي يمكن أن تشمل المنشورات أو المؤتمرات الأكاديمية أو الندوات

إن وجدت المعلومات التي سوف أقدمها قد تكون مشتركة بين أي من باحث آخر مشارك في هذا المشروع في شكل مجهول المصدر

سيتم التعامل مع كل المعلومات التي أقدمها على أنها سرية .

الباحث سوف يبذل كل جهد ممكن للحفاظ على سرية هويتي .

.....

(توقيع المشارك)

.....

التاريخ

.....

اسم المشارك

سيتم الاحتفاظ نسخة واحدة من هذا النموذج من قبل المشاركين. سيتم الاحتفاظ نسخة ثانية من قبل الباحث .

رقم الهاتف الباحث [redacted]

إذا كان لديك أية شكوك حول المشروع الذي ترغب في مناقشته، يرجى الاتصال :

Elie Cavalcanti @ [redacted]ec.uk OR [redacted]l.com

قانون حماية البيانات: جامعة اكستر هي مجموعة للبيانات ومسجلة لدى مكتب مفوض حماية البيانات كما هو مطلوب بموجب قانون حماية البيانات لعام 1998. وسيتم استخدام المعلومات التي تقدمها لأغراض البحث وسيتم معالجتها وفقا للتشريعات الحالية لحماية البيانات. ستكون البيانات السرية للباحث وإن يتم الكشف عنها لأي طرف ثالث غير مصرح به دون مزيد من الاتفاق من قبل المشاركين. سوف تكون التقارير استنادا إلى البيانات بشكل مجهول المصدر.