

To go from murkiness to clarity: How do course members perceive the teacher's role in an online learning environment?

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Abstract

The advent of the internet has changed the mode of delivery for many courses in the tertiary sector and courses are now offered in an online learning environment with variable success. There has been a range of studies concerning online learning, however there is little research about the role of information technologies in promoting professional learning for teaching practitioners. Initially, courses were posted online using the resources from a face-to-face course for the course members to download. Now the capabilities of the internet allow for a range of technologies to be used to enhance the learning in an online learning environment.

Educational practitioners undertake professional development to either develop their skills and knowledge to improve student learning in their classrooms or for promotional reasons. Educational practitioners want to be inspired by their teachers when undertaking professional development. Some researchers point to the relationship between the teacher and the course members as being an important factor in the success of a course. As many professional development courses are being delivered in an online learning environment, the course members never meet the teacher and the teacher needs to develop strategies to allow these relationships to develop.

The aim of this study was to explore the perceptions of educational practitioners who are undertaking an online professional development course. It sought to understand the teaching practitioners' expectations of the teacher in the online environment. A range of strategies was used to collect the data including questionnaires, data gained from the online learning environment, email correspondence and semi-structured interviews.

The findings from this study identify the importance of the teacher designing an online learning environment to enhance learning, by having tasks and assignments related to the course members' own practice, and by having a range of interactions that provide reflection opportunities to enhance thinking and learning. Other important findings included the importance of the teacher taking an active role in the interactions.

Dedication

To my father

JOHN RODERICK MATHESON

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Chapter One Introduction

The last decade has seen many reforms and changes in professional development for educational practitioners. One of the major changes has been in the modes of delivery that are now available due to the advances in technology and in particular the World Wide Web (WWW) altered the way tertiary education courses could be delivered. Distance education had been traditionally delivered by printed material sent to course members who then worked in isolation relying on the telephone and postal mail for any contact. Television and video have also been used but these lacked the ability to interact with the course members (Allan, 2004). With the advent of the WWW as well as the hardware and software to make this possible, many distance education courses were made available for online delivery. New terms such as e-learning or online learning to describe this mode of delivery have become part of our language.

Traditional distance courses enabled institutions to attract course members from the global community prior to the use of computers for online learning (E-Learning Advisory Group, 2004). These early examples of distance learning were based on a linear approach to teaching and learning giving students pre-packaged books and with little formal interaction between students (Vrasidas, 2000). Distance education has been available from many institutions from the 1960s. For example, in 1961, as part of Victoria University, Massey College offered distance courses for students (Massey University Calendar, 2007) and 16 years later the University of Southern Queensland became a dual-mode institution in 1977 (Taylor, 2006).

Common reasons students give for choosing distance courses are convenience, flexibility, location, other commitments and adaptability to their personal needs. An important distinction between online courses and distance courses is that a distance course does not necessitate the need for students to use a computer while an online course has the potential for interaction via the internet (E-learning Advisory Group, 2004). Initially many of the courses acted as a repository for a collection of files and web links with little or no opportunities for course members to interact (Dede, 1995). Online education has become more prevalent in tertiary education and some universities are encouraging or expecting that online courses are offered to attract students and increase enrolments (Ukpokodu, 2009). Other reasons are that teachers are able to provide

courses to a wider student cohort in a more interactive form and that tertiary institutions are expecting that online learning to be an affordable and comprehensive learning method. Furthermore, online learning is no longer limited to external students as many on-campus courses offer integrated components in an online environment (Lee & Duncan-Howell, 2007). Not all online courses have been successful. For example, despite having £62 million of public funding, the UKeU (UK eUniversities Worldwide Limited) project was terminated due to enrolment numbers of only 900 (Ginns & Ellis, 2009).

The impact of technology on teaching and learning

Teachers, in a face-to-face or in a distance delivery, search for links between beliefs and relevant practices due to the desire to make positive and significant changes to the learning environment (Tidwell & Fitzgerald, 2004). However in teaching practitioner education programmes some feel that critical elements of the teaching and learning process will be compromised by online learning (Ukpokodu, 2009). While online learning courses are being used by institutions many educators are still unclear about how to use the technology and find effective delivery in this learning environment complex (Abel, 2005). This means many teachers are using an online learning environment which may not enhance learning interaction between teacher and course members as the teacher may simply be posting materials online (Abel, 2005). As many teaching practitioners are now using an online learning environment, it is important to investigate course members' perceptions and attitudes regarding these environments.

Some of the professional development programmes offered lack the key pedagogical, content and structural characteristics of effective professional development (Schlager & Fusco, 2004). Indeed, as online courses have become more common in tertiary education, there is some concern over the learning effectiveness of such courses when compared to the traditional courses (Lu & Jeng, 2006/2007). They note research studies that discuss the effectiveness of online learning but caution that these studies have been conducted with surveys about perceived learning and satisfaction of undergraduate participants who tend to be concerned about their grades than about how much they learn.

Despite these concerns there are now many online professional development programmes available for teaching practitioners but little is known about best practices for the implementation of these courses. Evidence of their effectiveness is lacking due to it largely being anecdotal, or survey data obtained after the programme, and accordingly it cannot be established if the programme has had an ongoing influence (Dede, 2006).

Online Learning and Professional Development for Teaching Practitioners

Online learning is a relatively new teaching and learning environment with few comparative studies undertaken in the New Zealand context accordingly, research is needed within New Zealand to enable a broad research database and improve educational practice (Alton-Lee, 2006; Baker, Ferguson, Roberts & Fielden, 2003). However frameworks that are grounded in research to guide direction for the creation and evaluation of online professional development are not yet available (Vrsidas & Glass, 2004). There is a gap in New Zealand research into professional development for teaching practitioners where the studies provide actual content of the sessions, and where there is evidence of the learning and change (Timperley, Wilson, Barrar, & Fung, 2007). It is clear that the online learning environment is becoming more important in the delivery of professional development courses and areas requiring further research include the course members' reactions to the technology used and positive ways to improve the online environment and the participants' learning (Pan, Sivo, Gunter, & Cornwall, 2005). Baker et al., (2003) adds to this and identify other areas requiring further research about online learning in the New Zealand context such as effective ways of providing learning opportunities for course members and how changing from a traditional course to a fully online course affects course member learning.

The task of the online...teacher is to choose, adapt and perfect educational activities that maximise the affordances of the web. In doing so they create learning, knowledge, assessment and community centred educational experiences that result in high levels of learning by all participants.
(Anderson, 2004, p. 55)

Over the past 10 years I have developed my own online environment based on my teaching experience in a face-to-face environment, reading of literature relating to online learning

environments, experiences using the Internet, my observations of students' use of the Internet. I have been teaching a professional development course for over a decade. Initially as a face-to-face traditional course that evolved to currently being delivered in a online learning environment although there is still a printed book containing tutorials and posted to course members. However this online learning environment is continually changing and evolving due to feedback from course members or from my own research. Reading Anderson's (2004) work aroused my curiosity about the course members' perceptions of the teacher's role in the online context. I wondered about whether course members agreed with Anderson's viewpoint. Therefore the purpose of this study was to find out how course members, who are teaching practitioners undertaking professional development in Information and Communication Technology (ICT), view the online course and the role of the teacher in this environment. This is important research to undertake because their viewpoints may help to give those designing and teaching in online learning environments insights into the course members' perspectives.

This study hopes to deepen understanding of this educational context and may help lead to improvements in professional practice in this context (Anderson, 2004). It aims to be a contribution to the body of literature which gives voice to the course members' perceptions of the role of the teacher in an online learning environment in order to understand learning processes within these types of learning environments. I seek an understanding of what the professional development online experience is like for the course members and how these course members operate in the online environment during this course. In this study it is intended to listen to the perspectives of the course members relating to their experiences during the course.

Definition of terms

For the purpose of this study and to avoid confusion I have used the following terms

| | |
|-----------------------|---|
| Teacher | Refers only to an online teacher, in particular the one involved in this study |
| Teaching practitioner | Refers to all other teachers, in particular classroom teachers. In some cases this may be teachers who are enrolled in the online course. |
| WWW | World Wide Web |
| ICT | Information and Communication Technology |

Chapter Two Literature Review

In this chapter I will discuss the literature which is drawn from two main areas. The first is the field of professional development which discusses how technology has impacted on the delivery of courses, the nature of tasks in professional development and professional development in ICT. This will be followed by a discussion of online learning including the design and navigation of online learning environments, learning communities, interactions, advantages and disadvantages of online learning, and the teacher's role in the online learning environment. Finally, I introduce and discuss the research questions.

Professional development

Reforms in the education sector and the knowledge based society have emphasised the need for educational practitioners to become life-long learners by continuing their own professional development throughout their careers (Capper, Fitzgerald, Weldon, & Wilson, 2000; Vrasidas & Glass, 2004). Due to changes in the classroom environments, teaching practitioners need to have professional development as a component for their teaching which enables them to link research and practice, as well as learning from each others' ideas and knowledge (Capper et al., 2000). Professional development is meant to be a continuous endeavour that is grounded in the practitioner's own work and tailored to their needs (Schlager & Fusco, 2004).

Many schools are now making it mandatory for teaching practitioners to undertake professional development. School administrators are expanding the time teaching practitioners devote to enhancing their knowledge and skills, the price being that the practitioners' energy is being stretched to cope with the demands on their time (Dede, 2006). In light of this, he suggests that course members need to be sure that the time and effort involved needs to be spent undertaking quality programmes that explain and utilise best practices in teaching. Ideally some professional development programmes do not provide ongoing guidance and support for course members when they attempt to use new strategies in their classroom, the result being frustration with professional development which considered ineffectual or inconsistent (Dede, 2006). Learning needs to be meaningful to the course member and it is also important that there are ample practice opportunities in the learning experiences to facilitate the growth of connections and to link theory

to practice (E-Learning Advisory Group, 2004). Acquisition of a knowledge and skills base is acquired through ongoing professional development which provides experience in, and with reflection on, classroom experiences, as well as deepening theoretical pedagogical knowledge (Poskitt, 2005). As well as mandatory requirements for professional development during the the last ten years teaching practitioner education has changed with “a growing emphasis on qualitative research methods, on understanding multiple perspectives, and on improving the pedagogy of teacher education” (Hoban, 2004, p. 1040). Teaching practitioners undertake professional development so that they are able to continue to develop the skills, content knowledge and pedagogical changes they are able to use in their classrooms. The goal of professional development for teaching practitioners is to increase the knowledge and skills of teaching practitioners to improve student learning (Dede, Ketelhut, Whitehouse, Brett & McCloskey, 2006; Poskitt, 2005) although there is a lack of data to indicate how the teacher’s increased knowledge and competence is translated into improved outcomes (Timperley, et al., 2007). Schlager and Fusco (2004) suggest that teaching practitioner professional development is a “process of learning how to put knowledge into practice through engagement in practice within a community of practitioners” (p. 124).

In the 1980s and 1990s many courses had a skills based emphasis; however, it was found that these skills were not necessarily being transferred to the classroom situation (Poskitt, 2005). Research has shown that professional development of a short duration is not an effective way to improve teaching practitioner practice but needs to be continuous, grounded and prepares teaching practitioners to regularly reflect on their practice (Capper et al., 2000). Although short duration professional development or “listening to inspiring teachers” (p. xxv) has little impact on teaching practitioners in New Zealand there is still popularity for one day workshops and conferences. However providing extended opportunities for professional development is not necessarily effective. There is little evidence to suggest that providing time and resources for teaching practitioners for professional learning is effective so that there are positive learning outcomes for their students (Timperley et al., 2007). In addition there is a need for teaching practitioners to become reflective practitioners who are able to link research to practice, share ideas and knowledge, and become part of a wider learning community (Capper et al., 2000).

The content in professional development learning develops deeper understanding and extends a teaching practitioner's teaching skills. The content includes: integrating theory and practice, integration of pedagogical knowledge and assessment information, clear links between teaching and learning, and sustainability (Timperley et al., 2007). These authors argue that when course members are engaged in developing new understandings and skills, the following learning processes (Figure 1) are used. They suggest that these processes involve cycles of one or more of the three processes listed below, as deeper learning usually requires repeated cycles with the learning process. Timperley et al. (2007) listed these processes and outcomes and have been adapted these ideas into a visual model to show how the processes lead to the outcomes.

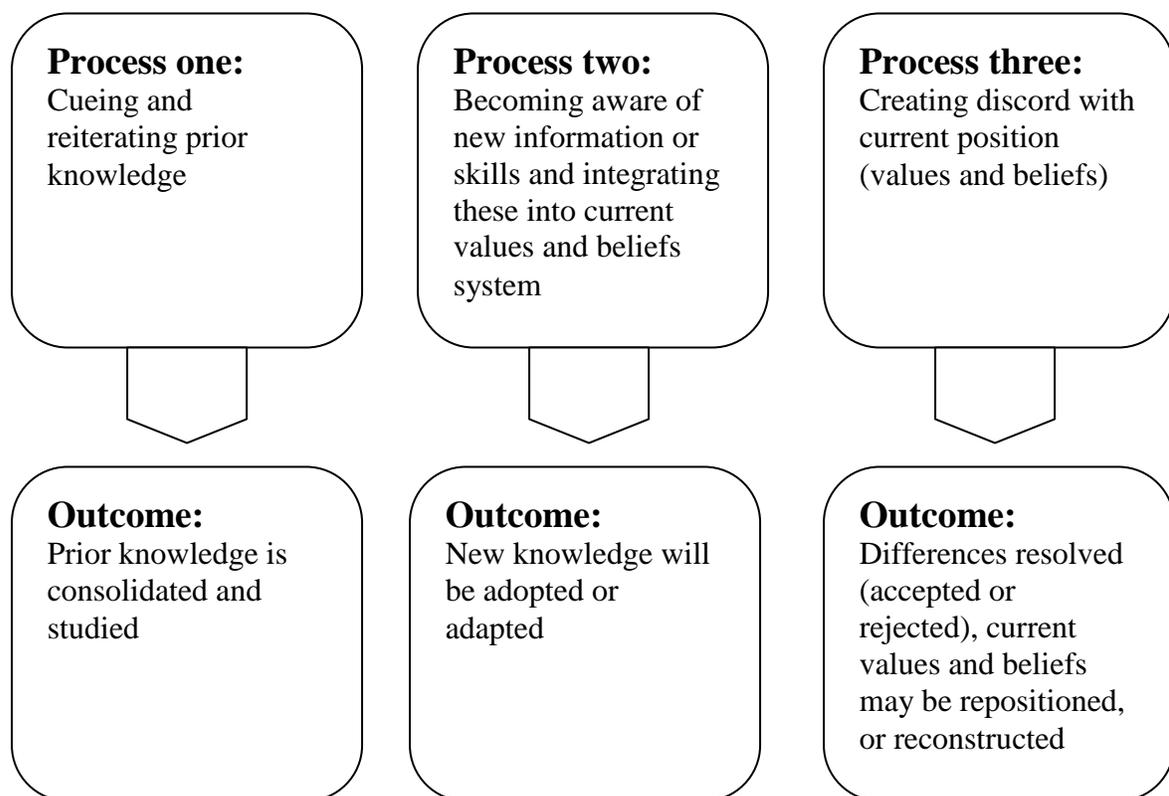


Figure 1

Processes lead to outcomes

Adapted by Diane Brooks from Timperley, Wilson, Barrar and Fung (2007, p. 8)

In this model, cueing prior knowledge is when the teacher practitioner recalls, through a learning experience, what they already know. In the second process, teaching practitioners develop an awareness of information or skills to enable them to be able to adapt these to their own contexts.

In the final process teaching practitioners cover a range of possibilities including such things as attitudes and values.

There are seven elements which are important for professional development that impact positively and substantively on student outcomes. These elements are: providing sufficient time for learning, engaging external expertise, engaging teaching practitioners in the learning process, challenging problematic discourses, providing opportunities to interact with other teaching practitioners, ensuring content is consistent with the wider policy and research trends, and having a leader in school-based professional development (Timperley et al., 2007). It is noted however that in the New Zealand context there are few studies that provide a description of the professional development, give evidence of teaching practitioner learning and change or student outcomes.

Nature of tasks in professional development for teaching practitioners

For professional development to be effective, a sufficient length of time, course members must engage in the learning process, be given multiple opportunities to learn through a range of activities to assist them to integrate the new learning into their own context, and be given opportunities to be part of a learning community to engage with other course members. Typically a professional development sequence starts with a rationale to engage followed by new learning. Activities are then introduced to assist the teaching practitioners to translate the new knowledge into practice. Repeated opportunities are provided to refine and revisit important content (Timperley et al., 2007). With the tasks and assignments to promote professional learning, there needs to be a clear alignment between the learning outcomes and the activities. No particular activity in professional development is more effective than others. The important factor is that teaching practitioners engage in a variety of activities that encourages them to learn to apply the new understandings and skills (Timperley et al., 2007). The learning needs to be relevant and applicable to the course members' own real-life experiences (Duncan, 2005).

Teaching practitioners, as students, learn best when they are:

actively engaged in meaningful activities; when they collaborate with peers, exchange ideas and provide and receive peer feedback; when they reflect critically on what they are doing; when they work on real-world challenging authentic activities; when the work is constantly evaluated; and when they are intrinsically motivated (Vrasida & Glass, 2004, pp.2).

Lu and Jeng (2006/2007) suggest that tasks should create an environment where course members can construct knowledge in ways which will have meaning for their own context furthermore, e-Learning Advisory Group (2004) argue that the learning needs to be meaningful to course members where they are supported in developing the skill of relating new material to what is meaningful to them while Anderson and Elloumi (2004) recommend that opportunities such as assignments and projects should be provided to allow course members to chose meaningful activities to help them transfer what they learn to real-life situations.

Learning communities

Learning communities are when members of a course get together in some manner (for example face-to-face or online) to share their learning. Teaching practitioners who are members of the same course at the same time are members of a learning community. According to Lave and Wenger (1991, p.89) a learning community is a community where “participation in activity about which participants share understanding about what they are doing and what that means for their lives and their communities” whereas Reil and Polin (2004) define a learning community as a community that has been intentionally designed to support the learning. It is suggested by Reil and Polin (2004) that there are three distinct but overlapping types of communities: task based, practice based and knowledge based. A learning community is useful for teaching practitioner learning as a “theory of how people learn, it is based on research within authentic adult working practices” (Leach, Harrison, McCormick & Moon, 2004, p. 40). They go on to add that the communities have members who share “artefacts and technologies, have geographical relations, share overlapping styles and discourse, and compete for the same resources” (p. 40). It is implied therefore that there are three essential dimensions that define such activities: joint enterprise, shared repertoire, and mutual engagement (Leach et al., 2004). Joint enterprise has an agreed, negotiated goal with mutual accountability; shared repertoire is idiosyncratic dialogue framing a

shared understanding of concepts, tools and resources of practice, and mutual engagement is a common activity with participants playing distinctive roles in joint work (Leach et al., 2004).

The teacher is the key to the management and success of an online community (Leach et al., 2004). In a traditional environment, the emphasis is on the teacher being the expert who transfers existing knowledge to the course members. However the information being processed may be changing which may require the relationship between the teacher and course members to become one of collaborative inquiry where the teacher is concerned with the strategies the course members use to access information and process that into knowledge (Capper et al., 2004). The qualities of a learning community that promotes teacher practitioner learning include supporting the participants to process new understandings and developing an understanding of the implications for teaching, and where the focus is on analysing the impact of teaching on student learning (Timperley et al., 2004).

ICT Professional Development

The use of technologies for teaching and learning is seen as driving a need for teaching practitioners to undertake professional development (Vrasida & Glass, 2004). In professional development that integrates the use of ICT into the classroom, changes in the classroom pedagogy occur. However Fullan (1991) cautions that the process of implementing educational change is complex and that many models to enable this to happen have been developed over the years and suggests that there are three ingredients necessary for innovation to be accepted: relevance, readiness and resources. As teaching practitioners are exposed to different technologies during professional development, new pedagogies may develop which they have not refined or implemented previously (Hoban, 2004).

Learning technological skills are of little use without learning how to use the digital tools to teach more effectively or how to use them to enhance their students' learning. The Technological Pedagogical Content Knowledge (TPCK) model emphasizes the knowledge that comes from the interaction of technological knowledge, pedagogical knowledge and content knowledge (Koehler & Mishra, 2008). The content knowledge is about the subject knowledge that is to be learned or taught. The pedagogical knowledge is about the processes and practices of teaching and learning.

The technology knowledge is about the ways of working with technology tools. The focus for ICT professional development should be on instructional strategies, course member needs, and addressing such issues as using technology to improve student achievement (SalJohn, 2003). She suggests that for those undertaking ICT professional development it is important for the participants to note what a lesson that utilises technology consists of as it is only when teaching practitioners are able to see the impact that technology can have on learning will they employ technology-enhanced teaching strategies. She further recommends that teaching practitioner professional development in ICT needs to be ongoing rather than of short duration. Koehler and Mishra (2008), in the same vein, suggest that learning skills with technologies is of minimal value without developing knowledge about how to use the digital tools to teach more effectively, developing understandings of the relationships between the technologies and content, and how to use the technologies in context. This supports Leach et al.. (2004) who suggest a model for professional teaching practitioner development that encompasses subject knowledge, school knowledge and pedagogical knowledge be adopted.

The literature on ICT professional development suggests that there are a number of gaps while the use of ICT in professional development continues to grow. The development of an overarching model of ICT use would be useful. In the New Zealand context, there are few studies that provide evidence of the use of ICT to promote professional learning. These studies tend to focus on giving teaching practitioners the skills to use the technologies rather than linking teacher practitioner learning to student learning (Timperly et al., 2007).

Online learning

Due to the influence of technology, many areas of society are undergoing significant changes resulting in uncertainty. These uncertainties may result in a different set of skills being required. For example, the learning environment may change with cognitive skills being central to learning outcomes. Technology has certainly changed the ways in which teachers can deliver courses for the focus of learning has shifted from being teacher driven to an emphasis upon the participant's understanding. Furthermore computers connected to others permit many different ways information can be transferred. Course members therefore need to be able to adjust to change and make sense of unlimited information (Capper et al., 2000).

While conventional distance education attempts to replicate traditional classroom teaching, the use of the World Wide Web (WWW) enables an alternative instructional paradigm (Dede, 1997). The WWW gives access to a wealth of information sources, networks of people and many different learning and research opportunities and where course members and teachers are able to connect with each other, learn flexibly and collaborate with others (Wheeler, 2001). However while the amount of information available is extensive, there are many inaccuracies and misinformation available on the WWW. Using the WWW as a resource for information points to an important role for the teacher which is to separate out the misinformation and help students develop strategies to do this by recognising the authenticity of the information (Wheeler, 2001). In a conventional face-to-face course the relationship that develops between the teacher and students is seen as crucial to its success (E-learning Advisory Group, 2004) and this is an important issue to be addressed in terms of the distance factor that is characteristic of most online courses.

Other factors apart from the relationship issue have also assumed importance. For example, due to the increasing complexity and diversity of modern society tertiary institutions have been rethinking their modes of delivery for students (Elloumi, 2004; Jeffrey & Atkins & Laurs & Mann, 2005). Many tertiary institutions are reframing existing courses and developing new courses for online delivery. Elloumi (2004) noted that some of these have not been successful due to the cost of technology, poor decisions, competition from other providers and a lack of business strategies. Furthermore, the failures in attempting to replicate classroom experiences did not result in a sustainable and profitable return from course members.

Although there have been considerable issues in the delivery of online learning as it has become more prevalent in the last decade, progressing from traditional forms of distance learning, it has been recognized as a force that has brought together culturally diverse course members. Indeed as Baker et al.. (2003) note the online learning environments aim to provide flexible teaching and learning with greater access to a wider community. McLoughlin (2000) suggests that the pedagogical values in one culture may be inappropriate to that in another and that the use of technology itself “may be imbued with cultural values and assumptions” (p. 231). Furthermore, teaching practitioners need professional development that will fit into their busy schedules (Dede, 2006) and the online learning environment is a way to accomplish this. Duffy, Kirkley, del Valle,

Malopinsky, & Scholten (2006) suggest that while online learning environments for professional development needs to be flexible allowing self-paced learning, they should also provide for just-in-time access giving freedom to register for a course at any time. They argue that freedom of access is crucial if professional development is to meet the needs of teaching practitioners and the constraints they work under.

Retention of course members is another factor that has been examined and there are many studies relating to course member retention in a web based course. Many of these studies reveal that course members taking web based courses drop out of the course or are awarded an incomplete status more frequently than those taking traditional face-to-face courses (Kember, 1989). This is however a universal finding because Fredericksen, Pickett, Shea, Pelz and Swan (2000) found that the completion rates for online courses was slightly higher but statistically similar to face-to-face courses. There are of course many reasons for those dropping out of web based courses such as individual motivation, lack of teacher feedback or support, lack of knowledge about online courses, and lack of IT skills (Choy, McNickle, & Clayton, 2001; Easlerling, 2001). In one study, Kim and Moore (2005) investigated how course members' characteristics and behaviours affect their satisfaction and learning experience when using web-based courses. They suggest that the number of courses being offered in an online environment has grown rapidly and because some students were not familiar with the technologies, they faced challenges and were often dissatisfied with the learning environment resulting in course dropouts. Once again, not all research studies completely support these findings. For example, Irons, Jung and Keel (2002) argue that students living in different locations was an important element to be considered as they found that course members in urban areas were more likely to express satisfaction with web-based courses due to access to the technologies such as broadband rather than dial-up. Schrum and Hong's (2002) assessment of the elements related to successful web-based learning provides a good summary of the key factors that need to be considered in developing online learning. These elements are: access to the tools required, experience with the technologies, learning preferences, study habits and skills, course member's goals and purposes, lifestyle factors and personal traits and characteristics.

Design of the online learning environment

Despite many courses are now being offered online, Dede et al.. (2006) contend that little is known about best practices for the design and implementation of these online professional development models. As much of the information on the internet is inaccurate or contains misinformation, it is envisaged that one of the roles of a teacher within the learning environment is to sift quality information from misinformation (Wheeler, 2001). Previously materials were organised and presented in a sequence, the online learning environment allows course members the freedom to access materials in a variety of ways with flexibility and choice in the use of resources (Oliver, 2001). Oliver (2001) suggests there are three critical elements for those designing online learning environments. These elements are: the learning activities, the learning resources and the learning supports. Duffy et al.. (2006) argue that there are four design commitments that are crucial to the effectiveness of professional development in an online environment. These features are: to ensure the materials and learning experiences are relevant to the course members, to create a theoretically and pedagogically sound online learning environment to support and scaffold course members' engagement and reflection, to provide learning opportunities that offer ease of access and flexibility, and to design a model of online professional development that is sustainable.

Interaction has become a significant design feature. Designers of online learning environments create the infrastructure with relevant tools to enable course members to engage in social dialogue and to share information (Job-Sluder & Barab, 2004). A shift in pedagogy now has online courses valuing interaction amongst the participants and encourages participants to reflect on their own teaching and learning (Capper et al., 2000; Vrasidas et al., 2004). But Schlager and Fusco (2004) suggest that many educational practitioners find it difficult to reflect on their own practice and that simply having the ability to interact more frequently and for longer durations in an online learning environment does not translate directly into high quality learning experiences. Similar to face-to-face this requires the teacher in the online environment to support the course members with their reflections to enable them to become reflective practitioners.

Relatively few studies have gathered data from participants about the design of the online environment. In one study about designing websites for learning and enjoyment, Lin and Gregor

(2006) interviewed five participants and found key features for encouraging online learning and enjoyment included: user centred design, attractive appearance, increasing interaction with course members, ease of use and. provision of staff to help with technical and course queries, and provision of useful hyperlinks. Another important valued feature was accessibility at different times (known as asynchronous discussion) whereby people communicate using the same virtual space/system, but there is a delay between the user sending a message and receiving a response. In addition they suggest that the visual design of the web site is important and encourages course members to maintain concentration. These are important points for those designing their online learning environments to consider as are those of Palloff and Pratt (2001) who suggest that a well constructed course is one which is logical in its design, easy to navigate and is inviting to the user. This is supported by Lin and Gregor (2006) who suggest that the structure of the web site should make it quick and easy to navigate to find what they want and Trewern and Lai, (2001) who highlight the importance of having a structured learning environment to ensure that course members are not confused. Essentially what this is means is that if the components in online environments are not organised in a meaningful way they are more difficult to understand (Fahey, 2004).

As in all learning sequences, having clearly stated learning outcomes describing the intent, in terms of the knowledge skills and attributes, of the lesson are important components of the online learning environment (Ally, 2004; Davis, 2004). This enables course members to approach the lesson with a clear view to content so they can gauge whether they have achieved the learning outcomes at the conclusion of the lesson. The learning outcomes are able to be translated into lesson content and resources to enable the course members to achieve the goals as suggested by (Davis, 2004).

Interactions in the online learning environment

As previously indicated interaction in the online learning environment has become an important design feature but what is the nature of such interaction? Some studies have been undertaken to provide such information.

Discussion lounges hold valuable qualitative data that can authentically provide evidence of what is learnt and how the knowledge is constructed (Lu & Jeng, 2006/2007). In a study of online professional development for teaching practitioners, Duncan (2005) explored the eight participants' reactions to their first online course. These participants valued being acknowledged, respected, building their prior knowledge and having the course relevant and applicable to their own real life situations. Some suggest that experience with the technologies has little influence on the course member's learning performance, although this can affect the course member's level of satisfaction. However a critical factor impacting on satisfaction with web-based learning is the teacher valuing the course member's performance - for example, through the use of discussion which is authentic, frequent, and characterised by positive and enthusiastic responses (Fredericksen et al., 2000). Supporting this viewpoint, Choy et al., (2001), in their research study, found that course members in an online course felt that regular contact with, as well as quick responses, by the teacher were also essential elements, both for motivation as well as for direction. Others however do not support the role of the teacher being an active participant in the online forums (Hewitt, 2004) preferring instead to monitor online progress and mentor individuals. In addition clear statements about what they were going to learn and clear information about the course before it began were considered important by course members (Hewitt, 2004). Gorsky and Blau's (2009) study about online teaching effectiveness used the data gathered from two teachers and forty-two graduate students via survey data, log recording active participation, and from the discussion lounges. This study suggested that the teacher's presence, particularly facilitating interactions, played an important role in achieving and sustaining the learning. However Derry, Seymour, Steinkuehler, Lee and Siegel (2004) point to the use of discussion lounges having a low level of challenging discussions amongst educational practitioners as they often equate criticism with personal inadequacies.

In an exploration of what participants valued in specific terms, Green and Magliaro's (2004) study investigated how course members perceived the helpfulness, in their online learning environments, of computer-mediated activities such as contributing to chat rooms or reading and responding to threads. They found that course members perceived contributing to chat rooms was significantly more important than reading or responding to the threads in a discussion lounge.

Another factor considered important to consider is the peer group. Many teaching practitioners identified a need for a peer group in an online learning environment so a sense of camaraderie could be fostered and peers could share stories about their experiences and learning. Duffy et al. (2006) argued that a peer group could be distracting to the learning and lead to superficial discussions, which although may result in social satisfaction, may lead to a low level of learning. They suggest that learning with a group may not be critical for effective professional development as their study suggested that their course members in an online learning environment were focussed on tasks which were relevant to their classroom and they viewed collaborative activity as distracting.

Online learning advantages

As technology has developed considerable effort and finance has been directed towards online learning as it has a number of distinct advantages. As online learning, by its nature, provides flexibility, Spender (2001) asserts that online learning is the next generation of learning. This is in direct contrast to learning a decade ago when learning was generally face-to-face and there was no flexibility for the course members concerning where and when they engaged in their learning.

A strength of online learning is that it gives course members time to ensure that they have the understanding of what they are reading. Consequently there is time to consider and compose their responses by providing opportunities for reflection in asynchronous discussions. This may be helpful to course members as some are able to find their voice in the mediated interaction but may not contribute in a face-to-face environment (Dede et al., 2006). Courses, rather than being linear, may be more flexible allowing for course members to use a non-linear progression for problem-solving (Wheeler, 2001). Furthermore, online courses allow members to acquire new skills without interruptions to their working lives and frequently come at a reduced cost in relation to face-to-face courses. Of course online courses need to be planned for, grounded in an understanding of the roles of the teacher and course members, and an understanding of how people learn (E-learning Advisory Group, 2004).

Other benefits of online learning are related to the capability to deliver courses with efficient and timely access to learning materials as well as allowing teachers to tutor from any location at

anytime and update online materials easily (Anderson & Elloumi, 2004). As the shelf-life of knowledge is usually very short, one way that course members can meet the demands of their learning, is to engage in online learning at a time and place convenient to them (Spender, 2001). In the online environment course members may view each others' work and give feedback to each other. Knowing that they have a waiting audience to view their work can be a motivating force for some course members (E-Learning Advisory Group, 2004). This is significant because one benefit in online courses is the opportunity for reflection in an asynchronous interaction (Dede, et al., 2006).

Online learning disadvantages

Online learning in education also has a number of disadvantages and restrictions. For example Means, Toyama, Murphy, Bakia and Jones (2009) suggest a barrier to making the most of online learning can arise from the course member's familiarity with face-to-face classrooms and assumptions that this is how learning occurs. There may be a tendency towards course members having a greater interest in superficial learning to pass a course rather than in increasing understanding of the course content.

Another set of potential limitations relates to the teacher. A major missing component in many online courses has been the lack of adequate training and support which has contributed to barriers for those preparing the courses. This includes factors such as: increased preparation time, lack of awareness of the benefits of distance education, adequate technical support and access to the required technologies (Curry & Tu, 2003). Additional time demands often problematic as online teachers have found that responding to student emails requires additional workload which is not allocated in their teaching time allocation (E-Learning Advisory Group, 2004).

In a study on course member's perceptions of the ease of use of the technology in an online learning environment it is suggested that for a teacher wanting to improve course members' attitudes towards an online learning environment, focusing on improving student perceptions of the usefulness of the system would be beneficial (Pan et al., 2005). Bonk's (2004) study identified overwhelming tasks, confusion, excessive data and the failure of some course teachers to ensure adequate integration of learning content to real-life situations as some of the problems

associated with online learning. An important consideration therefore is to remember to be cautious in the use of the technology because as it becomes more powerful and widely used, it can have unintended effects on people, activities and communities (Hoban, 2004).

The teacher's role in online learning course delivery

There has been considerable discussion about the nature of teaching and learning online learning environments. Overall however there is little substantive research data in this area. Timperley et al. (2007) suggests that there is a lack of research into the role of information technologies in promoting professional learning. There are articles and policies, not all based on research, to guide online teachers in their role. What is apparent however is that there are, at present, many gaps in our understanding of the demands that may be placed on an online teacher. In addition, our understanding of the opportunities that an online learning environment may offer is constantly changing as the technology evolves.

An important principle relating to all the learning-teaching environments is the nature of the teaching and characteristics of that learning environment. In a meta-analysis study Alton-Lee (2006) noted that quality learning appears to be a key variable in explaining the levels of member participation, involvement and achievement. The teacher needs to consider what course members need to know in order to deepen their professional knowledge and extend their skills so that they can have a positive impact on student outcomes (Timperley et.al, 2007).

Some of the challenges facing the online teacher include: identifying and meeting the needs of the course members, designing experiences to meet the objectives of the course and ensuring that the interactions are designed to enrich the learning (E-Learning Advisory Group, 2004; Timperley et al., 2007). In an online learning environment a teacher needs a further range of skills in addition to those in a face-to-face environment. They need to be skilled users of the technologies themselves, as well as being able to help course members to understand or use the tools.

Many of the skills needed by the teacher in online environments are similar to those required by any teacher in a professional development programme. Specific honing and adaptation of many

of these skills are needed however the teacher needs to develop a teaching presence that includes knowledge of the subject area, the design and management of learning, and the facilitation of active learning (Gorsky & Blau, 2009). An online environment with defined sessions and clearly stated learning outcomes which describe the intent of the knowledge skills and attributes, enables course members to approach the session with a clear view of the content. They are then able to gauge whether they have met the outcomes at the conclusion of the session (Ally, 2004; Davis, 2004; E-Learning Advisory Group, 2004). By using the learning outcomes the teacher is then able to translate these into the session content and identify resources to enable the course members to achieve the goals (Davis, 2004). Teachers also need to develop their skills to be able to respond to course members' needs by developing a set of online activities that are adaptable for each course member's needs (Anderson, 2004). These activities should be purposeful and relevant (Fahey, 2004). Professional development activities for teaching practitioners need to include a range such as: engaging with professional readings, authentic experiences in action, examining student understandings and should provide the course members with opportunities to deepen their professional knowledge and skills (Timperley et al., 2007). Lu and Jeng (2006/2007) suggest that activities should be done in an environment where course members can construct knowledge in ways that will have meaning for their own experience.

Facilitating online learning discussions is a skill teachers need to develop so that discussions become collaborative enabling course members to share their learning experiences. Communicating electronically presents its own issues and care needs to be taken with content, tone and length of the messages. The most important role of the online teacher is to ensure a high degree of participation and interaction (Woods & Baker, 2004). Teachers need to actively participate, model appropriate messages and responses, and be vigilant to ensure the communications in the site are not abused in ways that could give offence to some students (E-Learning Advisory Group, 2004). In a study by Veseley, Bloom and Sherlock (2007) the students perceived the teacher modelling as being the most important element in building an online community. In elaborating upon this idea, Hult, Dahlgren, Hamilton and Söderström (2005) found that course members suggested that in discussion lounges the teacher should participate fully, develop new themes if course member's postings declined, and remain alert to course member's ideas that might enhance the exchange of ideas and knowledge. This is supported by

Gorsky and Blau (2009) who argue that teachers need to be seen online regularly by posting and responding in a timely manner and modelling good online communication. They also suggest that course members place a high priority on the role of the teacher to maintain momentum in discussions.

In one study Ukpokodu (2008), which drew upon teachers' reflective perspectives on pedagogies that enhance learning in an online course, a number of key variables were identified. There were 35 participants in this study and data was collected from ten surveys, four interviews, course evaluations and document analysis from the course members' written work. It identified a range of factors that enhanced the learning: teacher relationships, flexibility warmth, encouragement, frequent communication, sharing ideas, and informative prompt feedback. This was supported by Fahey (2004) who further suggested that initially the feedback needs to be more frequent to ensure course members have a positive initial experience in the online environment.

As previously identified another important factor for the teacher relates to the interaction between teacher and learner. E-Learning Advisory Group (2004) contend that the relationship between the teacher and course members is critical to the success of the course member and therefore the physical separation is a significant feature in the online environment. The online teacher can foster a friendly discussion forum climate and develop relationships with course members by incorporating real-life stories and humour (Woods & Baker, 2004). However, in her study on course members' reactions to their first online professional development course, Duncan (2005) found that most email interactions were task related with little interaction that was general, non-course related or social interaction. A reason she found for this was that the participants had prioritised the demands on their time, and hence this has implications for the teacher to make interactions meaningful, relevant and timely.

Another reason for purposeful interaction relates to the lack of personal contact, lack of body language and not necessarily knowing the context of the discussion. The anonymity of the Internet was seen both as a benefit to some course members where they felt they could speak more freely while others felt using the Internet chat room was a hindrance to a good conversation (Bonk, 2004). However Light, Colbourn and Light (1997) suggest that some course members are

hesitant to express their opinions online for others to see as they found the idea of contributing daunting and worried about how others would view their thoughts. For those designing online learning environments, this research suggests that the teacher needs to provide opportunities to enhance the social nature of learning as well as opportunities for reflection. Developing a social presence in the online environment is the ability of the teacher to project themselves and develop personal and purposeful relationships (Gorsky & Blau, 2009). They suggest a correlation between social presence and perceived learning including course satisfaction. However they caution that further research is need to ascertain whether or not the social interaction affects the actual learning. They argue that that the social interaction may be a key element in the success or failure of an online course.

During the interactions it is important at the commencement of the course that online teachers give course members the opportunity to share their understandings, culture and any other unique features about themselves which can be done through virtual 'ice breaker' activities that have been designed by the teacher (Anderson, 2004; E-Learning Advisory Group, 2004). The online teacher can also provide 'just-in-time' learning through the use of online step-by-step tutorials and videos for course members to access when they need these (SalJohn, 2003). Teachers need to provide ongoing formative assessment and give specific feedback about the links course members are making between their existing knowledge and the new ideas and skills they are developing (E-Learning Advisory Group, 2004).

Overall, it has become apparent that the teacher who designs the course needs to be aware of pedagogical approaches, course members' needs, learning objectives, activities, delivery methods and the time required to develop the course (E-Learning Advisory Group, 2004). As much of what the educational practitioner needs to know involves learning in the context of practice, resources for the improvement of teaching can be created, by the teacher, to be used in the context of their daily practice (Schlager & Fusco, 2004).

Many contend that the role of the teacher will change and that new patterns of learning will become apparent. Teachers will become learners as well as enablers and designers of the learning environment while the course members will become knowledge gatherers (Leh, 2001; McIsaac

and Craft, 2002; Wheeler, 2001). In this role the teacher becomes the 'expert learner' while the student becomes a 'novice learner' and these roles may change over time (Leh, 2001). Novice learners no longer just learn from the teacher but may learn from other course members or from other members of the wider community (Leh, 2001). Brown, (2005) suggests that due to the impact that Information and Communication Technology (ICT) has had on education a new paradigm is emerging, knowledge navigation or 'navigationism'.

It is clear that more research is required in the area of online learning. The nature of online learning, professional development and online learning and the teacher's role all need further consideration. Although Leach et al.. (2004) suggest that more research is required before we can fully understand the trends appearing in the online learning environment, there appear to be three emerging factors which have implications to the way in which the institutions deliver their courses. According to Jeffrey et al.. (2005), the changing face of the student body, advances in technology, and new educational goals are factors that need to be understood in this research environment.

Research questions

This study investigates one main research question:

What pedagogical practices and qualities does a teacher in an online learning context need as perceived by teachers undertaking online Professional Development in ICT?

The context is an online professional development course for teachers who are gaining skills and knowledge to use in their own practice. Specifically, the study is concerned with the following guiding questions:

- ✧ What do course members, who are undertaking professional development, value?
- ✧ In what ways does the teacher contribute to the learning in an online context?
- ✧ What key learning experiences contribute to sustaining the learning?

The literature discussed in this chapter provides the online teacher with guidelines to consider when designing the course and the online learning environment. A learning environment which is attractive and easy to navigate is important. Designing opportunities for interaction and reflection enables the learning environment to be more than just a repository for resources. For those designing educational professional development courses it is suggested that opportunities are provided to allow the teaching practitioners use the skills and knowledge in their own context.

This study builds on other studies that investigate course member's perceptions of the role of an online teacher and the impact the online teacher's role has on the course members' experiences of an online professional development course.

Chapter Three Methodology

Introduction

This chapter will outline the methodology used in this study and the justifications for the research design. This chapter is divided into the following sections to address these issues including: an overview, a rationale for the research focus, the setting, research design and data collection, limitations of the study, and ethical considerations. A summary conclude the chapter.

Overview

The aim of educational research is to improve teaching and learning systems and practices for the betterment of the teaching community and society in general. As it focuses on people, organizations and interactions, educational research is said to fall under the broad category of social science research (Burton & Bartlett, 2005; Mutch, 2005). Teaching practitioners often find it difficult to look critically at their own practices (Whitehead, 2004) but those wanting to find out about their own practice do this by using a systematic and intentional inquiry (Cochran-Smith & Lytle, 1993). Indeed teachers often research their own practices in order to understand and change their modes of teaching and they use a range of strategies such as case studies, action research and evaluation studies to accomplish this. It is important that teachers develop these skills to enable them to look at the topic from different viewpoints (Burton & Bartlett, 2005; Clough & Nutbrown, 2002) and to provide possible solutions to questions, so that researchers and others who are interested may then act on the findings in appropriate ways.

In the past 50 or so years, interpretive research has commanded a significant place in educational research with researchers looking to find answers to questions relating to educational problems. It is a way to explore and understand data in order to discover understandings or explanation from it and it concentrates on the ways in which participants construe their social world (Cohen, Manion, & Morrison, 2007; Morse & Richards, 2002). Interpretive methods gained popularity in educational contexts because it recognised the views of all, including the 'powerless' (Bogdan & Biklen, 1998, p. 18). The central focus is to provide understanding of a setting or activity from the perspectives of the participants (Gay & Airasian, 2000). As these researchers are interested in

the participants' truth as opposed to objective truth, the perceptions of participants are crucial as each person is conscious of their own responses (Burns, 2004; Gay & Airasian, 2000). "Social reality is the product of meaningful social interaction as perceived from the perspectives of those involved, and not from the perspectives of the researcher" (Burns, 2004, p. 388). This allows researchers to describe the experiences of the participants and how a particular setting affected them. This view is supported by Burton and Bartlett (2005) who suggest that the researcher is seeking to understand and portray the participants' perceptions and understanding of a particular situation. Morse and Richards (2002) claim that interpretive research may be used by the researcher, to understand people's own accounts of their behaviour and experiences.

Methods used in interpretive research often involve intensive participation in a field setting, collecting data from field activities, followed by the researcher synthesising and interpreting the meaning of the data. The sources of data for interpretive research are from real-world situations and are descriptive. The data are analysed inductively with generalisations reached from collecting or observing multiple specific instances (Gay & Airasian, 2000). Interpretive research may allow the researcher to describe what is actually going on in a particular setting and the participants' perceptions of the events. The researcher may find data through observations or discussions between the researcher and participants (Burton & Bartlett, 2005; Fouché, Lunt, & Yate, 2007). While undertaking interpretive research, the researcher may find that the focus of the study may change as new themes emerge (Morse & Richards, 2002).

A strength of interpretive research is that the researcher is able to gain the participant's view of the experiences allowing documentation of the social and educational interactions (Burns, 2004; Gay & Airasian, 2000). Using such methods, the researcher may gain insights into refinements and intricacies that may be missed by other research methods. Interpretive descriptions can suggest relationships within the setting, can highlight subtleties in participant's behaviour, provide insights into reasons for action, and provide information on teacher understandings (Burns, 2004; Burton & Bartlett, 2005). Looking at alternative viewpoints of activities provides teachers with insights into seeing how things may differ to what they may have thought in relation to their own practices (Burns, 2004; Mutch, 2005). While interpretive research does not provide teachers with easy answers it does provide practical alternatives. Weaknesses in

interpretive research include subjectivity, therefore making it difficult to apply conventional standards of reliability and validity. This may present a difficulty for replication, possible researcher bias while gathering data, as well as time needed to undertake the research using this approach (Burns, 2004; Gay & Airasian, 2000).

Within interpretive research, a case study is one which focuses on “a bounded object, usually a person, group, setting, or concept” (Mutch, 2005, p. 216). Case studies are frequently used in an educational context and may be used to gain in-depth understanding through rich subjective data from the participants’ viewpoints (Burns, 1990; Stake, 2003). This approach is not a new form of research, although over the years there has been debate relating about the reliability of the findings (Becker et al., 2005). A case study focuses on a single event or setting and so enables the research to focus on the deeper complex issues and to learn about others' viewpoints and how they may be taken into account. A case study is often used in education because it allows the researcher to learn about their practices and student learning within their educational context (Abel, 2005; Haigh, 2004; Stake, 2003).

Yin (1993) maintains that there are three approaches to be used when designing a case study: exploratory, explanatory and descriptive. He recommends that a case study include these sections; an overview of the project, field procedures, questions, and a guide for the report. A case study can use a triangulated research strategy by collecting multiple sources of data. The object is to include different angles and perspectives in order to gain a greater understanding as well as providing the validity of the data gathering procedures selected (Burton & Bartlett, 2005; Yin, 1993).

A weakness of the case study is that it is usually dependent on a single case which does not make it capable of generalising the results to other settings (Burns, 2004; Cohen et al., 2007).

Corcoran, Walker and Wals (2004) argue that case studies may “fall short due to a lack of theorizing about the research methodology or an understanding about the methodology” (p. 1). They contend that researchers using this approach need to carefully consider the manner in which they report their findings. For example, Yin (1993) emphasises the importance of clearly articulating one's speculative point of view, determining the goals of the study, selecting

participants, selecting the appropriate methods of data collection, and providing some consequence to the composition of the final report. In support of Yin's view, Zeni (2001) suggests that the final report should be written in a style which does not exclude the school community but written in a way that communicates to both schools and universities. These reports should provide a critical analysis and reported in such a way that the findings may have value for others. Those arguing against case studies say results are difficult to generalize because of inherent bias and because they are based on interpretive one-sided data, which is only relevant to a particular context (Becker et al., 2005; Burton & Bartlett, 2006; Cohen et al., 2007). Case study work however is sometimes undertaken by individuals who have little interest in the generalisations but instead their research aims to develop understandings of what is important about that particular case in its own world (Stake, 2003).

I was particularly interested in gaining the participants' insights into the role of the teacher in the online environment. I therefore gathered data related to the interactions made by the participants and the teacher in an online setting, participants giving feedback to each other in the online setting as well as listening to the participants in telephone interviews in an effort to understand their own experiences. This study focuses on one setting, an online educational course where all the participants were enrolled course members. As this study focuses on understanding course members' perceptions of the teacher's role in an online course environment, the use of interpretative research design using a case study approach seemed an appropriate methodology for this study. Insights gained from this study will hopefully guide me in my work as an online teacher.

Setting

This study focussed on an online course which I have taught for a number of years. Initially the course was taught in a face-to-face environment. The course is now online and is delivered using an array of media including PowerPoint presentations, video clips and hyperlinks as well as relevant Word files. The content focus is on integrating ICT tools into the classroom and the use of these tools for administration purposes. The course is for professional development for teaching practitioners. It is a one semester course which is delivered totally in an online

environment. This environment includes asynchronous discussion lounges, and sharing areas. This allows course members to interact with each other as well as sharing files and adding feedback to other course members. Teaching practitioners complete this course as part of a post graduate diploma. The teaching practitioners generally live in New Zealand although some are from other places such as Japan or Korea. Within this setting the online interactions were a possible source of data.

Research Design and data collection

This study investigated the role of the teacher in an online professional course and examines the participants' experience of how that teacher's role impacts on their learning. The study is interpretive in design, and included a range of methods for data collection. I decided to use the following methods of data collection: questionnaire, the online course interactions, the email exchanges and interviews. These appeared to be the most appropriate to examine the perspectives of course members. I was mindful of what Burns (2004) emphasised about being interested in the participant's own realities to allow me to describe the participant's experiences and how the setting affected them.

At the start of the course all enrolled course members were sent a letter (Appendix One) inviting participants to take part in the research. Five course members agreed to take part in the research study.

These five participants were sent a questionnaire at the start of the course (Appendix Three) by email to complete and return. The questions in the questionnaire were shaped by a pilot study completed in the previous year with participants in the same course. The purpose of the questionnaire was to find out relevant background information about the participants. This would enable me to have an understanding of their reasons for undertaking the study. In the pilot study I also wanted to find out how easy the design of the form would be for them to complete. For example, I used drop-down menus to make completing these forms as easy as possible for the participants and kept the layout clear and uncluttered. I was also guided by Mutch (2005) who advocated keeping the instructions clear and precise and the questions avoiding built-in assumptions, being leading or being double-barrelled. Questionnaires have the advantages of

being inexpensive, confidential, having all participants receiving an identical set of questions which are phrased in the same way, and leave the respondents free to answer in their own time and at their own pace. However questionnaires have the disadvantages of opportunity to acquire supplementary data, a possibility of misinterpretation by the respondents, being difficult to obtain in-depth personal responses, and a danger that the researcher may read an opinion into the data that is not substantiated by the question (Burns, 2004; Gay & Airasian, 2000).

The second source of data related to the contributions of participants in the online interactions. During the course all comments made by these participants or the teacher in the online environment were collected as were all email exchanges between the teacher and the participants. The comments included those in the discussion lounges as well as when participants were asked to give feedback to each other in shared areas of the web site.

After the course was completed all participants were contacted by email and times arranged for a telephone interview. All interviews were conducted over the telephone using a speaker phone. These conversations were taped and then transcribed verbatim by the researcher. The technology failed with one of these interviews. The other four interviews were able to be transcribed.

This study used participant observations. This is where an observer engages fully in the activities being studied but is known to the participants as a researcher. Advantages of participant observation include the ability to gain insights and develop relationships with the participants. Being a participant observer provides a broad depth of information about the participants or the setting. Disadvantages include that the researcher may lose objectivity and become emotionally involved with the participants or the researcher may have difficulty participating and concurrently taking field notes (Gay & Airasian, 2000). As the course is online, the danger of becoming emotionally involved is lessened as the relationships developed are different than observing in a face-to-face situation. As the course progressed, I developed a professional relationship with all course members via interactions and email correspondence. Due to the flexibility of participating in an online learning environment, possible tensions caused through simultaneously participating and collecting data did not occur.

Using interviews allowed the researcher to obtain information where they could explore and probe a participant's responses to gather in depth data about their experiences and feelings (Gay & Airasian, 2000). I used partially structured interviews as described by these authors where questions were formulated but the order I asked the questions depended on the conversation and responses from each participant. The interviews focussed on the participants' perceptions of the online course and the teacher's role in it as well as their own learning during the course. Questions were added or modified where it was deemed appropriate such as in one interview where the participant was discussing her own pedagogical shift and I wanted to probe this concept. Open-ended questions were designed to set a context for the interview therefore allowing participants more freedom to answer the question. Closed questions were not included as they limit interviewee responses and thus restrict the rich data that was central to the research question (Kock, McQueen & Scott; 1995 Mutch, 2005). Open-ended questions can be analysed by interpretive methods (Kock, et al., 1995; Mutch, 2005) and also allow the researcher the opportunity for further questions to clarify points that may be open to different interpretations allowing the course members' voice to be reported accurately.

Advantages of using interviews include: flexibility, response rate, interaction assisting in the establishment of rapport, ability to record for later analysis, and a higher rate of motivation among participants. In addition probe questions may be used to elicit further information. Disadvantages of using interviews include: cost in terms of time and money, time-consuming to use, the bias of the interviewer, limited numbers of participants due to time constraints, participants may feel that they are being 'put on the spot', the flexibility afforded by the interviews which may generate difficulties when attempting to categorise or evaluate the responses, and the complex scoring of unstructured items (Burns, 2004; Gay & Airasian, 2000).

Ethical issues

In this study key ethical issues were the consideration and care for the people and institutions involved. Many educational case studies are often undertaken by people who have, either directly or indirectly, power over both those being studied. This conflict of interests can impede the reliability of the study (Becker et al., 2005). Participants need to be made aware that non participation in the research will not result in any negative actions and nor will those participating

gain preferential treatment (Burns, 2004; Ebest, 2001). While undertaking research where the researcher is also the teacher, the teacher continues to teach while the goal of the research is to improve their practice. As such, this research needs to happen in collaboration with those being researched so that participants' perspectives are valued (Van der Berg, 2001). As suggested by Delamont (2000), all course members were aware that I was researching the course, although not all course members were participants. I also kept in mind that relationships between the researcher and participants may be a problem for the researcher as the presence of the researcher in a setting may have a reactive effect on the participants. The interpretive researcher needs to be careful about anonymity when presenting the results of the study (Burns, 2004).

Course members also place a trust in a teacher and have an expectation that they will not be harmed in any way by the teacher (Zeni, 2001). Those being studied need to give informed consent, be aware of the confidentiality of any data, and know whether they are able to opt out of the research at any time (without penalty), and those researching need to hold themselves accountable, to the participants, that these conditions are met (Ebest, 2001; Mutch, 2005; van der Berg, 2001). All participants were sent a letter (Appendix One) which described how they would not be disadvantaged or advantaged in any way by participating in the study. The letter also outlined the purpose of the study, how data would be collected, how confidentiality would be met, and how they could opt out of the study at any time without penalty were all described. A signed letter agreeing to participate in the study was then sent to me by those course members agreeing to be participants (Appendix Two).

Burns (2004) cautions that participants, who are enrolled in courses where a research study is being undertaken, may feel pressured to partake in the study. This is due to believing that an undesired effect such as their marks may be adversely affected. All participants in this study were volunteers. All enrolled members of the course were sent letters outlining the study and asked if they wished to participate. Five course members agreed to do so. All course members were assured that there would be no penalty for not participating in the study. As course members were all busy practicing teaching practitioners as well as doing their own study I realised that by asking them to participate in this study was asking them to do extra in terms of filling in the questionnaire and partaking in an interview. At the completion of the course, the telephone

interviews were conducted. These interviews occurred two or three weeks after course assignments had been marked and returned to ensure that no participant felt that they may be disadvantaged by anything they said.

Burns (2004) recommended that participants must understand the nature and purpose of the research and consent to participate without coercion. He emphasised that participants receive information outlining the purposes of the research, its procedures and the right to withdraw at any time which makes the situation clear to the researcher and the participants, and then sign forms to acknowledge their understanding and consent. All participants were assured that their participation was entirely voluntary and that not participating would not involve a penalty or loss of benefits to which they might otherwise be entitled. They were assured that they were free to withdraw from the study at any time without penalty and without providing any explanation. It was made clear that they could decline to answer any questions. They understood that their participation in this study was confidential to me and my supervisors so no one else was informed and their names are not be used in the study. Participants were informed that no information that could identify them would be included in any part of the study or in any publication which may arise from it. In addition, following the interviews the tapes were transcribed and tapes stored in a locked filing cabinet for 5 years with the only key being held by me. An explanation was given to the participants about being asked to contribute to a discussion lounge during each course session which I would like to read and use some of these reflections which are relevant to the study and provide insights into the teacher's role. They were assured that no names or identifying data from these reflections would be used. I protected the participants' right to privacy though a promise of confidentiality as suggested by Cohen et al.. (2007) and avoided names or any information which may identify participants or their workplace in this report. This information is known only to me and my supervisors.

Participants

All course members were in the educational and included early childhood, primary and secondary teaching practitioners. Course members were from throughout New Zealand except for one member who was currently teaching in Japan. There were ten teaching practitioners on this course and all participants completed the course.

At the start of the course all enrolled members were sent letters and forms asking them to take part in this research project. Five course members, three female and two males, agreed to participate and completed consent forms.

There was one participant in the 21 to 30 age group, one in the 31 to 40 age group and three in the 51 to 60 age group. The three in the 51 age group all had over 20 years teaching experience. One participant is a head of department at a secondary school. Two others have classroom responsibilities and release time for management responsibilities. These responsibilities include being an ICT facilitator for a secondary school while the other was the deputy principal for an intermediate school. Two participants were on study leave for the year with one of these participants usually being a teaching principal while the other taught at year 3 level.

All participants had taken online courses prior to the current course. One participant regularly enrolled in professional development courses as part of his commitment to being a life long learner and was not currently studying for any particular qualification. Judy and John were completing a Graduate Diploma ICT in Education, Shirley was studying for a certificate in online learning and Margaret was upgrading her teaching qualification to a bachelor of teaching and learning.

Data analysis

This study attempts to give voice to those course members involved in online learning environments. Data included participants' online interactions, email exchanges, a questionnaire and partially-structured telephone interviews. The multiple data sources ensured the trustworthiness of the data (Cohen, et al., 2007). My task was then to find what was important in the data, why it was important and what can be learnt from it. This study used a thematic analysis strategy to identify categories from the data. This section describes the data analysis and decisions made by the researcher to ensure credibility (Mutch, 2005).

It is suggested by Mutch (2005) that identifying themes and recurring ideas is the most challenging phase of data analysis. Therefore, as suggested by Gay and Airasian (2000), during

the data analysis I had the research focus typed on a large sheet of paper to guide me when selecting important portions of my data for interpretation.

During the course, all comments made by these participants or the teacher in the online environment were collected as were all email exchanges between the teacher and the participants. The comments included twelve different discussion lounges as well as two shared areas where course members were asked to give view each others' presentations and give feedback to each other. Emails were intermittent depending on the needs of the participants. These comments were placed into a word document as they occurred. There was a large margin on the right hand side of the page to allow for comments to be made about the data. I read the data several times to make these comments and highlight issues that seemed important. This data provided verification of the rich data that was gained from the interviews which are described later in this chapter.

The responses to the questions were emailed to me by the participants. They were analysed by using an Excel spreadsheet into a raw data grid. The design of the spreadsheet used the questions along the top row with each question using one cell. Responses from each participant were entered on a separate row for each participant with responses directly under the corresponding question. Some questions were multiple-choice or closed so the responses from these were able to be grouped. Other questions required the respondent to use their own words. These words were directly copied and pasted into the spreadsheet. I read and reread the data several times. Excel allows comments to be added into different cells. This representation allowed me to see all the responses to a question together and showing grouping when appropriate. I also added comments and underlined issues that seemed important.

The telephone interviews were taped and then transcribed by me. Once the transcribing was completed all data was read. Following this I read again more closely using highlighters as described by Delamont (2000) and Mutch (2005) to look for items of interest, repeated concepts, recurring themes and key words. After this step I coded the data to determine the categories. To do this I wrote key words or themes in the margins as I read the data. I then read the data closely to look for patterns emerging from the data. Initially the key words were used and the data put into an Access database so that reports could be generated. This method however was unwieldy as I was limited by the size allowed for field entries and the reports being individually generated

thus making it difficult to move any data around. I then decided to use a raw data grid by using a table in Word to copy and paste data to group similar data together. Using the highlighted themes, quotes from the data were put into a table under three theme headings. These main themes were then analysed again looking for the characteristics contributing to the theme. I looked to find the connections among the characteristics to help focus the search. All data was reread many times while looking for each characteristic for each theme. These characteristics were put into a computer generated table using Word. This table used four columns: the first column was for the text from the data, the second column I wrote what the text meant, in the third column my reasons for including the data and in the final column I noted where the text had come from to enable me to find it again. I reread many times to ensure that the data did not overlap. I also read to identify suitable quotes that could provide sound evidence for the themes and interpretations.

Summary

This study involved a research method from the interpretive paradigm. Participants were all volunteers from an online course I was teaching. Ethical issues were considered and informed consent was sought from enrolled members of the course. Privacy and confidentiality were protected. Participants were able to withdraw from the study at any time if they wished to. A questionnaire was used in the initial stage of the study. This was followed by data collection from discussion lounges, shared areas and emails between the teacher and the participants throughout the duration of the course. The final data was collected via telephone interviews. Ethical considerations have been discussed and researcher decisions clarified.

Once the data gathering process was complete the data was sorted and analysed. A thematic approach strategy was used to analyse the data. The questionnaires provided data relating to the participants' backgrounds and contexts for their studies. The interviews provided the rich data for the initial identification of themes and associated categories. The data from interactions corroborated the identified themes providing triangulation. The results of this analysis process are reported in the next chapter.

Chapter Four Research Results

Introduction

In this chapter I report the analysis of the data. Themes emerged from the data were considered under headings related to the research question posed for the study.

This study investigated the pedagogical practices and qualities needed by a teacher in an online learning context, as perceived by teaching practitioners undertaking online Professional Development in ICT. This chapter is organised with themes under the following headings; the perceptions of the participants' views of their prior experiences in online environments, the participants' views about what they value in the online environments, the participants' views of their key learning experiences in the online environment and the participants' views of interactions in the online environment. For each theme, the data is reported with quotations included to illustrate the analysis. I have provided pseudonyms for the participants. They are Judy, John, Shirley and Margaret.

Participants' perceptions of their prior experiences with teacher professional development courses

All participants had undertaken professional development courses in an online environment. One participant had completed one course, another had completed two courses and three had completed more than five courses. This section reports participants' perceptions about previous online learning environments.

Two participants had previously undertaken correspondence courses and understandably compared these courses to the online courses. They enjoyed the freedom to study at their own times and place afforded by correspondence courses and online courses. Both mentioned the lack of interaction in correspondence courses and how in the online environment you have the

“connectedness” – John interview

One mentioned how the time taken to receive any feedback in correspondence courses appeared

“interminable” – Margaret interview

whereas in the online environment it was immediate.

Another participant compared the online environment to her previous traditional tertiary education courses:

“go to a lecture, take notes, write an essay, hand it in. I am so pleased I don’t have to work like that any more”- Judy interview

Two members mentioned that they needed time (e.g. the first two weeks) in any online course to become familiar with each new online environment. One of these participants suggested that as the course designers do not have the same understandings as each individual coming to the online environment, then a schematic map of the environment would be useful for course members.

One participant mentioned that she had previously completed two courses in an online environment. One of these was with a lot of interactions in the online environment while there were almost none in the other. She felt that the interactions in an online environment were important as they were what made course members feel connected.

One participant mentioned online learning environment courses in which some comments posted by one course member were directed at various other course members that were:

“harsh” – Shirley interview

She mentioned having being a recipient of some of these comments and consequently felt

“bullied”- Shirley interview

She was scared to put reflections into the web site even when asked to by the teacher. She stated that the incident made her withdraw and lack motivation to continue the course.

“it made me doubt myself” - Shirley interview

However, she also pointed out that she did not know or meet the person making the inappropriate remarks and that type of remark may not have been part of their persona and was unintentionally interpreted in a personal manner. She mentioned that the teacher did not participate in the discussion.

In summary, participants when describing previous teaching practitioner development courses, emphasised how the online environment lent itself to interactions and leads to course members being connected to each other and the teacher. They mention the flexibility of time and place afforded by this mode of study. They also valued the speed of feedback both from the teacher and other course members. The comments made by one participant about their prior experiences in the online learning environments point to questionable interactions which were being made in some courses. Comments by some participants highlight the need for some course members to have time, in each new course, to become familiar with each new environment.

Online learning environment

Resources

In this course, a printed book of self paced tutorials, follow up tasks and focus questions was posted to course members prior to the course commencement. This resource had been created by the teacher. These tutorials enable course members to learn new skills, the focus questions enable the course members to look at how the skills learnt can be used in other contexts, and the follow up tasks gives the course members the opportunities to transfer the learning to new contexts.

Other resources provided by the teacher were in the online environment and included: explicit learning outcomes for each session, extra tutorials which were written by the teacher during the course, and a Frequently Asked Questions (FAQ) databank with video or tutorial answers. It also included queries about software or the online learning environment, relevant readings relating to the course, multimedia PowerPoint presentations by the teacher relating to the course, and relevant videos and web links. Some material was uploaded into the online environment prior to the commencement of the course. Other material was uploaded as the course progressed to meet needs as perceived by the teacher, at the request of a course member, or to answer a course member's query. In each session the course members worked through a series of tutorials from the printed book. They then used the skills they had learnt during this session in another context

and answered relevant focus questions. This is subsequently discussed in the discussion lounge. Course members also download a relevant reading during each session which they read and discuss in the discussion lounge.

Three participants mentioned how clear they found the tutorials in the printed book or in the online environment which had been written by the teacher. Shirley compared the tutorials to tutorials in other courses which had been text based. She found the “*pictures*” (screen dumps) that had been included affirmed for her that she was “*on the right track*” when working through the tutorials. This was when screen dumps were shown to enable course members to see exactly how something should look on their own computer or to show them where to find something. She found she “*really enjoyed learning that way*” as it was hands on but that everything was there to enable you to succeed. Participants found the tutorials were written so that they could work at their own pace and that everything they needed to learn the skill was clearly detailed.

“It was all there in the book. I really enjoyed learning that way and I think that it was really beneficial to my learning. In other courses they might just be all listed in text maybe whereas you had all the pictures as well so you could see what you were expected to create and what it was meant to look like It was reaffirming you were on the right step and in some courses they don’t have as much detail as you do but just say ‘create a spreadsheet’ and leave it like that and then you go - hmm how am I going to do that?”- Shirley interview

“I like how the tutorials and first exercise was authentic and this has helped clear the cloud.” - Judy discussion lounge

“I found the tutorials easy to follow” – Shirley discussion lounge

“The tutorials were detailed and easy to follow”. – Margaret discussion lounge

Shirley and Judy mentioned referring back to the tutorial book for help when transferring their knowledge to another context if they struck a road block. This helped them to continue with their work without a longer interruption while they sought help from other places such as emailing the teacher or putting a query in the discussion lounge. They also said that they would use the tutorial book and other downloaded tutorials in their classrooms in the future. Margaret mentioned that although the tutorials were clear it was not always easy to translate the instructions to other

versions of the software. She mentioned how thrilled she was when the teacher found she was using a different version and rewrote the tutorials, uploading them to the online environment for the version she was using.

“Brilliant, thanks so much for the new tutorials” – Margaret discussion lounge

This enabled her to continue working without having to translate the instructions into her version.

Judy talked about how it was having all the resources available that made her learning possible. She also mentioned finding video resources useful to her style of learning.

“The video links that Di has posted have been a better (said the visual learner) tool for my learning” – Judy discussion lounge

In the discussion lounges, four participants mentioned how they valued relevant readings and the tutorials both in the book and the online environment. One participant enjoyed how the readings provided in the course were relevant to the learning and how these were open to debate in the discussion lounges encouraging course members to link the theory to their practice.

“I remember a good discussion when one of the others had a big input and I was impressed by what he said which made me think about what he was saying and what I had read - linking the theory to practice.” – Margaret interview

“Reading everyone’s post has also helped to see clearer pictures.” – Judy discussion lounge

Another participant said;

“I became more competent as I worked through the tutorials. I also think that there was a good balance of practical and theory. The theory helped consolidate the reason for and why, we use these technology skills in teaching.” – Shirley interview

One participant mentioned how she enjoyed playing with the skills she had learnt through the tutorials in other contexts which consolidated her learning. Two participants mentioned how much they enjoyed learning from the material they found by following the web links provided in the online environment.

Participants identified the value of clear tutorials provided by the teacher with relevant screen dumps to guide the learning, as being important. Having these in printed form provided easy access to use as a reference when engaging in other tasks was mentioned as being valuable. Providing relevant readings which can then be discussed by course members was also seen as important.

Assignments

In this course there are two assignments. These assignments are related to their own classroom practice or administrative roles. Each assignment consisted of each course member trialling an activity either with a class or as an administrative task. A written report is placed in the online environment for marking by the teacher. This report could not be viewed by other course members. A summary of the activity is presented and uploaded into the online environment for other course members to view and give feedback on. These presentations were usually completed using a PowerPoint slide show, although one participant used a web cam and uploaded a video to YouTube.

All participants mentioned benefits of the assignments including the importance of having the assignment linked to classroom practice and that by sharing their presentations with others they did not feel that they were learning in isolation.

“We trialled it at school today. It was a success and it works and it looks like the school wants to use it! I’m so proud. I love that this course is really helping me” – Shirley email correspondence

One participant mentioned how the assignment task was authentic as she had to relate it to the classroom and the children’s experiences and will now use it again because she saw how it works in practice.

“You will actually do it and use it again because you can see how it works” - Shirley interview

Another participant has shared the task he did with others in his work environment where it has been

“picked up on and a contract being let in our area for next year to actually take that database and use it as a productive tool”- John interview

He was particularly proud of his achievement with this tool and said;

“trial your learning in an authentic context has been brilliant for me” – John interview

Uploading the presentations for others to view and give feedback on was mentioned by all participants. One participant explained that when she viewed other’s presentations that this was a

“turning point” – Judy interview

for her to opening up other possibilities.

“the next level really came in when we looked at what the others were producing... that really was pivotal learning for me... It’s like having your eyes opened”- Judy interview

Two participants mentioned how these assignments were usable and authentic to their own classroom practice rather than just writing an essay which may be discussing ideas and not always practical in terms of classroom practice. Another participant said that the more meaningful you can make a task or assignment then the more worthwhile it is for course members. In the written assignments all course members described positive experiences by using their knowledge in the classroom or with other staff members.

Participants reported that having assignments that were meaningful and authentic to their own classroom practices were valuable as the knowledge gained is then more likely to be continued to use in the participant’s own future practice.

Contact with the teacher

Relationships between course members and the teacher are seen by many as being important to the learning. These relationships may be built up by contact between the course members and the

teacher. This contact can be made in different ways in an online environment. In this course all course members had contact with the teacher via email, comments in discussion lounges and phone calls. Course members were informed in the initial introductory letter, by email and by news items on the web site that they could email the teacher at any time. The email address was displayed on the web site as well as being on the emails sent out by the teacher. This contact was mentioned by all participants as being an important part of their learning, just knowing that the teacher is there if they need them gave a sense of security.

Two participants mentioned that they needed a lot of support from the teacher to reassure or affirm that they were doing things correctly. They both mentioned that this was done both in discussion lounges and through email contact. This enabled them to continue with the next step in their learning. Shirley reported that being able to email the teacher with queries rather than just asking questions in a discussion lounge was helpful for her as it ensured that she

“was not making a fool of yourself in front of others” – Shirley interview

Two participants mentioned the importance of using emails to get help from the teacher and also mentioned an expectation of having a reply within twenty four hours. The speed of the feedback was important to the participants to enable them to continue with their learning. One of these participants mentioned that by being confident to email the teacher for help meant that the help was there rather than:

“I will ask instead of just sitting there for days and getting upset over something that could quite easily be fixed” – Shirley interview

One participant mentioned that the teacher had been good at grounding her as she had been very nervous at the beginning of the course. The emotional support and encouragement in discussion lounges and through emails was important to give her an attitude of

“I can do it” – Shirley interview

One participant mentioned that it was through the questions and insights by the teacher in various discussion lounges that:

“the teacher creates clarity for you to keep building on” – Judy interview

All contributors point to the value of developing a relationship with the teacher through contact with the teacher through email and online interactions. Participants emphasised the need for emotional support and encouragement by the teacher which was achieved through emails and discussion lounges by the teacher.

Design and navigation of the online learning environment

Site navigation is the design of the online learning environment and the ease with which course members can find their way around the site to locate what they need. In this course all major links were in table in the middle of the Home page of the site (see Appendix Four). Each session had a consistent layout including the session content and learning outcomes, a folder of relevant tutorials, web links and readings, as well as a discussion lounge. This created a sense of familiarity for course members.

One participant articulated how she found the front page area:

“I found it easy to navigate especially your front page with all the links right there and you just click in to the session you were up to and of course the dates on the right hand side which had what session you were doing on what date.” – Shirley interview

“It was all right there for you and then in each session up the top was everything you needed the files, web links, all the discussion areas, learning outcomes, everything, it was great” - Shirley interview

Another participant, who felt that easy navigation of the online environment was important, said:

“The website was easy to navigate around. The links were visually obvious and arranged in a logical order which allowed moving from one page to another easy to do.”- Judy interview

“Thanks for the work that goes into making the site easy to move around and for providing interesting sites as these are very useful” – John discussion lounge

Two other participants also found this having the links in the one area made for easy navigation. By having the session dates clearly displayed helped them to know exactly which session to click into. One participant found that some things were not always immediately obvious and that he needed them to be immediately known. A suggestion he made was that course members be provided with a chart showing the structure of the course at the start of the course to enable course members to become familiar with a site without wasting time.

One participant mentioned that during the second part of the course she realised,

“from a teacher’s perspective”- Judy interview

that the site was so well planned, and well designed with the learning being built in meticulous steps which had enabled her to work through the course with the guidance from the teacher.

Having the learning outcomes clearly stated was an important aspect of the course design for three participants. As one participant said:

“that constant link into the relationships between all the different areas of the online environment with the learning outcomes for each session” - Judy interview

The design of the online learning environment to support the learning was valued by one participant where she found that the design allowed the course members to become the directors of their own learning.

“the design was that the learners became the directors of the learning really” - Judy interview

In summary, participants valued the resources provided by the teacher, authentic assignments connected with their own practice, ease of contact with the teacher, and ease of site navigation. The participants identified the importance of having clear learning outcomes for each session with the resources to enable them to meet the learning outcomes. They pointed to the need for reassurance and emotional support from the teacher and that this was able to be achieved through

the contact with the teacher. All valued the nature of the authentic and meaningful assignments. They also found that by sharing and viewing each others' work they were able to broaden and build on their own knowledge. Giving feedback to other course members in relation to the assignments was viewed as a highlight, encouraging participants to think in depth about their own and others' work.

Weekly tasks

After completing some tutorials from a printed work book, reading a relevant reading from the online environment course and exploring relevant web links, members were asked to use the knowledge and skills gained during the session to complete various tasks or scenarios in order to use this learning in their own context.

“I really enjoyed these activities and absolutely loved how easy it was to transfer the information” – Judy discussion lounge

“found the relevant hands on approach very helpful with my learning”
– Shirley discussion lounge

Participants felt that these tasks had contributed to their learning although one participant found some of these a “bore” and said that while some were relevant to her personally others were not. However she also found that by using the formulas in Excel in context made it work

“just like magic” – Margaret interview

which she found she enjoyed and spent time using these. She also enjoyed having the freedom to try out different things which were relevant to her own personal learning.

One participant said that she could not have got through without the weekly tasks;

“Couldn't have got through without them – just having the skill building and then putting them into a context that had a purpose – and seeing how it all fitted.” – Judy interview

She noted that if she had not had the tasks and had been concentrating on skills alone it would have been meaningless and she would not have been able to transfer the skills into other contexts and use these skills in the future.

John was dealing with one curriculum area in the classroom so he changed the tasks slightly to fit the one curriculum area when he needed to. This he found helped him to think about other ways to use the tools in his curriculum area.

Another participant found that by doing the weekly tasks she was able to put everything she had learnt into practice and said:

“it definitely added another level of learning” - Judy interview

Participants discussed these tasks in the appropriate discussion lounge and valued getting feedback from others about these as they felt it added to their own learning. Although one participant found some weekly tasks a bore the others found that these aided their learning by putting the skills and knowledge into purposeful contexts. Having freedom to change the task slightly to suit his purpose was valued by a participant.

Key learning experiences in the participant’s own context

During the course all course members had opportunities to use what they had learnt on the course in their own context. This was accomplished through the weekly tasks and the assignments.

All participants found that they valued these learning experiences.

“I’m loving using the work I have done with my children” – Shirley email correspondence

Using the skills and knowledge she had learnt from the course one participant, mentioned how she began to see changes in the children. She found the children were totally involved in their learning and she was finding the experience very worthwhile. She was also getting responses from staff about these changes, they were inquiring what she was doing as well as suggesting to her that she

“was making a difference” - Judy interview

through the work she was doing with the children. This participant described these experiences as becoming her motivating force as she continued in the course and she found she wanted to learn as much as possible rather than just concentrate on a grade for the course.

“I started to see changes in the children, I started to see responses from staff members saying “what are you doing” or “what’s that”, “oh that looks quite neat” and that really become the motivating force really to continue on and it was more not how much can I do to get a good grade but how much more can I soak up before the course ends.” – Judy interview

In the written report in her assignment, this participant detailed how the children were highly motivated by the work where they were working collaboratively. One participant mentioned how watching the children or teaching practitioners using the files she had created in a school context was very worthwhile. She had made a file for administrative purposes which she gave other teaching practitioners to trial. These teaching practitioners used it successfully which she said had given her a feeling of success.

“it was something you had made yourself but when you saw the teachers actually use it... that was the best bit for me, seeing it in practice” - Shirley interview

She also created a file to use in the classroom situation with children which was also successful. Seeing it in action and realising that it “worked” was the “best bit” for her.

“that to me, seeing people using it , what I had created with the software was an awesome learning experience, very special” - Shirley interview

One participant set up several administrative files for the other teaching practitioners to use in the future.

“I had to set up a massive big thing for the gifted and talented in the school... Another one was art orders for next year are now on a spreadsheet for all the expenditure and things and now it makes sense to me” - Margaret interview

Others said:

“Yes I was very proud of myself that I had created, and for my own work seeing the other teachers use my spreadsheets for their Star results” – Judy interview

*“My Year 7 and 9’s were spellbound with the ‘magic’ of the task. They understood it – it was a wonderful response, very satisfying”
– Margaret discussion lounge*

Margaret also took ideas from what she herself was learning and then used her these in her classroom with the students. She was excited when she realised how the children were learning and showed understanding from the tasks she used in the classroom situation. Three participants felt validated in their efforts by favourable comments from other teaching practitioners in their schools about the work they were doing in the school setting. One participant said that, prompted by thoughts from the course, he did an exercise where he successfully used the ideas he had been learning about during the course as a key tool in the classroom. He mentioned that he would not have thought about doing this had the course not prompted these thoughts allowing him to transfer the knowledge gained into his own context.

All participants found that by transferring the skills and knowledge they were learning during the course into their own context added to their own learning and informed their classroom practice. Seeing other staff and children using the files and ideas from the participants was a key learning experience for participants.

A pedagogical shift

One participant felt that her views of teaching and learning theory in the school context had moved due to her experiences in the online learning context. She felt she had used a traditional model of teaching in her own classroom as this model had always been successful. She described her experiences in the online learning environment and how these experiences had changed her perceptions of teaching and learning.

“Well I guess that for a long time I have been stuck in a traditionalist model really and working through the ICT PD has, its shown me the possibilities but its not until you actually work it through yourself and become the student or the learner that you can see the enhancement you can get

*through working online and working in a high tech savvy environment.” –
Judy interview*

She initially had no concept of the context she was going to be working in and had no real idea of what she wanted from the course other than to complete the course for a qualification.

“because I had no concept of the context I would be working in I didn’t really know what I wanted other than just a general “let’s get to the end”. I will be completely honest with you its like just do this, get it done – like those kids in the classroom who come to you “I’ve done it” you know. There is not real thinking behind anything and it is not until you experience this that you have the actual shift through the learning that you begin to realise it actually doesn’t matter if I fail what actually matters is that I take this new learning away and I start adapting the way I do things from 2009 onwards.” – Judy interview

Her views were also articulated in the discussion lounge.

“Candy, Crebert and O’Leary (1994) helped me to determine what it is that I need to go into and what depth the students require. As curriculum designers we endeavour to create authentic learning experiences to motivate and to inspire learning within our students... there is a time that as the teacher one must let go and allow the learner to ask the questions which will spiral towards learning something more in depth. In my own learning I feel that I have more skill development and understanding when I have to struggle through the confusion ... I only ever bother to do this if it is something that I want to continue. If I need it I’ll learn it, if I don’t need it I won’t learn about it” – Judy discussion lounge

Judy had initially felt similar to some of the children who said they had completed a task without any real thinking behind what they have been doing. It was after this that she found an actual shift in her learning and that the grade for the course was no longer a driving factor but her own learning became the driving factor. Judy explained how, by using other people’s knowledge (in discussion boards and presentations), she was able to build up a better picture for herself of how the learning related to her own practice. While she had known of the possibilities of different educational theories for her it was not until she became a learner in the environment that she became aware of the enhancements that could be found by working in the online environment.

“it is about the context of learning that is important, it is kind of an inside out thing driven by the learner”- Judy interview

Judy came to the realisation that if she wanted to get the most out of the course then she actually had got to put the most back in.

“it is realising that you are constructing meaning yourself. The shift for me from traditional teaching to this way of learning and teaching, is that you change quite quickly with your thinking whereas I find, when I think about the ways I did things traditionally it takes me a long time to make the changes even with my own practice because this has always been successful, this has always worked so why change and try something new whereas when you are online you are continuously challenging those thoughts so you feel it doesn't matter if I change, if I have a different outlook today because I have got some new information. I am going to run with it and see where it takes me. So if it takes me in a whole circle that's fine, if it takes me into another spiral then so be it.”
– Judy interview

This participant felt that the teacher had contributed to her shift in her learning through the design of the course so that gradually the learners became

“the directors of the learning” – Judy interview

For her the teacher had provided the feedback and facilitated the learning to enable this to happen.

In summary, participants indicated the value of having weekly tasks to complete as they found that this ensured that the skills and knowledge that they had gained from the course was able to be used in a different context rather than just be an exercise where they did not use the skills again. Participants valued having the freedom to use the skills in their own context and were thrilled by having other staff members interested in the work they were doing either in the classroom or as an administrative tool. Observing children being excited to use the tools in meaningful ways in the classroom was another important motivating factor. One participant valued how her own philosophies of teaching and learning had been challenged by being a learner in the online environment.

Interactions

Weekly emails

Emails were sent weekly to course members by the teacher. They included a debrief of the work covered in the previous session, comments about the work achieved in the work up until that point, and reminders of what is to come in this week's session. These emails also included general 'chatty' comments about their workloads or the weather for example to help the teacher build a social presence for the course members.

“Interesting discussion starting up this week about the task, it will be interesting to see how the others find it” – Shirley email correspondence

All participants mentioned that they found these emails useful. One participant said that it made the course seem more real particularly with the general comments that were included as it reminded her that she was actually working with a teacher and that she always looked out for the emails each week.

“Just having that contact I definitely find that important and I was always looking out for it at the beginning of the week” – Shirley interview

“I found that those were important to remind me of what was happening this week and where I need to go. Sometimes they just jogged my memory” – John interview

“Gave a sense of the 'personal touch' in an impersonal situation”
– Margaret interview

“thanks for the email, it's great to be kept up-to-date” – John email correspondence

Three participants mentioned that the emails reminded them about their learning during the current week's session which set the scene for their work and reminded them about what they needed to be doing for this week. Weekly emails were important to all participants as a way of having regular contact with the teacher and to help the participants stay on track with the course sessions.

Intermittent emails with files attached

These emails were sent separately by the lecturer to keep in contact and develop a relationship with the course members. They were also to give course members extra relevant readings relating to the course or examples of how the software had been used. Emails were sent intermittently and helped to build relationships between the teacher and course members.

One participant mentioned that she took more notice of the readings or examples because the teacher had emailed them and it therefore appeared that the teacher had just come up with these and so they must be relevant to what was being learnt. One participant felt that these emails and files were worthwhile and that some of them were enough to focus his thinking through one of the readings or examples, at other times he found that it reaffirmed his own thinking. Another participant found these “great” as she enjoyed getting them with the fun examples showing how the tools worked as well as readings related to what she was doing.

One participant said that she found that she looked for these emails with the files as they;

“helped shape or give more understanding in relation to what we were learning – it definitely added another level of learning” – Judy interview

Other emails, sent at irregular times, were valued by the participants for having additional relevant readings and other examples for them to peruse at their own time.

Emails between the participants and the teacher relating to the learning

In some course sessions, the teacher asked all course members to email their work to her for feedback. At other times, course members were asked to email their own definitions or define something they had been learning about. In addition, the course members initiated emails. Course members were encouraged to email the teacher if they needed to at any time. These emails also were part of the teacher building relationships with course members.

One participant articulated that this was important as it meant that the teacher was able to ensure that course members understood what they were doing before moving on to the next level.

“you wanted to make sure that we understood what we were doing before we went to the next level so that was important” – Margaret interview

Another participant found these requests from the teacher helpful as it made her interpret or analyse various concepts in her own language which cemented her understanding and gave her confidence with the work she was doing.

“it made me interpret or analyse in my own words and cemented my understanding” - Shirley interview

Participants also found that they liked to contact the teacher, via email, at other times to affirm their learning and make sure they were on the right track.

“just wanting to check in – have a look at this – is it right” - Shirley interview

“ask for help and to double check I was on the right track” - Judy interview

“your replies clarified things for me or told me I was on the right track” – Shirley interview

“I am just sending you this one because I can’t work out how to...” – Margaret email correspondence

Participants found the interactions with the teacher supported and encouraged learning. One participant said that as well as the ones the teacher had asked for she sent emails asking for points to be clarified. All participants mentioned that they had emailed the teacher for help or direction at various times throughout the course which enabled them to quickly overcome any roadblocks they encountered in their learning. Three participants mentioned they appreciated getting a rapid reply from the teacher, with two of these mentioning they liked a twenty-four hour turn around.

By being required to email tasks and definitions to the teacher, participants felt that these aided their understanding of key concepts and ideas as well as getting feedback from the teacher to affirm their learning. All participants used email to get help or support from the teacher at various times.

Discussion lounge interactions

Discussion lounge interactions were used to encourage participants to make comments about their learning and to discuss relevant readings. To start this off, at the commencement of the course all course members participated in an ice breaker activity discussion. In subsequent sessions course members had focus questions, a relevant reading to discuss, and also tasks to complete and discuss after completing tutorials from their printed course book.

“The reading gave me more substance to hang my ideas on and to remove some more of the haze. I’m really good at the tutorials but have trouble when I use them in the exercise to consolidate the skills and use them in an authentic context. I am finding that reading everyone’s comments helps to make connections. I have definitely worked collaboratively with all of you, read your comments and gone back to the article to re-establish my own synthesise of information.” - Judy discussion lounge

“it’s a great article which issues some powerful challenges”. – John discussion lounge

“The focus questions highlighted how engaging these sorts of activities are for children’ – Judy discussion lounge

“The focus questions made me think about how I could use this in other curriculum areas” – Shirley discussion lounge

All participants reported the importance of the discussion lounge interactions, however two participants mentioned being apprehensive initially. One saw some of the comments by other course members making her feel others may think that she had little to contribute. She mentioned that when reading others’ comments it seemed they had a greater depth of understanding than she herself.

“Actually I think I was probably a little bit apprehensive when I started and saw a lot of the secondary people’s comments and things like that” – Shirley interview

“I used to read people’s comments and think “oh gosh, I’ve completely missed the point and everyone’s got such a good depth of understanding and I’m just at the point of plugging in and those sorts of things”.- Judy interview

She was also apprehensive about the reaction of those from a different educational sector and their reactions to her comments.

You always feel like you're the only one though and particularly like I think when I started reading a lot of the secondary people's comments and things like that because they just have an assumption that there is a difference between the whole teaching and learning thing at the different levels and you just think oh my goodness they will be thinking blimin primary school teachers what do they know?" - Judy interview

The other participant had encountered a discussion lounge in a previous course and described the experience:

"with discussion lounges I have come across other courses in my time that have been harsh to people in discussion boards and an odd comment has been made my way and it really closed me down and I got really upset and I did not want to carry on. I was always too scared then to put my work up when we were meant to or make comments in case this person would make a derogatory comment" - Shirley interview

Both participants mentioned that by following the model given by the teacher in the discussion lounge that they became more confident about putting their views in the discussion lounge. They both found that the modelling had been a very important component in for them.

"Probably the guidance from the teacher, it was well modelled, if the teacher makes a statement on someone else's work, they might question something or have that positive feed and then question something and then challenge them to extend their thinking. That was great." - Judy interview

"having it modelled helps you realise as a group this is OK, this is acceptable" – Shirley interview

One of these participants described how her own level of conversation in the discussion lounge changed as she began reflecting more and becoming more confident with what she was doing.

"I definitely remember a point where there was a change in the level of my own conversations because the reflections were coming through and showed I had done a bit of learning and experienced some success and read what other people were talking about and their own experiences. – Judy interview

She found that as she worked through activities in different contexts that she became more reflective about what she was doing.

I had the chance to put the skills into practice so I know there was definitely a time when I really felt my conversation levels had changed. The posts that I was making were more at a reflective level, I was challenged by the exercises because that is what we were doing and how we commented on those and how we had a chance to think about other ways that this could be done or how we had the opportunity to reflect on how we found doing the exercises” – Judy interview

One participant mentioned how she appreciated being able to be part of a wider educational discussion group and not just with the teaching practitioners in her own school.

“you get quite isolated where you work in your little school and in your little classroom and just to have those points of contact is quite neat and it’s quite unique”- Judy interview

One participant mentioned how, by reading the comments of others, she could see different ways of looking at the same things. She also felt that by taking part in a discussion you need others acknowledging your contribution

“you are not having a discussion unless things are being built on” – Margaret interview

She found comments by some other course members were thought provoking. One participant mentioned finding comments in the discussion lounges were important to see how others viewed things in different ways this helped her to gain insights into her own learning.

Discussion lounge interactions were viewed as important by participants as being a way of seeing other viewpoints to aid their learning. Some participants reported initial feelings of inadequacy at making comments in discussion lounges. To help overcome these feelings, modelling by the teacher in the discussion lounges was thought to be crucial.

Discussion lounge interactions by the teacher

the teacher had input into the discussion lounges. It was used to give feedback to course members, explain relevant personal experiences and make connections between what has been discussed by the course members. In doing this, the teacher was also building relationships with course members.

All participants commented on how the teacher, being part of the discussions, was important. One participant mentioned feeling “sick” after putting something on the discussion but in having the teacher give feedback and giving a response affirmed her learning and gave her confidence for making comments in future discussions.

“I found that you were good at quickly grounding me as far as coming back with something that was positive and suddenly I felt “oh, I can do that, I am not as stupid as I think”.” - Judy interview

This participant found that she looked to see the comments that had been made by other course members and then how the teacher gave clarity and tied together all the comments. She said that this had given her clarity about certain concepts or ideas.

“sometimes people might write things and you may not know the depth behind what you are saying but it takes the lecturer to pick up those links and respond to those links and then things start to go from the murkiness to that clearness so I guess the lecturer in a sense creates clarity for you to keep building on” - Judy interview

Two participants mentioned how they read the feedback from the teacher for others then used these comments in their own learning.

“how does that affect my learning or how could that affect my classroom practice and I definitely got that from things that you asked and spoke to us about in the online environment” - Shirley interview

“I loved reading the comments you put with other people and what other people would say and how you tied people together and ideas together and made those connections” - Judy interview

One participant commented on how it was important that the teacher had a meaningful part in the discussions not just acknowledging that people have made a comment. She also valued the teacher giving her own thoughts and experiences.

“What I like about you is that you put in your thoughts too” – Margaret interview

This participant also felt that the teacher’s role in the discussion lounges was:

“having a meaningful part in the interactions not just acknowledging that someone has made a comment.” – Margaret interview

Another participant described her experiences with the interactions by the teacher:

“always there in an email or at the end of a post (sometimes I felt ‘oh my goodness she’s reading my mind) because she would say and I would think “that’s just what I need, that fills the gap, that’s where I need to go”” - Judy interview

This participant mentioned that through questioning and comments by the teacher, she felt challenged in her learning.

“Every step I took I felt challenged. I felt, through the teacher, good questioning and good insight. Because sometimes people might write things and you may not know the depth behind what you are saying but it takes the teacher to pick up those links and respond to those links.”- Judy interview

All participants pointed to the importance of the teacher taking a meaningful and active role in the discussion lounges. The need for the teacher to use good questioning in the online environment was a factor that was deemed important by a participant. Participants also reported the importance of the feedback by the teacher in the online discussions.

Peer feedback to others

As part of the assignments in this course, all members summarised what they had completed for their written assignment into a presentation which was uploaded into a sharing area on the web site. Course members then viewed the other presentations and gave feedback to each other.

“I believe that through your presentation you have managed to take a very large concept and bring clarity and understanding to people like myself.” – Feedback given by Judy to John

“Well done you are a brave soul. This is what ICT is all about especially the developments in Web2.0. That information has new ways of being shared. The digital natives, digital immigrants argument annoys me as it often focuses on skills and knowledge when its all about attitude, as you have just demonstrated you have a digital native’s attitude.” – Feedback given by John to Judy

Participants found that viewing these presentations and the giving of feedback were very important to their learning. One participant mentioned that had she only viewed the presentations without giving feedback, then this would not have been as successful a learning experience for her. For another giving and receiving feedback was a key component in the course for her.

*“having that feedback from people and looking through things and giving feedback to others about certain things which were parts of their own learning that too just completes it. It just builds another level to it.”-
Judy interview*

Being able to reflect on the work of others enabled two course members to see other possibilities for their own classroom or administrative practices. They also found that by being expected to give feedback and not just view the presentations meant that they viewed these more in depth and thought about the content in greater detail which in turn they related back to their own practices. They also valued the feedback they received from the other course members which also gave them other views on their work. One participant mentioned that by getting feedback from others and not just the teacher made the task more authentic.

“...having to look at other people’s work makes you think about how things are put together and how people have used things and some of the aspects where people have planned tasks and activities to co-ordinate ... the comment part was really the pièce de résistance in the fact that it wasn’t always you Di saying well done – it was more authentic” – Judy interview

Giving feedback to others was important to two participants who mentioned that by giving feedback to others made them think in greater depth about the presentations rather than just having a cursory look at them. One felt it was the pinnacle of the course.

“pièce de résistance ”- Judy interview

Participants identified the value of viewing others’ presentations and giving feedback to each other, as this was felt to add to their learning.

In summary, all participants identified the value of interactions in the online environment. Weekly emails by the teacher were viewed by the participants as being important because they reminded participants of the work for that week as well as helping participants feel connected to and develop a relationship with the teacher. Other emails containing files were viewed by the participants as having important information relating to the course and as these were emailed they were taken more notice of rather than if they were just in the online environment. Discussion lounges were viewed as a valuable interaction in online learning by the participants as these enabled them to reflect on the learning of others as well as their own. It was important to the participants that the teacher took an active role in the interactions and did not just acknowledge that course members had contributed. Peer feedback by course members to each other was valued by participants as they felt that they looked more in depth at each others’ work rather than giving it a cursory glance and that this was important for their own learning.

Chapter Five Discussion

Introduction

This chapter will focus on those themes identified from the data. These will provide insight into answering the question of how participants in an online professional development environment view the role of the teacher. The results of this study were reported in the previous chapter under three main themes: participants' perspectives of what they valued in an online learning environment, participants' perceptions of the key learning experiences in the online learning environment that sustained their learning, and participants' perceptions of the ways interactions contribute to the learning in the online learning environment. This chapter discusses the findings and relates these to relevant literature. The themes related to three key areas: the key roles of the teacher, the nature of course tasks and assignments, and the nature of the interactions in the online environment. In addition a critical incident was a key learning journey for one participant. I will take each finding from the results to discuss in further detail. I will also describe each significant finding with a brief description from the previous sections with links to the relevant literature.

Key roles of the teacher

Design and navigation of site

Design of the online learning environment

A significant finding in this study relates to the design of the online learning environment. Participants identified that having links “*visually obvious*” was seen as an important part of the web site design. Participants in this study identified that having a logical order was an important element in the design of the online environment. By having links signposted in a logical order that is consistently used throughout the site, gave the course members familiarity with the

learning environment and enabled course members to move around the site easily; *“allowed moving from one page to another easy to do”*.

Another finding in this study suggests a layout with clear organisation is necessary to encourage easy navigation. For example *“it is easy to navigate especially your front page with all the links right there and you just click in to the session you were up to”* suggests that having all the major links in one area of a Home page (Appendix Four), with the links clearly visible, helps course members to navigate the site quickly and easily from a central area to the relevant session without becoming frustrated by not knowing where to go. This finding aligns with Lin and Gregor (2006) who claim that the visual design of the web site is important and encourages course members to maintain concentration. They also suggest that the structure of the web site should make it quick and easy for course members to navigate to find what they want.

Curriculum design of the online learning environment

How the links are sequenced and the sessions organised is important for the online environment design and layout. Participants identified this as being important *“On the top was everything you needed – files, web links, discussion areas, learning outcomes”*. This design enabled the course members to feel familiar with the structure for each session so they were then able to continue with their learning for each session. Becoming directors of their own learning was identified as important by participants: *“the design was that the learners became the directors of the learning really”*. Participants mentioned the learning outcomes as being important to each session, *“that constant link into the relationships between all the different areas of the online environment with the learning outcomes for each session”*. This can enable the course members to find all areas without having to search, providing easy access and flexibility as suggested by Duffy et al. (2006).

When designing the online learning environment, providing opportunities for course members to reflect on their learning was seen as important in this study. This is evidenced by one person who stated: *“I definitely remember a point where there was a change in the level of my own conversations because the reflections were coming through and showed I had done a bit of learning and experienced some success”*.

This finding aligns with Fahey (2004) who suggests that if components in online environments are not organised in a meaningful way, they are more difficult to understand. Trewern and Lai (2001) also emphasise the importance of having a structured learning environment to ensure that course members are not confused about what is being asked of them. Having these clearly stated learning outcomes for each session describing the intent of the session in terms of the knowledge skills and attributes (Ally, 2004; Davis, 2004) enables the course members to approach the session with a clear view to content of the session and to gauge whether they have achieved the learning outcomes at the conclusion of the session. The learning outcomes could then be translated into the session content and resources to enable the course members to achieve the goals (Davis, 2004). This finding supports Palloff and Pratt (2001) who suggest that a well constructed online environment is one which is logical in its design, easy to navigate and is inviting to the user.

Nature of course tasks and assignments

The next group of findings relates to the weekly tasks and two course assignments. These are related to participants' educational context and are a key component in the online environment for teaching practitioners.

Participants in this study valued the weekly tasks which were at the conclusion of each session. These tasks involved the course members using the skills and knowledge that were built up during the session and were then used in the course member's own context. This is evidenced by comments from participants such as "*Couldn't have got through without them – just having the skill building and then putting them into a context that had a purpose*", and "*it definitely added another level of learning*". The participants described how they needed to put the knowledge into a context that had a purpose which was an integral part of the weekly tasks undertaken by course members. They felt that this was important to encourage them to use the skills in the future. In their own contexts course members were able to use the skills and knowledge within their classrooms or as part of their administrative roles. This is illustrated by one participant who described how, if she had only skill building without putting these into a context with meaning it

would have been “*pointless*” as she would not have been able to transfer the skills to use in context in the future. Another participant found that through doing tasks in her own context, she was able to put everything she had learnt into a context with a purpose. Course members having ample opportunities to use the skills and knowledge in their own contexts supports E-Learning Advisory Group (2004) who point to the importance of having ample practice opportunities in the learning experiences to facilitate the growth of connections and to link theory to practice. In addition this finding endorses Timperley et al. (2007) who suggest that when undertaking professional development, teaching practitioners need multiple opportunities to learn through a range of activities to assist them to integrate the new learning into their own context. Learning needs to be relevant and applicable to the course member’s own real-life experiences (Duncan, 2005; Lu & Jeng, 2006/2007).

Understanding the pedagogy with the skill building was valued by participants as this enabled them to make the connections in their learning. “*Theory helped consolidate the reason for and why, we use these technology skills in teaching*”. Learning skills with technologies is little use without developing knowledge about how to use the digital tools to teach more effectively, developing understandings of the relationships between the technologies and content, and how to use the technologies in context (Koehler & Mishra, 2004; Leach et al., 2004).

Course members were also required to complete two assignments related to their own classroom practice or administrative roles. These assignments were highly valued by the participants who all described the benefits of the assignments that were linked to their own practice. A participant said, “*trial your learning in an authentic context has been brilliant for me*” while another described how having an authentic and meaningful assignment meant that she had seen how successful using these tools in the classroom was and now had the confidence to use her skills in her classroom in the future. Another participant used the assignment he had completed to develop an administrative tool which will be used as a “*productive tool*” for part of a contract his school had won.

Impact of course tasks and assignments

The next group of findings relates to the impact the use of the course tasks and assignments had on the participants.

In the classroom context, course members were able to see the impact the lesson had on student learning which was viewed as a significant event by participants. A participant said that she had seen “*changes in the children*”; this participant found that this became a motivating factor in the online learning environment for her. Another mentioned a staff member saying “*the kids have been talking about that – you are making a difference*”. This supports SalJohn (2003) who argues that only when teachers are able to see the impact that technology can have on student learning will they employ technology-enhanced teaching strategies.

A significant finding in this study is that course members are more likely to use the knowledge and skills developed during the online professional development through seeing how their work was viewed by others when using it in context. Participants identified the impact their learning was having on colleagues while they were completing the tasks and assignments. They were able to see how their efforts were viewed by other staff members as indicated by a participant saying; “*it was something you had made yourself but when you saw the teachers actually use it... that was the best bit for me, seeing it in practice*” while another said; “*I started to see responses from staff members saying “what are you doing” or “what’s that” “oh that looks quite neat’*. Another participant said; “*that to me, seeing people using it, what I had created with the software was an awesome learning experience, very special*”. These comments encouraged the participants in their own endeavours and indicated that the colleagues wanted to know more about what the colleagues were learning about and were able to successfully use the artefacts that had been created. The feeling of success for the course members through these experiences suggests that they will use their knowledge and skills in the educational context in the future.

In the written assignments all course members described positive experiences by using the knowledge in the classroom or with other staff members, and feelings of success to further use the skills and knowledge in their classrooms. By having positive experiences where the course members used the skills and knowledge from the online environment in a technology infused

lesson, they were more likely to integrate these skills and knowledge in their classrooms in the future to enhance the children's learning as described by SalJohn (2003). E-Learning Advisory Group (2004) support this finding as they argue that the learning needs to be meaningful to course members where they are supported in developing the skill of relating new material to what is meaningful to them. This also supports Anderson and Elloumi (2004) who argued that opportunities should be provided for course members to transfer what they learn to real-life situations.

An important finding in this study is that having authentic and meaningful tasks and assignments in the course member's own context are an important part of teaching practitioner professional development. It allows teaching practitioners to integrate their own learning into their classrooms to enhance the children's thinking and learning.

Interactions

The last group of findings relates to the interactions in the online learning environment. In the online learning environment there were a range of interactions between the teacher and course members or between course members. These interactions can take place via emails, in online discussion groups and when course members can comment on each other's work in the online learning environment.

Email interactions with the teacher

Regular contact with the teacher was seen as important by participants. Weekly emails were valued to maintain contact between the teacher and the course members. Having course members email work in to the teacher was seen as important by one participant because it meant that the teacher was monitoring to ensure that she understood the learning before moving on to the next step "*you wanted to make sure that we understood what we were doing before we went to the next level so that was important*". Some participants liked contact with the teacher to affirm their learning or to gain support and encouragement from the teacher. Two participants stated that they needed speedy responses via email from the teacher and they mentioned a desire for a twenty-four hour turn around by the teacher.

This study found that the teacher asking course members to email exercises or information relating to the learning gave participants confidence in their learning. This enabled the teacher to ensure that the course members had developed knowledge or the teacher could clarify miscomprehensions to enable course members to move to the next step. This provided formative assessment throughout the online professional development as evidenced by *“your replies clarified things for me or told me I was on the right track”*. Similarly Fahey (2004) suggests that feedback initially needs to be frequent to ensure that the course members have a positive experience in their learning. Participants felt that that *“it made me interpret or analyse in my own words and cemented my understanding”* and gave them the confidence to enable the course members to continue their learning.

The teacher’s role in online discussions

A significant finding in this study is that the teacher needs to take an active role in the interactions in the online environment. This is evidenced by participants noting that the teacher, in the online interactions, used *“good questioning”*, *“good insights”* to enable learning to progress to the next step. Having the teacher being an active contributor in the online discussions provided participants with support and guidance; this is shown by a participant saying that after contributing she would look for the teacher’s comments to know she was on the *“right track”* and another participant saying *“it takes the teacher to pick up those links and respond to them”*. The participants found that the teacher’s contributions created clarity for them to enable the learning to continue.

In this study the teacher monitored the discussions and interactions carefully to ensure that misunderstandings did not occur, to interpret what was being said, and to point course members in the right direction for their learning *“it takes the lecturer to pick up those links and respond to those links and then things start to go from the murkiness to that clearness so I guess the lecturer in a sense creates clarity for you to keep building on”*. This is how a teacher in a face-to-face class would be working however the online teacher needs to take the time to read carefully to ensure that they fully understand what the course members are saying and carefully word the response to ensure clarity.

These findings support Gorsky and Blau's (2009) study which suggested that the teacher's presence, particularly facilitating interactions, plays an important role in achieving and sustaining the learning. They also suggest that course members place a high priority on the role of the teacher to maintain momentum in discussions, a finding which is supported by my study. The findings from this study also support the study of Choy et al., (2001) who found that the participants in their online professional development valued quick feedback and regular contact with the teacher both for direction and motivation. However this study is in conflict with Hewitt (2004) who argue that some teachers do not support the teacher taking an active role in the online interactions.

Modelling by the teacher in the online discussions

A significant finding in this study is that the teacher needs to set and model a respectful learning climate to enable the peers to share contributions. Participants found that good modelling by the teacher enabled them to overcome their fears of contributing to the discussions "*the guidance from the lecturer – it was well modelled*" as well as "*having it modelled helps you realise as a group this is OK, this is acceptable*". This finding supports Gorsky and Blau (2009) who argue that it is important that teachers model good online communication and Veseley, Bloom and Sherlock's (2007) study where students perceived the teacher modelling as the most important element in building an online community.

Social interactions in the online learning environment

In the online environment the teacher is not 'seen' or 'heard' in the traditional sense with the physical separation being a challenge for the online teacher. The social presence of the teacher is their ability to project themselves to develop personal and purposeful relationships (Gorsky & Blau, 2009). Discussion, where the teacher related stories of her own teaching experiences, was valued by participants and gave the course members an insight into the teacher's own teaching life. As one participant said "*What I like about you is that you put in your thoughts too*". One participant said that the teacher's role in the interactions was "*having a meaningful part in the interactions not just acknowledging that someone has made a comment*". This is a way of building these relationships. Having the teacher taking an active and meaningful part in

discussion lounges was viewed by the participants as being important not only for the modelling but also to build relationships, help clarify points, and to question and challenge course members' thinking. Woods and Baker (2004) found that an online teacher can foster the climate in the discussion lounge by incorporating real-life stories.

These findings align with Gorsky and Blau (2009) who suggest that there is a relationship between course members' perceptions of social presence as a motivating force to participate online and argue that the social interaction may be a key element in the success or failure of an online course. In a similar way Ukpokodu's study (2008) found that a key point noted by the participants to enhance their learning included the teacher relationships. Woods and Baker (2004) suggest that by the teacher using humour and real-life stories in discussions that these contribute to the building of the teacher relationships. This study found that the social interactions where the teacher takes an active role are an important component of the online learning environment.

Participant interactions

Contributing to the discussion lounges initially held fears for two participants. One had prior experiences which had left her feeling reticent about contributing. The other participant felt "*I was probably a little bit apprehensive*" about contributing. She was worried about leaving her comments to be under the scrutiny of others. Unlike a verbal contribution a written interaction stays and may be reread many times. Light et al. (1997) also found in their study that some course members are hesitant to express their opinions in an online environment. They found the idea of contributing daunting and worried how others would view their thoughts. This points to the need for the online teacher to be vigilant to ensure that interactions in the site are not abused in ways that may give offence to others (E-Learning Advisory Group, 2004). Not feeling comfortable to contribute in the online environment can cause course members to waste time worrying and stifle their own learning.

An important finding in this study was that participants valued the freedom an asynchronous discussion gave them as evidenced by having "*the ability to gather your thoughts*" and having "*the opportunity to reflect*". An important distinction here between the online environment and the face to face classroom is that often not all course members have the opportunity to contribute

while in the online environment they are all able to contribute and be ‘heard’ by other course members. This finding supports Dede et.al. (2006) suggesting that there are opportunities for reflection in asynchronous discussions as some course members are able to find their voice in the mediated interaction.

Feedback from the teacher

In this study participants found that asking for help or support from the teacher was an important component in the online learning environment. This was evidenced by participants mentioning that they felt comfortable at being able to contact the teacher and confidently expected a prompt reply. By being able to contact the teacher participants felt supported and gained confidence in their learning. This was evidenced by participants saying “*just wanting to check in – have a look at this – is it right*” and “*ask for help and to double check I was on the right track*”. These interactions supported the course members in their learning. Two participants felt that a prompt reply was a twenty-four hour turn around supporting Gorsky and Blau (2009) and Ukpokodu (2008) who advocate that teachers need to reply in a timely manner.

Feedback from peers relating to assignment

This study found that giving and receiving feedback from others relating to their work was an important part of their learning. Participants said that “*using other people’s knowledge to build a better picture for yourself*” enabled the participants to use the feedback to encourage them in their own learning. This also gave the course members the time to read and reflect on the feedback to gain insights into their own learning. Giving feedback to others was “*pivotal learning*” for one participant who felt that by doing so was “*like having my eyes opened*” and this feedback gave participants insights into their own learning. Another referred to this part of the learning process as the “*piece de résistance*” as this part of the online environment was where she felt gave her insights into making the connections and linking ideas together. This study supports the view of E-Learning Advisory Group (2004) who suggest that course members value and can gain a great deal from viewing other’s work.

These findings suggest that it is important to give opportunities for course members to view each other’s work and give feedback. This uses strategies that requires the course members to evaluate

the work of others, helping course members to transfer the knowledge to their repertoire of practice as suggested by Anderson and Elloumi (2004). This study also suggests interactions using discussion lounges where the teacher takes an active role and models appropriate behaviours, regular email contact with the teacher and peer feedback were important components of the online learning environment.

Major shifts in pedagogical practice

A goal of professional development for teaching practitioners is to increase the knowledge and skills of teaching practitioners to improve student learning (Dede et al., 2006). These authors suggest that little is known about the impact of professional development on teaching practitioner change, particularly improvements that transform practice.

In this study, one participant mentioned a significant pedagogical shift for her. This finding was not expected. However during the interviews the participant mentioned this as being a major part of the online environment for her. She described how the teacher had contributed to this shift in her learning through the design of the online environment to enable the learners to become “*the directors of the learning*”. The participant suggested that the design of the online environment contributed to this shift through the interactions, the authentic tasks, and the meaningful assignments in the online environment which were able to be seen in this participant’s own context. The participant described how the teacher providing feedback and facilitating the learning was a key component for her in making the pedagogical shift. Timperley et al. (2007) also found that when teaching practitioners encounter new information that challenges their existing beliefs or offers new possibilities for their student learning, they will often chose to engage with the new approaches and theories to substantially change their practice.

This study suggests that valued aspects of the teacher’s role in an online learning environment are in designing an environment to enhance the learning, planning and participating in interactions, and designing tasks or assignment that are related to the course members’ own context. The teacher taking an active and meaningful role as well as modelling were significant factors.

While this study did not explore pedagogical shifts, this study found evidence of this happening signalling a need for further exploration. In the next chapter, I will reconsider the findings and discuss the implications of this study.

Chapter Six Conclusions

This final chapter reviews the findings in relation to the research question. This was a small case study with only five volunteers from one online learning environment. However the size and make up of these participants should not undermine these participants' perceptions as what they shared is valuable and interesting to those teaching in an online environment. These allowed me to look at alternative viewpoints to provide me with insights into what I thought in relation to my own practices (Burns, 2004; Mutch; 2005).

This study found that participants perceived that the teacher's role was important to the online learning environment by designing an environment to enhance the thinking and learning of the course members, by giving opportunities for interactions where the teacher takes an active role, and by providing opportunities for tasks and assignments which are closely linked to the learning outcomes and the teaching practitioners own practice.

Pedagogical shift

This study suggests that a pedagogical shift for teaching practitioners can be accomplished in the online learning environment through the online environment design and the teacher taking an active role in the facilitating.

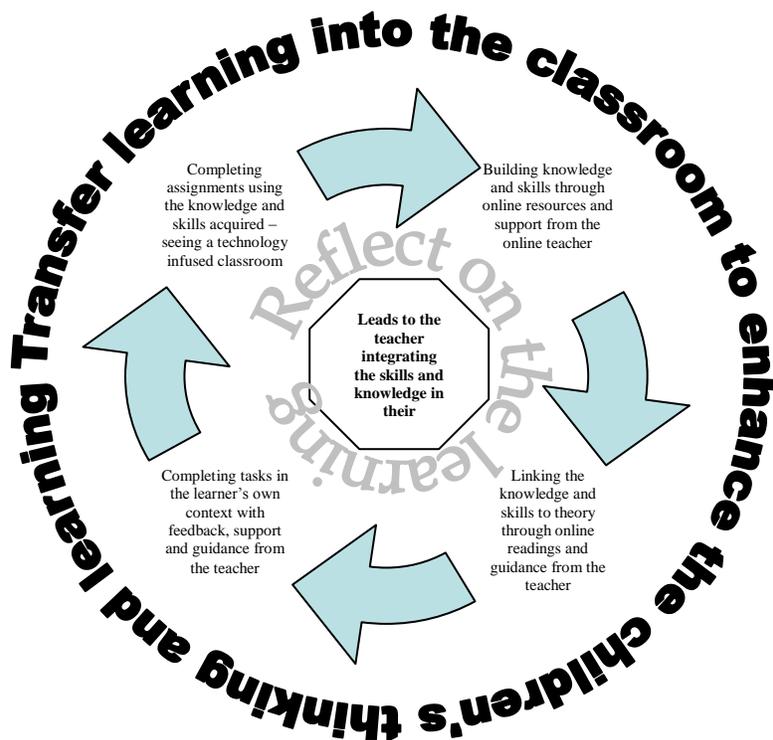


Figure 2
Model to enable teachers to transfer learning into their own environment

Using the findings from this study, a model for the online learning environment to encourage teaching practitioners to integrate the skills and knowledge into their classrooms to enhance the children's learning is shown in Figure 2. This model involves a cyclic approach and involves developing skills and knowledge in educational contexts, linking these to relevant theory and reflection on the learning, completing a range of tasks in the course member's own context, and completing assignments using the skills and knowledge in a classroom setting to enable the course member to see a technology infused classroom in practice. Seeing a lesson where technology is used and seeing the impact that the technology can have on student learning encourages teaching practitioners to employ technology-enhanced teaching strategies. This model aligns with Timperley et al. (2007) who suggest three stages in professional learning processes: cueing and retrieving prior knowledge, becoming aware of new information/skills and integrating them into current values and beliefs system, and creating dissonance with current position. This area has the potential for further study.

Design and structure of the online learning environment

The teacher in the online learning environment needs to be accomplished in many areas in order to deliver professional development to enhance the learning of educational practitioners. This is an important consideration for those undertaking teaching in an online environment. All parts of the online learning environment need to be carefully planned to ensure that the course members are able to move around the site quickly and easily. The online learning environment requires a clear structure with a logical order which is used consistently throughout to give a sense of familiarity when navigating to locate the different areas as required. In addition the teacher needs to carefully structure the course to meet the learning outcomes as well as designing experiences that meet the objectives of the course to enrich the learning (E-Learning Advisory Group, 2004).

Tasks and assignments

As learning needs to be meaningful to them (E-Learning Advisory Group, 2004) course members need to be provided with meaningful activities to encourage learning. In this study having meaningful tasks and assignments which were related to their own practices were highly valued. These tasks and assignments were closely aligned to the learning outcomes of the course and to the course members' own practice as suggested by Timperley et al.. (2007). An important component of the assignments was the course members presenting their work to their peers, viewing each other's assignments and giving feedback to each other about the presentations.

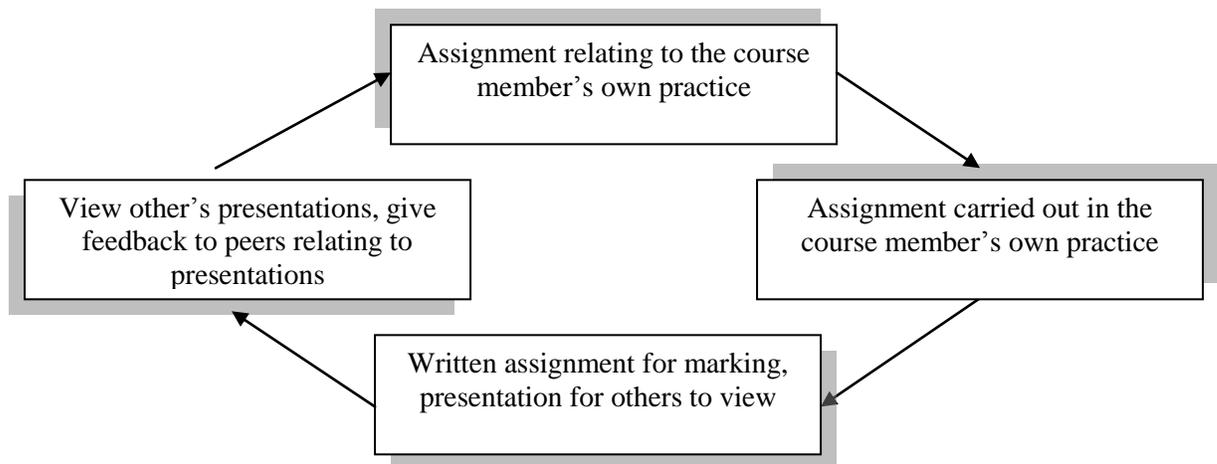


Figure 3
Model for assignments in the online learning environment

The model that was used for assignments is shown in Figure 3. This study found that a crucial component of this cycle was the viewing and then giving feedback relating to the presentations. Participants in this study found that this was a valuable activity where they viewed, reflected upon and then gave feedback. This was seen to be the “*pièce de résistance*” and “*pivotal learning*” in the course structure.

Interactions

The teacher providing the opportunities for interactions is seen as important in this study. The interactions provide opportunities for reflections, social interaction, and peer or teacher help and support. An important part of the interactions in this study is the teacher modelling appropriate behaviours and monitoring discussion lounges to ensure that they are not misused (E-learning Advisory Group, 2004). This was seen as important as this study found that when course members have had a negative experience in their past courses they lose confidence in their ability to contribute to the discussion lounge and it requires a lot of teacher modelling and support to build up their confidence to contribute again.

The teacher taking an active role in the interactions is seen as an important role for the teacher: to build relationships, to provide support, to provide insights, to question, and to pick up links and respond to them. The teacher only acknowledging that course members have contributed to the

discussion lounge was not seen as contributing to the interactions. This study found that the teacher monitoring discussions is important to ensure that course members do not have experiences where their contributions are not valued as this can have lasting effects on the course members causing them to become reticent to contribute.

In addition to the opportunities for interactions in the online learning environment, email interactions with the teacher are an important component to maintain contact and build relationships. The teacher replying promptly to emails from course members is seen as important. Participants' expectations of prompt replies to any queries or interactions place a stress on the online teacher to meet these expectations. The teacher monitoring discussion lounges, taking an active role in the discussion lounges and sending or replying to emails requires a lot of teacher time which is an important factor that needs to be taken into account. An online learning environment requires as much if not more teacher time as a traditional face to face course which it is important to acknowledge.

This study investigated one main research question:

What pedagogical practices and qualities does a teacher in an online learning context need as perceived by educational practitioners undertaking online Professional Development in ICT?

This study found that the role of the teacher is crucial to the success of the online learning environment for educational practitioners undertaking professional development. Course members' expectations of the roles of online learning teacher are many and varied in the same way as a face-to-face teacher. A main point of difference is that the online learning environment is available at any time for the course members or teacher to access. Another point of difference is that in a face-to-face situation not all course members have the opportunities for interaction that are available in the online environment. With large numbers in courses, this can place stress for the teacher to ensure that they have the time allowance to maintain this contact.

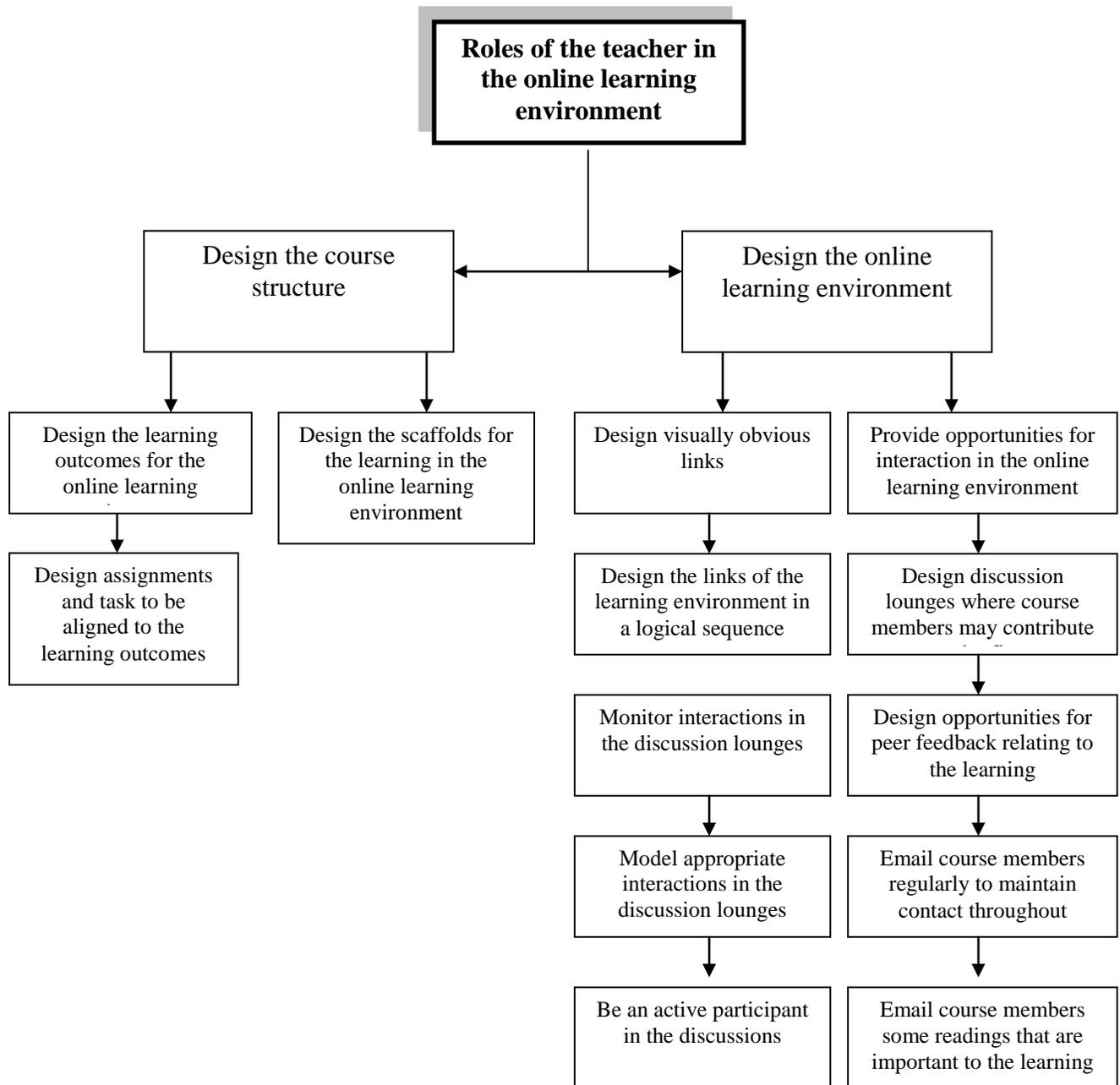


Figure 4
The roles of the teacher in an online learning environment

In an online learning environment, the teacher needs to: design a course structure with clear learning outcomes, provide scaffolding for the learning, and design assignments or tasks that are aligned to the learning outcomes (Figure 4). They need to ensure that links are visually obvious and in a logical sequence. Another important aspect of the design is the teacher providing opportunities for interactions where the teacher is also an active participant modelling appropriate interactions, and monitoring discussions.

This study found that participants valued opportunities for interactions with the teacher and peers, teacher modelling, monitoring and taking an active role in the interactions, prompt responses to email interactions, having tasks and assignments which are related to the participants' own contexts, an online learning environment which has a clear structure and is easy to navigate. Although this study did not attempt to find out about a pedagogical shift, this was an incidental finding which could be explored in greater depth. While this study was undertaken at the completion of the course, whether the skills and knowledge gained are continued to be used in the course members' own contexts is an area that would be interesting to explore.

Online learning will continue to evolve as technologies change. The challenge is to utilize these changes to enhance the online learning environment. To do this it is important that we continue to research our practice to ensure that we using the technologies in the best way possible rather than using a gimmick which has the potential to detract from the learning.

The most important aspect of this study was asking the teaching practitioners for their perspectives. This has enabled me to gain insights regarding what the participants actually expect from the teacher and how the online learning environment can enhance their learning. To understand how the online learning environment can cater to the needs of teacher practitioners we must continue to consult them as well as reflecting on the relevant literature. In this way we can continue to develop and grow as teachers in order to deliver courses that enable teaching practitioners to grow and develop.

References

- Abel, R. (2005). Implementing Best practices in Online Learning. *EDUCAUSE Quarterly*, 28(3), 75-77.
- Allan, M. (2004). A Peek into the Life of Online Learning Discussion Forums: Implications for Web-Based Distance Learning. *International Review of Research in Open & Distance Learning*, 5(2), 1-16.
- Ally, M. (2004). Foundations of educational theory for online learning. In T. Anderson, and F. Elloumi (Eds.), *Theory and practice of online learning*. (pp. 3-32) Athabasca, Canada: Athabasca University.
- Alton-Lee, A. (2006). *Iterative best evidence synthesis*. 4th Annual Policy Evolution Conference. Retrieved 1 November 2007 from: <http://www.conferenz.co.nz/iterative-best-evidence-synthesis-2.html>
- Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Wellington: Ministry of Education.
- Anderson, T. & Elloumi, F. (Eds.), (2004). *Theory and practice of online learning*. Athabasca, Canada: Athabasca University.
- Anderson, T. (2004). Toward a theory of online learning. In T. Anderson, & F. Elloumi, (Eds.), *Theory and practice of online learning* (pp. 33 – 60). Athabasca, Canada: Athabasca University.
- Baker, S., Ferguson, B., Roberts, M., & Fielden, K. (2003). Five years of online learning research in New Zealand: A review. *Bulletin of Information Technology Research*, 1(1). Retrieved 15 Oct 2007, from: <http://www.citrus.ac.nz/bitr/0101/baker.html>
- Becker, B., Dawson, P., Devine, K., Hannum, C., Hill, S., Leydens, J., Matuskevich, D., Traver, C., & Palmquist, M. (2005). *Case Studies. Writing@CSU*. Colorado State University Department of English. Retrieved 25 Oct 2007 from : <http://writing.colostate.edu/guides/research/casestudy/>
- Bonk, C. (2004). *Related to the effectiveness of e-learning and collaborative tools*. Retrieved June 27, 2008 from: http://www.trainingshare.com/download/australia/TAFE_sydney/tools.ppt
- Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative research for education: An introduction to theory and methods* (3rd ed.). Boston: Allyn and Bacon.
- Brown, T. (2005). Beyond constructivism: Exploring future learning paradigms. *Education Today*, (2), 14-30.

- Burns, R. (1990). *Introduction to Research Methods*. Melbourne: Longmans.
- Burns, R. (2004). *Introduction to Research Methods* (4th ed.). Melbourne: Longmans.
- Burton, D., & Bartlett, S. (2005). *Practitioner research for teachers*. London: Paul Chapman.
- Capper, P., Fitzgerald, L., Weldon, W., & Wilson, K. (2000). Technology and the coming transformation of schools, teachers and teacher education. In A. Scott, & J. Freeman-Moir (Eds), *Tomorrow's teachers: International critical perspectives on teacher education* (pp. 176-199). Christchurch: Canterbury University Press.
- Choy, S., McNickle, C., & Clayton, B. (2001). Online support for VET clients; Expectations and experiences. *AVETRA National conference 2001; research to reality; putting VET research to work*. Retrieved 1 November 2007 from www.aveutra.org.au/abstracts_and_papers_2001/Choy-McNickle.pdf
- Clough, P. and Nutbrown, C. (2002). *A student's guide to methodology; justifying enquiry*. London: Sage Publications.
- Cochran-Smith, M., & Lytle, S. L. (Eds.) (1993). *Inside outside*. New York: Teachers' College Press.
- Cohen, L. Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). London: Routledge.
- Corcoran, P., Walker, K., & Wals, A. (2004). Case studies, make-your-case studies, and case stories: A critique of case -study methodology in sustainability in higher education. *Environmental Education Research*, 10(1), 7-21.
- Curry, M. & Tu C. (2003). *Distance education; what works well?* Binghamton, New York: The Haworth Press.
- Davis, A. (2004). Developing an infrastructure for online learning. In T. Anderson & F. Elloumi (Eds.), *Theory and practice of online learning* (pp. 97-114). Canada: Athabasca University.
- Dede, C. (1995). *The transformation of distance education to distributed learning*. Retrieved 5 December 2006 from: <http://www2.gsu.edu/~wwwitr/docs/distlearn/index.html>
- Dede, C. (1997). Distance learning to distributed learning: Making the transition. *Learning & Leading with Technology*, 23(7), 25-30.
- Dede, C. (2006). *Online professional development for teachers: emerging models and methods*. Cambridge MA: Harvard Education Press.

- Dede, C., Ketelhut, D., Whitehouse, P., Brett, L., & McCloskey, E. (2006). *A research agenda for online teacher professional development*. Harvard Graduate School of Education. Retrieved 19 June 2009. from: http://gseweb.harvard.edu/~uk/otpd/Dede_research_agenda_final.pdf
- Delamont, S. (2000). *Fieldwork in educational settings. Methods, pitfalls and perspectives* (2nd ed.). London: Routledge.
- Derry, S. Seymour, J., Steinkuehler, C., Lee, J., & Siegel, M. (2004). From ambitious vision to partially satisfying reality: An evolving socio-technical design supporting community and collaborative learning in teacher education. In S. Barab, R. Kling, & J. Gray (Eds.), *Designing for virtual communities in the service of learning*. (pp. 256-298). Cambridge, UK: Cambridge University Press.
- Duffy, M., Kirkley, J., del Valle, R., Malopinsky, L., Scholten, C., Neely, G., Wise, A., & Chang, J. (2006), Online teacher professional development. In C. Dede (Ed.), *Online professional development for teachers: emerging models and methods* (pp. 15-23). Cambridge, MA: Harvard Education Press.
- Duncan, H. (2005). On-line education for practicing professionals: A case study. *Canadian Journal of Education*, 28(4), 874-896.
- Ebest, S. (2001). Action research on action research; Emancipatory research or abuse of power? In J. Zeni, (Ed.), *Ethical issues in practitioner research*. Columbia University NY: Teachers College Press.
- E-learning Advisory Group (2004). *Critical success factors and effective pedagogy for e-learning in tertiary education*. New Zealand Council for Educational Research. Retrieved 2 November 2007. From: http://elearning.itpnz.ac.nz/files/NZCER_Final_Report_Critical_Success_Factors.pdf
- E-learning Advisory Group (2002). *Highways and pathways: Exploring New Zealand's e-learning opportunities*. Wellington: Ministry of Education.
- Elloumi, F. (2004). Value chain analysis: A strategic approach to online learning. In T. Anderson, & F. Elloumi (Eds.), *Theory and practice of online learning* (pp. 61-96). Athabasca, Canada: Athabasca University.
- Fahey, P. J. (2004). Media characteristics and online learning technology. In T. Anderson, & F. Elloumi (Eds.), *Theory and practice of online learning* (pp. 137-171). Athabasca, Canada: Athabasca
- Fouché, C., Lunt, N., & Yate, D. (2007). *Growing research in practice: a collection of resources*. Retrieved 14 November 2007 from: www.massey.ac.nz/gripbookweb.pdf

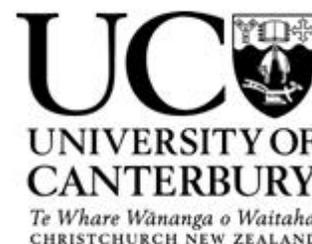
- Fredericksen, E., Pickett, P., Pelz, W. & Swan, K. (2000). *Student satisfaction and perceived learning with online courses: Principles and examples from the SUNY learning network*. Retrieved January 23 from: http://www.sloan-c.org/publications/jaln/v4n2/pdf/v4n2_fredericksen.pdf
- Fullen, M.G. (1991). *The new meaning of educational change*, London: Cassell.
- Gay, L., & Airasian, P. (2000). *Educational research; Competencies for analysis and application* (6th ed.). New Jersey: Prentice Hall.
- Ginns, P., & Ellis, R. (2009). Evaluating the quality of e-learning at the degree level in the student experience of blended learning. *British Journal of Educational Technology*, 40(2), 652-663.
- Gorsky, P., & Blau, I. (2009). Online Teaching Effectiveness: A Tale of Two Instructors. *International Review of Research in Open & Distance Learning*, 10(3), 1-27.
- Greene, C., & Magliaro, S. (2004). A computer-mediated community of learners in teacher education. In C. Vrasidas, * G. Glass (Eds), *Online professional development for teachers* (pp. 31-50). Connecticut: Information Age Publishing.
- Haigh, M. (2004). *The many faces of case study research*. Retrieved September 12, 2006, from University of Auckland Web site: <http://www.ace.ac.nz/learning/science/articles/a5.asp>
- Hewitt, J. (2004). An exploration of community in a knowledge forum classroom: An activity system analysis. In S. Barab, R. Kling, & J. Gray, (Eds.), *Designing for virtual communities in the service of learning* (pp. 210-238). United Kingdom: Cambridge University Press.
- Hoban, G. (2004). Using information and communication technologies for the self-study of teaching. In J. Loughran, M. Hamilton, V. LaBoskey, & T. Russell (Eds.), *International handbook of self-study of teaching and teacher education practices* (pp. 1039-1072). Cornwall, Great Britain: MPG Books Ltd.
- Hult, A., Dahlgren, E., Hamilton D., & Söderström T. (2005). Teachers' invisible presence in net-based distance education. *International Review of Research in Open and Distance Learning*. 6(3), 1-11.
- Irons, L., Jung, D., & Keel, R. (2002). Interactivity in distance learning: The digital divide and student satisfaction. *Educational Technology and Society*, 5(3), 175-188.
- Jeffrey, L., Atkins, C., Laurs, A., & Mann, S. (2005). Elearning profiles: diversity in learning. *Ministry of Education, TeLRF project report*. Retrieved November 29 2006 from: <http://cms.steo.govt.nz/NR/rdonlyres/48291469-AD1C-4E32-B00C-CB892E183430/0/Researchreportfinal31Oct.pdf>

- Job-Sluder, K., & Barab, S. (2004). Shared “we” and shared “they”: Indicators of group identity in online professional development. In S. Barab, R.Kling, & J. Gray, (Eds.), *Designing for virtual communities in the service of learning*. (pp. 377-403). Cambridge, UK: Cambridge University Press.
- Kember, D. (1989). A longitudinal-process model of drop-out from distance education. *Journal of Higher Education*, 60(3), 278-301.
- Kim K., & Moore J. (2005). Web-based learning: Factors affecting students’ satisfaction and learning experience. *First Monday*, 10(11). Retrieved 16 October 2006 from: http://www.firstmonday.dk/issues/issue10_11/kim/index.html
- Kock Jr. N., McQueen, R., & Scott J. (1995). A methodology to IS study in organisations through multiple action research cycles. *Research Report No. 1995-5*. Dept. of Management Systems, University of Waikato, New Zealand.
- Koehler, M., & Mishra, P. (2008). Introducing TPCK. In AACTE Committee on Innovation and Technology (Eds.). *Handbook of technological pedagogical content knowledge (TPCK) for educators*. (pp. 3-30). New York: Routledge.
- Lave, J., & Wenger, E. (1991). *Situated learning: legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Leach, J., Harrison, D., McCormick, B., and Moon B. (2004). Developing teacher knowledge and pedagogy in a large-scale , electronic conference environment for professional development. In C.Vrasidas, & G. Glass (Eds). *Online professional development for teachers* (pp. 31-50). Connecticut: Information Age Publishing.
- Lee, K., & Duncan-Howell J. (2007) How do we know e-learning works? Or does it? *E-Learning*. 4(3) 482-496.
- Leh, A. (2001). The changing role of the teacher: Case study. In J. Price, D.Willis, N. Davis & J. Willis (Eds.), *Proceedings of SITE 2001* (pp. 2366-2368). Charlottesville, VA: Association for the Advancement of Computing in Education.
- Lin, A. & Gregor, S. (2006). Designing websites for learning and enjoyment: A study of museum experiences. *International Review of Research in Open and Distance Learning*, 7(3),1-18.
- Light, P., Colbourn, C., & Light, V. (1997). Computer mediated tutorial support for conventional university courses. *Journal of Computer Assisted Learning*, 13(4), 228-235.
- Lu, L., & Jeng, I. (2006/2007) Knowledge construction in inservice teacher online discourse: Impacts of instructor roles and facilitate strategies. *Journal of Research on Technology in Education*, 39(2), 183-202.

- McIsaac, M. & Craft, C. (2002). Faculty development; Using distance education effectively in the classroom. In M. Curry, & C. Tu (Eds.), *Distance education; what works well* (pp. 15-31) Binghamton, NY: The Haworth Press, Inc.
- McLoughlin, C. (2000). Cultural maintenance, ownership, and multiple perspectives: Features of web-based delivery to promote equity. *Journal of Educational Media*, 25(3), 229-241.
- Massey University Calendar (2007). Retrieved January 30 2007 from:
<http://calendar.massey.ac.nz/information/mu.htm>
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online-learning studies*. Washington, D.C.: U.S. Department of Education.
- Morse, J., & Richards, L. (2002). *Read me first for a user's guide to qualitative methods*. London: Sage Publications.
- Mutch, C. (2005). *Doing educational research: A practitioner's guide to getting started*. Wellington: NZCER Press.
- Oliver, R. (2001). Seeking best practice in online learning: Flexible Learning Toolboxes in the Australian VET sector. *Australian Journal of Educational Technology*, 17(2), 204-222.
- Pan, C., Sivo, S., Gunter, G., & Cornwall, R. (2005). Students' perceived ease of use of an e-learning management system: An exogenous or endogenous variable? *Journal of Educational Computing Research*, 33(3), 285-307.
- Palloff, R., & Pratt, K. (2001). *Lessons from the cyberspace classroom. The realities of online teaching*. San Francisco: Jossey-Bass Inc.
- Poskitt, J. (2005). Towards a model of New Zealand School-based teacher professional development. *New Zealand Journal of Teachers' Work*, 2(2), 136-151.
- Riel, M., & Polin, L. (2004). Learning communities: Common ground and critical differences in designing technical environments. In S. Barab, R. Kling, & J. Gray (Eds.), *Designing Virtual Communities in the Service of Learning*. (pp. 405-443). Cambridge, UK: Cambridge University Press.
- SalJohn, S. (2003). *Professional development: 21st century models*. Retrieved Feb 2, 2007 from
<http://www.techlearning.com/showArticle.php?articleID=13000492>
- Schlager, M., & Fusco, J. (2004). Teacher professional development, technology and communities of practice: Are we putting the cart before the horse? In S. Barab, R.,Kling, & J. Gray, (Eds.), *Designing for virtual communities in the service of learning* (pp. 129-153). Cambridge, UK: Cambridge University Press.

- Schrum, L. & Hong, S. (2002). Dimensions and strategies for online success: Voices from experienced educators. *Journal of Asynchronous Learning Environments*, 6(1), 57-67.
- Spender, D. (2001). E-learning: are schools prepared? *Proceedings of the Annual Washington conference on e-learning in A Borderless Market*. 21–33.
- Stake, R. E. (2003). *Case studies*. In Denzin, N. and Lincoln Y., (Eds.). *Strategies of qualitative inquiry* (2nd ed. pp 134 – 164). Thousand Oaks: Sage.
- Taylor J. (2006). *The virtual university*. Australia: University of Southern Queensland. Retrieved November 29 2006, from:
http://www.unesco.org/iiep/virtualuniversity/media/document/Ch8_USQOnline_Taylor.pdf.
- Tidwell, D., and Fitzgerald, L. (2004). *Self study as teaching*. In Loughran, J. & Hamilton, M. & LaBoskey, V. and Russell, T. (Ed.), *International handbook of self-study of teaching and teacher education practices* (Vol. 1, pp. 69-101). Bodmin, Cornwall, Great Britain: MPG Books Ltd.
- Timperley, H., Wilson, A., Barrar, H., & Fung, I. (2007). *Teacher professional learning and development: Best evidence synthesis iteration*. Wellington: Ministry of Education.
- Trewern, A., & Lai, K.-W. (2001). *Online learning: An alternative way of providing professional development for teachers*. In K.-W. Lai (Ed.), *e-Learning: Teaching and professional development with the Internet* (pp. 37-55). Dunedin: The University of Otago Press.
- Ukphkodu, O. (2008). Teachers' reflections on pedagogies that enhance learning in an online course on teaching for equity and social justice. *Journal of Interactive Online Learning*, 7(3), 227-255.
- Van der Berg, O. (2001). *The ethics of accountability in action research*. In Zeni, J. (Ed.). (2001). *Ethical issues in practitioner research*. (pp. 214-225) Columbia University New York: Teachers College Press.
- Vesely, P., Bloom, L., & Sherlock, J. (2007). Key elements of building online community: Comparing faculty and student perceptions. *MERLOT Journal of Online Learning and Teaching*, 3(3), 234-246
- Vrasidas, C. & Glass, G. (Eds.). (2004). *Online professional development for teachers*. Greenwich, Connecticut: Information Age Publishing.
- Wheeler, S. (2001). Information and communication technologies and the changing role of the teacher. *Journal of Education Media*. 26(1). 7-17.
- Woods, R., & Baker, J. (2004). Interaction and immediacy in online learning. *International Review of Research in Open and Distance Learning*, 26(1). 7-17

- Whitehead, J. (2004). *What counts as evidence in self-studies of teacher education practices*. In Loughran, J., Hamilton, M. and LaBoskey, V. & Russell, T. (Ed.), *International handbook of self-study of teaching and teacher education practices* (Vol. 1, pp. 871 -904). Cornwall, Great Britain: MPG Books Ltd.
- Yin, R. K. (1993). Advancing rigorous methodologies: A review of 'Towards rigor in reviews of multivocal literatures.' *Review of Educational Research*, 61, (3).
- Zeni, J. (Ed.) (2001). *Ethical issues in practitioner research*. NY: Teachers College Press.



Appendix One

What pedagogical practices and qualities do online learners, who are practising teachers undertaking professional development, perceive as being important to the role of the online teacher?

INFORMATION SHEET FOR PARTICIPANTS

My name is Diane Brooks and I am currently enrolled in TL804 at the University of Canterbury as part of the Master of Teaching and Learning qualification. This research study is under the supervision of the University of Canterbury staff and has been reviewed and approved by the University of Canterbury Ethics Committee.

As a teacher in an online environment I am interested in how learners perceive my role and how I can be more effective in this environment. The aim of the study is find out about the learner's perceptions of the role of the teacher in the online environment which may provide me with insights into improving my own practice as an online teacher.

I would like you to fill in a questionnaire and to talk to you about the teacher's role in online learning environments. In addition I would like to read comments you make in the weekly discussion lounges and use any relevant comments that you made in these areas.

The data will be collected over the duration of the course beginning with a questionnaire, followed by an interview.

The interview will be by phone and will take a maximum of one hour. It will be taped, transcribed and used to prepare a research dissertation for submission to the University of Canterbury staff. If you agree to take part this raises questions regarding confidentiality and consent. Before commencing the interview I will clarify any questions you may have. Some points to note are:

- Your participation is entirely voluntary. Not participating will involve no penalty or loss of benefits to which you might otherwise be entitled.
- You are free to withdraw from the study at any time without penalty and without providing any explanation.
- You may decline to answer any questions that you do not wish to answer.
- Your participation in this study is confidential to me and my supervisors so no one else will be informed and your name will not be used in the study.
- No information that could identify you will be included in any part of the study or in any publication which may arise from it. All participants in the study will be given a code name so no-one else will know who made the comments I will use in my report of this research
- Following the interviews the tapes will be transcribed and tapes will be stored in a locked filing cabinet for 5 years with the only key being held by me.

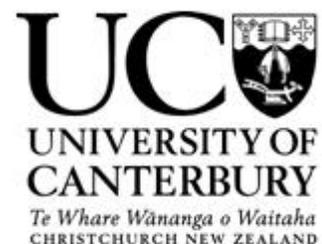
During the course you will be asked to contribute to a discussion lounge during each session. I would also like to read and use some of the course members' reflections in the course discussion lounges which are relevant to the study and provide insights into the teacher's role. No names or identifying data from these reflections will be used.

I may need to contact you by phone after the interview to clarify points raised and will send you a copy of the transcript of your interview to ensure that data has been interpreted in the way that you intended.

Should you wish to clarify any of the above points please feel free to contact me (ph 345) or my supervisors at the University of Canterbury, Dr Jane McChesney (ph 345) or Faye Parkhill (ph 345)at any time during the project. Thank you for your help.

1. This project has received ethical approval from the University of Canterbury College of Education Ethical Clearance Committee.
2. Complaints may be addressed to:
Associate Professor J Greenwood, Chair, Ethical Clearance Committee
College of Education, University of Canterbury
Private Bag 4800, CHRISTCHURCH

Telephone: 345 8390



Appendix Two

What pedagogical practices and qualities do online learners, who are practising teachers undertaking professional development, perceive as being important to the role of the online teacher?

PARTICIPANT CONSENT FORM

I have been invited to take part in a study about online learning environments that are used for teacher professional development.

I have heard and understood an explanation of the study and have been given an opportunity to discuss the study and ask questions about it. My questions have been answered to my satisfaction, and I understand that I can continue to ask questions at any time.

I know who to contact if I have any questions about the study.

I understand that:

- My taking part in this study is voluntary (my choice).
- I am free to withdraw from the study at any time and for any reason.
- The interview will be taped.
- I may decline to answer any question that I do not wish to answer.
- The information may be used for Diane's research dissertation.
- I give permission for working transcripts to be kept by Diane for use in subsequent related study.
- Tapes will be destroyed after 5 years, until that time they will be kept in a locked filing cabinet with Diane holding the only key.
- My participation in this study is confidential, and no information that could identify me will be used in any part of the study.
- My participation in this study will not disadvantage my study at the University of Canterbury at any time.

I have read and understand the information sheet (please ring one).

Yes / No

I consent to take part in this study (please ring one):

Yes / No

Participant's signature:

Date:

1. This project has received ethical approval from the University of Canterbury College of Education Ethical Clearance Committee.
2. Complaints may be addressed to:
Associate Professor J Greenwood, Chair, Ethical Clearance Committee
College of Education, University of Canterbury
Private Bag 4800, CHRISTCHURCH

Telephone: 345 8390

Appendix Three

Thank you for agreeing to become a participant in my study. Please take a few minutes to complete this form and email it back to me.

I have endeavoured to make this form as 'user-friendly' as possible – just click to the grey area by the name field and then press the tab key to take you to the next area of the form to fill in (*if you want a tutorial on how to make a form like this let me know and I will send you a tutorial*).

Thank you so much

Diane Brooks

Name: (optional)

1. What is your age group?
21-30
2. How many years have you been teaching?
0-5 years
3. What is your teaching situation at present?
4. What class level(s) do you usually teach?
5. What qualification are you currently studying for?
6. Where are you in your study?
7. Have you done any other professional development courses?
Yes
8. If so what courses?
9. Have some of these courses been in a face-to-face environment?
Yes
10. If yes please state how many
11. Have come of these courses been in an online environment?
Yes

12. If you have completed online courses please state how many.
13. Please describe any experiences of online study environments where you have been a participant.
14. Why did you enrol in this course?
15. What are your expectations of this course?
16. What are your expectations of a professional development teacher in a face-to-face course?
17. What are your expectations of my role as your teacher?
18. Please add any other details you think may be important.

Thank you for completing this form.

Diane Brooks

Appendix Four

Front page of the online learning environment

Tools for Thinking and Learning: Database and Spreadsheet Use in the Classroom 🛠️✍️

Welcome to your online learning course

Please remember if you have any problems

Phone 343 7780 ext 8144

Email diane.brooks@cce.ac.nz



Web links related to: [Databases](#) [Spreadsheets](#)

[Tutorials re Mac Differences](#) [Frequently Asked Questions](#)

[Excel 2007 tutorials](#) [Access 2007 tutorials](#) [Link to online Library Guide](#)

Assignment information

| | | | | |
|--------------------------------------|--|-------------------------------|-------------------------------|--|
| Ice breaker activity | Session one | Session two | Session three | Session four |
| Session five | Session six Assessment | Session seven | Session eight | Session nine/ten/eleven Assessment |

Ice breaker activity

Links to each of the course sessions

Contact information about the teacher

Links to general areas of the site

Tutorials for new Office 2007 software

Assignment information