

INQUIRY INTO A TRANSFORMATIVE APPROACH TO PROFESSIONAL DEVELOPMENT FOR ONLINE EDUCATORS

A Dissertation submitted by

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Certification of Dissertation

I certify that the ideas, experimental work, results, analyses, and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

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Abstract

This study investigates professional development for online educators within a transformative learning framework. A qualitative, action research method was adopted that captured data from interactions between the researcher and participants, and which allowed the generation of theory that could guide future design efforts. The project was conducted online from Australia during 2002 and 2003 with two groups of participants drawn from a Singapore polytechnic. Data were analysed utilising content analysis of transcripts, interviews, and observations, with the researcher being an active participant in the project.

The findings which differentiated online from traditional educational contexts, and which therefore are significant in terms of future design considerations were that since interactions were all text-based and visible, participants were careful to provide reasoned, reflective contributions. Furthermore, the archived interactions were available for inspection by all participants, giving rise to more articulate and constructive dialogues while maintaining evidence of the human “presence”. Other findings related to supporting an online community of adult learners by recognising the individuality of each learner and their specific needs in terms of their experience, need for relevance and flexibility in the learning activity, and valuing the sense of human connectivity. Offering of peer support through a peer learning partnership model was found to be an effective way for learners to support each other in a trusting, respectful, empathetic, non-threatening manner. Findings indicated that the provision of exemplars, or models of good practice, supported situated, authentic activity, and contributed to positive, motivated learners. The dynamic (constantly changing, growing, adapting) nature of the Internet required facilitators to be continually evaluating the learning situation in order to promote and nurture an atmosphere that supported the development of new ideas, the challenging of old, the exploration of alternatives, and support for changes in perspective and action. Evidence suggested that the use of the Internet for learning and teaching could go some way towards addressing the challenges of prejudice, discrimination, and celebrate the notion of difference.

From these findings, the literature, and the personal experience of the researcher, ten design principles were formulated and, if considered in light of local contextual characteristics, offer a framework for transformative approaches to professional

development for online educators. Further research to address the application of this framework to other discipline areas, and other educational settings, is recommended.

Key indicators

transformation theory, transformative learning, online pedagogy, professional development, online educators, online design framework, higher education

Foreword – A Practitioner’s Journey

I find the great thing in this world is not so much where we stand, as in what direction we are moving.
Oliver Wendell Holmes

This thesis arose from my professional practice, my reading of the literature, and my desire to make a difference in the field of education. I believe the understanding I have gained from this research has informed my practice, and will enable me to build capacity in others.

My interest in information and communications technologies began not long after I joined the University of Southern Queensland (USQ) in its Distance Education Centre (DEC) in 1992. My final paper for a Masters degree (completed part-time, and at a distance from 1992 to 1995) focused on the design considerations for developing hypermedia courseware. This paper provided an opportunity for me to expand my existing skills and knowledge, and to enter the world of academic writing and publishing when I had my first article published in a refereed journal.

As time went on, I observed a change in my conceptualisation of computer use. Working with the staff of a local school to develop a computer policy was a catalyst for this change. A conference introduced me to the Internet and the possibilities of online learning and teaching, particularly communications technologies. I commenced teaching online in 1997 – part-time, and in my “own time”. I met regularly with a like-minded colleague, to talk and to write about our experiences, and to critique each other’s work. Our expertise, knowledge and confidence in the field grew. During that time I expanded my technical skills through a range of practical classes. Along with other colleagues at our institution, we decided to run professional development sessions through the Human Resource department in order to put forward our beliefs about learning, and ways of using online technology to enhance that learning. I developed a Web site to support this and consequently improved my understanding of, and ability to use, the Internet.

As my doctoral studies progressed (commenced in the middle of 1999), my views about learning, and adult learning in particular, developed to include dimensions of dialogue,

reflection, action, and social engagement. A strong influence on my thinking at that time was the work of Pere (Father) Teilhard de Chardin, particularly his book *The Phenomenon of Man*, written in 1955. He maintained that evolution had a definite direction, an “Ariadne’s Thread”, and that thread is the increasing complexity of living beings, the focus of which is their nervous systems and more precisely, their brains. Central to this is thought and reflection. His opinions about the interconnectivity of mankind and his concern with establishing a global unification of human awareness as a necessary prerequisite for any real future progress of mankind struck a chord with me.

In 2003, I attended the Transformative Learning Conference at Teachers’ College, Columbia University, New York, and I was hooked! I heard Maxine Greene and Jack Mezirow speak. I met with Patricia Cranton, Kathy King, John Dirkx, and many other great names in the field. I was surrounded by positive, enthused, “transformed” educators – it was indeed a transformative learning experience for me, and as Cohen (1997, p. 61) has observed, “in order to practice and teach transformative learning, I had to *experience* transformative learning”.

On my return to Australia, I began working in earnest on my doctoral write-up. However, the more I wrote, the more I felt I needed to read, and the more I discovered. In 2004, I ran two online courses (twice) with postgraduate learners. I implemented many of the strategies I had been hearing and reading about, I trialled, I critically reflected, I discussed, debated and challenged. And the results were amazing. During the courses, learners engaged in reflective practices and I noted significant changes in terms of their confidence to challenge, explore, and push the boundaries. A series of professional readings was used as journal and discussion prompts. Connections between theory and practice became more explicit.

This research project emerged from a desire to marry the theories that resonated with me, to a practical program of professional learning for teachers. It was also borne out of a desire to make a difference, and for my work to lead ultimately to productive change in professional learning experiences for adults. A tenet which underpins my educational philosophy is the concept of learning as a journey, rather than an isolated event. This belief reflects a learning theory proposed by Fox (1983) called travelling theory. Travelling theory expresses learning as a journey through the countryside of knowledge with the

teacher providing guidance rather than clear instructions on how to get from point to point. The teacher may change into a fellow traveller at any point, or points along the way. The concept of learning as a journey is not a new one. In 1853, Hole (as cited in Candy, 1991, p. 57) observed that “education is not an affair of childhood and youth, it is the business of the whole life”. Indeed, the belief that learning is a lifelong journey is the subject of much interest and research in today’s educational community. Conferences are dedicated to the study of “lifelong learning” (e.g., *Lifelong Learning Conference* at Central Queensland University), and many “lifelong learning” university centres have sprung up e.g., Centres for Lifelong Learning at several UK universities. Learning can and should be a lifelong process that is promoted and supported from childhood and throughout adulthood, in formal settings as well as informal ones (Fraser, 2001).

Anderson and Kanuka (2003) say that they are convinced that “a networked society is not a fad and that we are at the beginning of a new era in human collective activity” (p. 7). Raschke (2003) emphasises the ability of the internet to encourage and nurture a partnership between those who teach and those who are taught and sees the internet as an “incubator of knowledge” (p. 38). Perhaps the Internet can support the incubation of life itself . . .

CHAPTER 1

Introduction

I am who I am not yet . . .

Maxine Greene

1.1 Background

Do we know what makes professional development for educators effective? Have researchers and practitioners reached consensus about the characteristics of a successful professional development experience? Is there a “one size that fits all” model of professional development? A review conducted by Guskey (2003) of the characteristics of effective professional development generally indicates the answer to these questions is “No”. In analysing 13 lists of the characteristics of effective professional development published in the last 10 years by a variety of agencies, Guskey (2003) concluded that there appeared to be little agreement between professional development researchers and practitioners on the criteria for professional development “effectiveness” and that most of the currently identified characteristics of effective professional development could be described as being important in some cases, but possibly not in others.

This study focuses on professional development for educators, specifically addressing the professional development of educators engaged in learning and teaching in online contexts (also referred to as “Internet-supported”, “web-based” or “e-learning” contexts). Within this study, the *e* prefix means that the activity, or noun modified, is associated with the electronic processes of the Internet and takes place on a “digital network that is available any time/anywhere” (Anderson & Kanuka, 2003, p. 4) e.g., email, e-learning, e-research, and e-community. The term “professional development” refers to a process of engaging in continued learning to enhance knowledge of, skills in, and attitudes towards relevant practice and theory, and the educational contexts in this study relate to post-compulsory settings e.g., polytechnics and universities.

Despite a high level of investment in online learning and teaching by educational institutions and corporations worldwide, there is limited systematic research into what

constitutes an effective learning experience for adult online learners and their teachers. Although the use of electronic mail (email) communication and computer conferencing began over three decades ago, there remain questions about the value and quality of online education (Harasim, 2000). Some practitioners have expressed concern that “the technology is driving the pedagogy” (Postle, Sturman, Cronk, Mangubhai, Carmichael, McDonald, Reushle, Richardson, & Vickery, 2003, p. 66). Reeves (2002, ¶ 2) refers to this as the “Trojan Horse notion” – the belief that if you let technology into the classroom, pedagogical change emerges, rather than viewing technology as a means of supporting sound pedagogy. Mayes (2002, section 1, ¶ 2) makes the point that “new technologies don’t lead inevitably to major change in education”. Laurillard (2002, p. 1) urges higher education institutions to “meet the demands of the knowledge society and take full advantage of the possibilities technology presents” rather than perpetuating the transmission model (the passing on of knowledge or information), which she believes has prevailed in higher education “throughout fundamental innovations including writing, books, computers, and the Internet”. Fowler and Mayes (1999, pp. 6-7) refer to this as the “acquisition metaphor” or a “representational view of learning” and voice concern about a tendency to “design by imitation” where existing learning environments are transposed into web-based learning environments with a “lack of innovation or utilization of the power inherent in technology-based learning”. Dede (2001, p. 29) asserts that “the most significant influence on the evolution of education will not be the technical development of more powerful devices but the professional development of wise designers, educators and learners”.

Examples of professional development provision for teachers in relation to the use of online technologies illustrate this point. Jacobsen (2002) reports on her Canadian educational context where teachers are expected to educate future workers for the knowledge era who are self-directed, critical thinkers, capable of working in collaborative teams. Teachers are also expected to have, as part of their teaching repertoire, sound knowledge and skills in using technology effectively for learning and teaching. However, she reports that there has been considerable imbalance in the investment in educational technology, with greater focus being given to technological production rather than investment in technological implementation. In a similar vein, at the schools level,

O'Rourke (2003) notes that within Australia, all states and territories have made the use of information and communication technologies (ICTs) a policy imperative for education and have made large investments in infrastructure, both in terms of networking and hardware provision. This in turn has influenced professional development provision for teachers in relation to ICTs, with authorities offering extensive train-the-trainer models of professional development together with workshop opportunities, professional networks, conferences, best practice schools, and seminars. Despite this commitment, significant concerns are still being raised in relation to how technology is actually being used to enhance learning and teaching, and whether teachers are simply reinforcing old pedagogy better suited to production line type educational systems (Bigum, 2002; Herrington, Oliver, Herrington, & Sparrow, 2000; Jones, 2001; Lankshear, Snyder, & Green, 2000; Luke, 2000).

It is apparent that *how* we prepare teachers to recognise the pedagogical implications of effective technology use continues to be a significant challenge. It would be naïve to assume that all educators *know* how to use technology effectively and that the use of a particular technology brings about changed or improved learning (Bates, 1999). Educators in tertiary settings, for example, come from backgrounds as diverse as the settings in which they practice. Expertise in a discipline area may be considered by organisations, and by educators themselves to be the primary prerequisite for becoming an educator. Growth and development as effective educators often tends to come from experience and trial-and-error practice (Cranton, 1996), particularly when professional practitioners move to teach in higher education environments. O'Reilly and Brown (2001) note that even those with learning and teaching qualifications are not necessarily supported by institutions to reflect on their practice as part of their own professional development. Teaching in these contexts now has the added dimension of working with computer technologies. This study addresses the challenge of how best to prepare educators to effectively teach in these contemporary learning environments. Emerging online learning and teaching paradigms might have similar characteristics to traditional (teacher-focused and directed, classroom based) educational situations but preliminary research and anecdotal reports suggest that learning and teaching in online environments is *different* in many important respects to traditional environments (Darby, 2002; Steeples, Jones, & Goodyear, 2002). This study aims to

investigate the nature of these differences as they relate to professional development for online educators, in order to make a contribution to existing research.

1.2 Significance of the Study

The study builds upon extant research into the professional development of educators using technology in educational contexts. The majority of previous studies have been situated in classroom environments from schools through to tertiary institutions, both in terms of the focus of the professional development, and the means of accomplishing that development (e.g., Bigum, 2002; Jacobsen, 2002; O'Rourke, 2003). This study will add to the body of research on learning and teaching online, in that it is conducted predominantly in an online environment. Using an action research framework, the study investigates how best to prepare educators to teach (and learn) in online higher education environments.

Professional development designed for educators to develop their capacity for using computer technologies in their learning and teaching has passed through a number of iterations. The first efforts in the 1970s and 1980s focused on the machines and the learning of technology skills (Salmon, 2002). Educators could access support on how to use and program the computer, often in a site away from their teaching location. The second wave of professional development (1980s to 1990s) responded to the realisation that technology integration had less to do with the technology and much more to do with learning and teaching (Jacobsen, 2002). However, this wave of professional development focused largely on specific computer applications (the software) and strategies for using the technology tools, often occurred in lengthy workshops, but it was still removed from the teacher's immediate work context. While accomplishing some skill development, this approach did not bring about large scale changes in teaching practice and many teachers continued to teach the way they had been taught, often perpetuating the transmission model of education (Cranton, 1996; Jacobsen, 2001), or the banking system of education where students are seen as passive consumers (Freire, 1976).

In the 21st century, the rapid changes in the nature of the workplace, work, the structure of organisations, and the pervasive presence of networked technologies are requiring a shift in focus in the world of education and training. A skill learned this week may be out of date

the next. Educators are required to prepare learners to be critical, self-directed, collaborative individuals who are able to contribute meaningfully to their own “learning organisations” (Cranton, 2003; Jacobsen, 2002; King, 2003b; Laurillard, 2002). It is evident from the literature (explored further in Chapter 2) that a third wave of situated, flexible professional development is emerging aimed at supporting and responding to the individual needs of educators and to current and future contextual requirements (Jacobsen, 2002; Stein, Smith, & Silver, 1999; Swan, Holmes, Vargas, Jennings, Meier, & Rubenfeld, 2000).

This third wave of professional development calls for the transition from transmissive to transformative approaches in education. The reasons for such a transition are strongly promoted in contemporary adult education literature (Cranton, 2003; King, 2003b; Laurillard, 2002). The transmissive approach refers to a traditional model of a teacher-student relationship, where the teacher is the expert communicator of knowledge and the student the recipient (Laurillard, 2002; The Tavistock Institute, 2002). The analogies “sage on the stage” or “teacher-centric” are often used to describe the transmission model of education (McDonald & Postle, 1999). The transformative approach relates to learning which occurs when an individual is empowered to reflectively transform their meaning schemes in terms of their beliefs, attitudes, opinions, and emotional reactions. Transformative learning is the process by which we call into question our taken for granted habits of mind or mindsets to make them more inclusive, discriminating, open and reflective in order to guide our actions. This is where the role of “guide on the side” or “facilitator of learning” is adopted by the teacher – where the teacher’s task is “less and less to inculcate knowledge, and more and more to encourage [and challenge] thinking . . . to become increasingly an adviser, a partner to talk to, someone who seeks out conflicting arguments rather than handing out ready-made truths” (Faure, 1972, pp. 77-78).

This approach reflects the principles of transformation theory which were formally proposed by Mezirow (1991), and closely aligns with the principles of constructivism and adult learning (Daley, 1997). Throughout this study, the terms “transformative” and “transformation” are used interchangeably. Preliminary evidence suggests online settings can provide “friendly” environments that will support learning contexts promoted by contemporary educational theorists (Cranton, 1997; Jonassen, 1998; Knowles, 1990;

Mezirow, 1991) – collaborative, interactive learning communities that support and promote transformative learning. Bonk (1999) observes that,

. . . online learning offers a chance for students to enter into dialogues about authentic problems, collaborate with peers, negotiate meaning, become apprenticed into their field of study, enter a community of experts and peers and generally be assisted in the learning process. (p. 410)

This approach to learning and teaching is not new, so why is it attracting such renewed interest in the tertiary education arena? In the early 1900s, for example, the educational theorist John Dewey (1916) supported an approach to education that would transform schools, work organisations, and the society at large into more participative, democratic cultures (Gregson, 1995). Dickinson (1992, ¶ 2) stressed the importance of finding new ways of communicating and working together “to confront the problems that threaten the lives of human beings, countries, even the planet itself”. The attempted transition, however, is a relatively recent phenomenon in the higher education sector and has met with some opposition (Raschke, 2003). What has hindered such ideas in the higher education “classroom” setting? Raschke (2003, p. 110) claims that higher education, unlike other “pillars of culture” or “sectors of the economy” has undergone little change over the last 80 years. He notes that despite significant cultural, social, economic, and political revolutions, the view of learning and teaching in higher education “does not look or function much differently from the way it did in the 1920s”. He believes that this resistance to new systems of knowledge creation and distribution is linked more to the desire to sustain a sense of privilege and aristocracy, than to a fear of the loss of quality standards. He observes that much of higher education has refused to join the “information grid” and that a good deal of institutional resistance to technological transformation stems from a belief that knowledge is nothing but “the transfer of information from one database or brain to another” (Talbot, 1999, as cited in Raschke, 2003, p. 110). However, technological advances and changing societal, economic, and political expectations are strongly influencing and encouraging the exploration of how tertiary educators “can go beyond the acquisition of simple techniques to a deeper reflection on and understanding of their work” (Cranton, 1996, p. vii).

Recent studies have supported this need for change. Cranton (1996) has observed that,

A strong theoretical and practical literature is [emerging] in adult education . . . it is not informed by one perspective, but perhaps that is not an ideal state given the kaleidoscope of activities included under the adult education umbrella. We are, though, witnessing a stage of development in the field that is reflective, critical, and fairly comprehensive. That is, we are beginning to understand how adults learn and how educators can foster, support, and challenge that learning. (p. 6)

The online environment may provide a setting for this to occur.

Samuelowicz (1999) argued that professional development activities in a university should be directed at changing the beliefs of people as well as altering teaching approaches. Pelliccione (2001), in her study on implementing innovative technology in an Australian university focused on two areas: the use of online technologies in learning and teaching by teaching staff, and the mechanisms the university has established in order to realign themselves with the information age. She identified the existence of transformational leadership across all levels of the university as a major factor in the promotion and adoption of ICTs, strongly supported by the development of a professional learning community. Pelliccione's (2001) research revealed that only through the synergy of university (organisational) commitment and individual commitment could change take place. Jacobsen (2002) reported on the Galileo Educational Network Association (GENA) project conducted at the school and district level within the province of Alberta in Canada. GENA's expert teachers successfully worked in schools in a mentoring capacity with teachers and students to "co-create new images of engaged learning, technology integration and professional development".

Given the limited amount of systematic research into what constitutes an effective learning experience for online learners and teachers, it was necessary to extend earlier studies and investigate how best to prepare educators to teach (and learn) in higher education online environments. The overall purpose of this research was to create a balanced theoretical and practical approach, in the form of a framework which could effectively support and guide the design of professional development for online educators and which reflected current literature, and legitimate research outcomes.

1.3 Scope of the Study

1.3.1 Context

The study focused on the work conducted by myself in 2002 and 2003 with a polytechnic located in Singapore. At this location, I acted in a consultative role as project manager and key facilitator for polytechnic teachers in an online course on designing and facilitating online learning and teaching.

The Ministry of Education (MOE) in Singapore introduced its Masterplan for IT in Education in 1997 and concluded the initiative in 2002. The government subsequently released its 2003-2007 MasterplanII or “mp2”. The vision of mp2 is that,

IT [Information Technology] will be pervasively and effectively used to enhance educational processes and structures to help realize the ability-driven paradigm. By leveraging on IT as a tool to customize education to meet the different needs and abilities of our pupils, we will be able to support and develop lifelong learners as we work towards the overall vision of Thinking Schools: Learning Nation. (Educational Technology Division, Singapore Ministry of Education, 2003, Philosophy, ¶ 4)

In response to the MOE initiative in Singapore, the polytechnic chose to facilitate the use of technology throughout all facets of the organisation. Management at the polytechnic decided to include online technology for learning and teaching as part of its strategic plan. Under its Mobile eLearning (MeL) initiative, the polytechnic was the first in Singapore to encourage all students to have their own notebook computers so that they could study, interact, participate in online discussions, access Internet resources, submit assignments and access Internet laboratories from campus or home. In addition to a high-speed network, each student has been issued with a wireless card which allows them contact to the network at any access point on campus. The polytechnic has an enrolment of approximately 20,000 and an academic staff of 850. All students are on-campus but the polytechnic expects to fully integrate e-learning and e-services by 2005.

In 2001, the polytechnic approached the University of Southern Queensland (USQ) and requested an online, facilitated course for 31 of its teachers, focusing on designing and facilitating online learning and teaching. The course was delivered via *Blackboard*, a web-

based Learning Management System (LMS) and was offered over one semester in 2002. NextEd Ltd, a company which specialised in providing online education infrastructure and had an office located on the USQ campus, supplied the technological infrastructure and support to deliver the course to the polytechnic. Data for this study were drawn from the first offering to polytechnic teachers of this USQ facilitated, online course, and the successive revision and offering of that course to a second cohort of 26 teachers in 2003. The context is discussed further in Chapter 3.

1.3.2 Propositions

An à priori assumption in this study was that learning and teaching in an online environment is different to learning and teaching in traditional educational settings. It was argued that effective professional development for educators to teach in online environments can be based on the principles of constructivist and transformative learning theories and should be, in the main, conducted in an online environment.

This study evolved from a need to marry theory to a practical program of professional learning for educators, and a desire for my work to contribute to productive change in places of higher learning and in the learning experiences of students, particularly in the online environment. The extent to which the outcomes of this study might apply beyond the immediate sample is an important issue. These limitations are addressed later in this chapter. It is an unrealistic expectation that a proposed framework is relevant to other users in different educational environments. As new information is discovered and new questions are raised, “early theories give way to redefined relationships and new generalizations” (Bell-Gredler, 1986, p. 6). Nevertheless, as an outcome of this study, I propose to conceptualise and articulate ways of sharing the findings, with the aim of building the capacity of others to work in online environments.

I chose this area of study because of the increased use, worldwide, of the Internet for supporting learning and teaching, and the growing evidence that effective use of the Internet can significantly improve the educational experiences of learners. My personal experience and interest as an online educator, as a designer of online learning environments, and particularly as someone involved in professional development for educators working in these environments has influenced my topic choice. I continue to look

for ways that my research, scholarship and teaching practice are connected. I share a belief with Daley (1997) that these areas are intricately woven into the fabric of our role as educators of adults. This belief is supported by a conceptual framework for scholarship proposed by Boyer (1990) who was sponsored by the Carnegie Foundation for the Advancement of Teaching in the USA to examine academic work within a university setting. The Carnegie Foundation report proposed that university work be thought of as having four separate, yet related, functions, these being the scholarship of discovery (what we most often think of as scholarship, or the pursuit of knowledge for its own sake); the scholarship of integration (making connections and drawing insights from discrete facts and findings to interpret, draw together, and bring new insight to bear on original research); the scholarship of application (which relates to the service role of the academic); and the scholarship of teaching (not merely a technical or routine activity, but a highly complex activity of professional practice) (Boyer, 1990). This approach supports Laurillard's (2002, p. 20) proposal that universities must "realign research and teaching and aspire to teaching methods that help students acquire the skills of scholarship" and must redefine "what counts as higher learning by moving beyond a curriculum that teaches what is known to one that teaches how one comes to know". This involves moving from an "acquisition" metaphor, to a "participation" metaphor (Sfard, 1998, as cited in Fowler & Mayes, 1999, p. 7).

To my knowledge, no previous studies have focused on the complex task of formulating a transformative approach that is presented in an online environment and that supports professional development for online educators. This study draws together extant theoretical viewpoints regarding professional development for educators, and the significance of learning and teaching in online environments, and proposes an approach to professional development for online educators. Many assumptions underlying the approach in this study are compatible with existing theories and approaches for professional development for educators. However, my study has implications for online learning and teaching practice.

Because the study is focused on the online environment, it was fitting to use the Internet as an integral component of the activities conducted. The Internet enables the tracking and recording of many types of online activity. The main sources of data for this study were text-based discourses and the transcripts of these interactions were readily captured and

stored as digital text files. Because of this instant transcription, cost and possibility of error were reduced. Use of the Internet also enabled me to reach a diverse population sample that may otherwise have been inaccessible due to the constraints of time, cost, and location.

1.3.3 Purpose, Objectives and Scope

The overall purpose of this research was to create an approach, in the form of a framework which could effectively support and guide the design of professional development for educators engaged in learning and teaching in higher education, online contexts. A challenge for this project was how to go beyond the technical and practical. With this in mind, my study had six research objectives:

1. To identify the learning theories appropriate for the professional development of educators (specifically constructivism, adult learning, and transformation).
2. To identify the emerging principles of online learning and teaching (online pedagogy).
3. To identify the key attributes of current professional development practice for educators.
4. Using an iterative, cyclical process, to develop, implement, evaluate, and modify a professional development course which embodies the principles and practices identified in objectives 1-3.
5. To determine the factors which contribute to successful professional development for educators engaged in learning and teaching online.

The overall objective was:

6. To formulate a framework for the design of transformative professional development for online educators, based on the developmental phases of this study.

The study drew upon extant theory, research, and practice.

The study explored three areas of literature (see Chapter 2):

1. learning theories, including constructivism, adult learning and, in particular, transformation theory (transformative learning),
 2. learning and teaching in online settings (online pedagogy),
 3. professional development for educators,
- and reflected upon:
4. feedback and critical reflections from online learners/participants, and
 5. the experience of several online teachers at USQ.

The core purpose of the study lies at the intersection of the three areas of work and aims to propose a framework that guides the design of transformative professional development for online educators. Figure 1.1 illustrates the scope of this study.

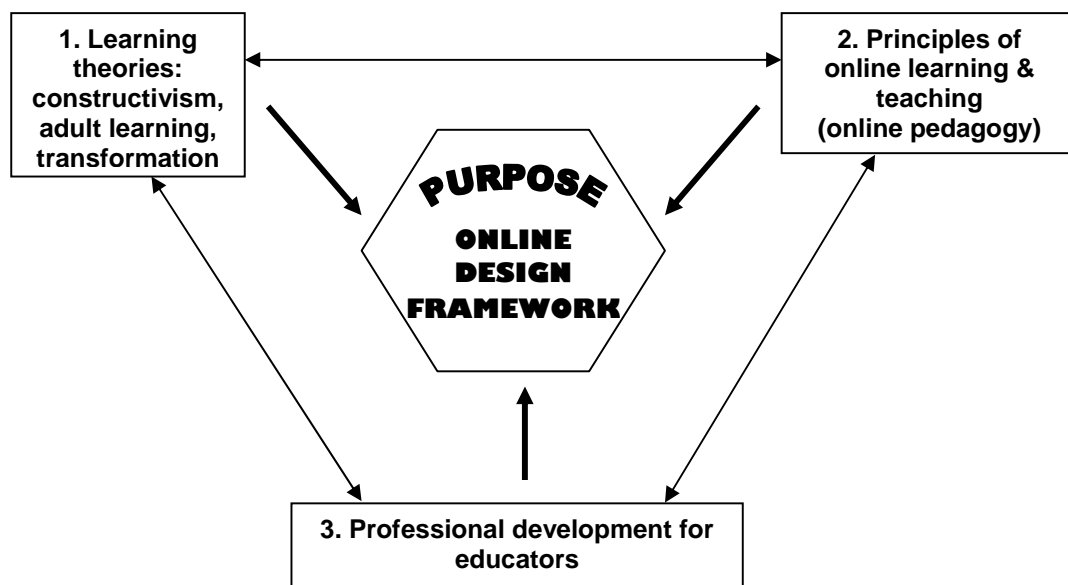


Figure 1.1. Scope of the study.

Central to professional development for educators is Cranton's (1996) tenet that *educators are learners*. She observes that the literature "applies equally to us as we learn about teaching. What we know about how our learners [learn] will be applied to how we grow and develop as educators. We too, are adult learners" (p. 6). King (2003b, p. 13) supports this perspective by stating that the "emphasis on the faculty as adult learners is

central to the new paradigm for professional development” as it helps us to understand their needs and experiences better. Professional development should provide new insights, stimulate critical reflection, and further the development of an educator’s knowledge of theory and practice. It is argued that professional development should therefore be underpinned by Mezirow’s (1991) theory of adult learning - transformation theory.

1.4 Strengths and Limitations of the Study

A number of strengths and possible limitations to the study were identified as:

1. The study focused on the design of an online professional development course offered by one Faculty at USQ. However, the course selected for this study did provide authentic examples of online learning and teaching and did focus on broadening a collective understanding of best practice to do with professional development for educators and online pedagogy.
2. The study followed an action research method. A common criticism of action research is its lack of generalisability, or external validity. To some extent this is a legitimate criticism. This study was sourced from one institution outside the Australian educational system - a Singapore polytechnic. This is because the cohort needed to be “intact” and contained. Therefore, the application of the findings was restricted to this group. Beyond that, reader generalisability (Merriam, 1998) means that each reader will relate the findings to their own existing “picture” of online learning and teaching in their own educational institution or other context. The fact that the study was located in both an Australian and an Asian setting may be considered both a strength and a limitation.
3. Cultural (including linguistic) differences may have had an impact on shared understanding and meaning of the participants and must be considered as having some impact on the findings of the study.

1.5 The Study in Outline

In this study, I collaborated with teachers from a polytechnic in Singapore to build the capacity of the group in the area of online learning and teaching. The study investigated the process of professional learning and change associated with the use of online technologies in an institution of higher education. Chapter 2 reviews the literature in this area. Views on learning and teaching in online environments, and contemporary learning theory (particularly transformation theory) are presented, along with key recommendations and justification for particular approaches to professional development for educators. These have also helped to focus the method and analysis strategies of the research.

Chapter 3 articulates the major issues involved in the choice of research design and related research methods. This chapter provides a rationale for the methods chosen and describes the participants, the methods of data collection, the types of data that were collected and the role of the researcher. For this research study, which is primarily qualitative in nature, the concepts of validity, reliability, and generalisability are discussed. The exploration of themes initiated in the literature review continues in this chapter with the aim of creating a framework that can support and guide the design of professional development for online educators. The description and application of a context-specific, data analysis framework is introduced.

Chapter 4 describes the data analysis phase of the study. This chapter further elaborates on the impact of the researcher roles, and the effect a contaminating variable has upon the study. Limitations and issues are highlighted. The themes of learning and teaching in online settings, professional development for educators in online settings, and transformative approaches to professional development for educators in online settings provide useful organisers under which to report the findings of the study.

The final chapter (5) articulates a way forward, both in terms of a framework for online design and the principles, practices and contextual considerations which define that framework. The implications for individuals (educators and learners), and educational institutions are discussed in light of the demands that they might face in facilitating transformative professional development experiences for educators engaged in learning and

teaching in online contexts. Areas for subsequent research are explored and the chapter concludes with a reflective “epilogue”.

CHAPTER 2

Literature Review

A word is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in colour and content according to the circumstances and the time in which it is used.

Oliver Wendell Holmes

2.1 Introduction

The purpose of this chapter is to explore the proposition, through relevant literature, that the online environment can support a process of learning promoted by contemporary educational theorists (Jonassen, 1998; Knowles, 1990; Mezirow, 1997) – learning which Bonk (1999) suggests occurs in collaborative, interactive communities where authentic problems are investigated, meaning is negotiated, and learners become apprenticed into their field of expertise. The study is located within a broad structure of existing theory and knowledge relating to three themes which were introduced in Chapter 1 (Figure 1.1). These themes are explored in this chapter by reviewing pertinent literature (see Figure 2.1):

1. theories of learning, including constructivism, adult learning and, in particular, transformation theory (transformative learning),
2. learning and teaching in online settings (online pedagogy), and
3. professional development for educators.

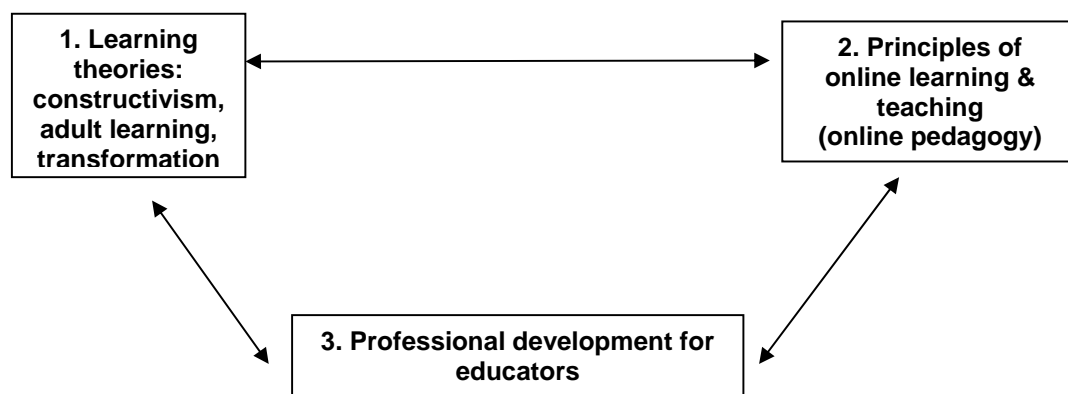


Figure 2.1. Scope of the literature review.

The first theme incorporates relevant learning theories and the impact of these theories on the proposed framework for design. Given the relative “newness” of this research area (transformative professional development through online education), and the fact that the theories guiding this area are still in developmental stages, a rationale for the chosen research method also emerges. The second theme addresses learning and teaching in online environments. Focus is on a number of key principles that guide much of the current online education work globally, and how these principles are applied to the design of the initial course under investigation in this study. The third theme examines the literature on professional development for educators which, in this study, acknowledges the need to provide professional support that reflects the elements revealed in themes 1 and 2. Through this review of the literature, gaps in extant theory and knowledge which require further investigation are revealed. Opportunities to extend knowledge and theory are provided through the research processes of the study.

2.2 Theories of Constructivism, Adult Learning, and Transformation (Transformative Learning)

2.2.1 Constructivism

Jean Piaget (1896-1980) was one of the first theorists in Western civilisation to explore learning and knowledge structures with a model that viewed people as the “builders of their own intellectual structures”. Another who also explored new views on the nature of learning was Soviet psychologist Lev Vygotsky (1896-1934) who developed “dialectic theory”, a social learning perspective that describes how children learn through interaction and dialogue with socialising agents (such as peers, teachers, parents), that is, viewing human knowledge as socially constructed. While both Piaget and Vygotsky are prominently mentioned in most texts as pioneers in the field of constructivist learning (Duffy & Jonassen, 1992; Wilson, 1996), more recent theorists have extended their work by critically examining the implications of the learning theory. One of the most notable proponents of constructivism and the use of technology has been Seymour Papert (1980), who has extensively discussed and illustrated the power of computers, when combined with constructivist environments to educate children.

Various forms of constructivism have emerged in the literature including radical, social, physical, evolutionary, postmodern, and information-processing constructivism (Steffe & Gale, 1995). Jonassen (1998) refers to the concepts of individual or personal constructivism (individuals constructing their own cognitive structures as they interpret their experiences in different learning situations), and social (learning with and from others) constructivism. Whether learning is viewed as socially situated or whether it is considered to be an individual construction has implications for the ways in which the learning process is conceptualised.

For this study, constructivism is based upon the assumption that meaning exists within, in that learners build from experience and construct their own knowledge and meaning (they are actively involved in making meaning), rather than relying on external enlightenment - “an active process of constructing rather than acquiring knowledge” (Hung, 2001, p. 282). Constructivism is also viewed as a process that recognises the role that society plays in the development of an individual (social constructivism). It is proposed that learners construct their own meaning from information and that one way of effectively constructing that knowledge is through joint construction with other learners. Constructivism can be considered a theory of learning (how people learn), and an epistemological concept (the nature of knowledge – a theory of knowing) that draws from a variety of fields, including philosophy, psychology, and science. The proponents of constructivism do not claim to have developed earth-shaking innovations in the area of education; constructivism merely claims to provide a sound conceptual basis for some of the things that inspired teachers have been doing without theoretical foundation (von Glasersfeld, 1995).

With the advent of computer-based instruction and the ever-growing capabilities of technology, researchers and educators are linking constructivism, and the use of technology with learning. Within the field of instructional design and technology, constructivist theory has become popular among theorists and practitioners who are creating and studying its practical applications to learning. Many see strong support for the principles of constructivist philosophy in computer-based learning environments. Use of technology, particularly the Internet, can provide learning environments, contexts and authentic “worlds” which students can experience and explore.

2.2.2 *Adult Learning*

The principles of constructivism can be argued to be similar to that of andragogy, which was originally defined as the “art and science of helping adults learn” by the adult learning theorist, Malcolm Knowles (1975). Knowles, having re-examined his original assertions about the unique characteristics of andragogy, now believes that it is not simply a theory of adult learning, but describes it as a situational model for human learning. As with constructivism, the *learner* is centrally important to the learning process. Andragogical principles include the need of the learner to be personally involved in the planning and evaluation of instruction, the importance of learner experience and relevance to the learner in providing the basis for learning activities, and a focus on content as process rather than content as product (the process of learning is of greater value than acquiring the knowledge). When examining these principles, together with the social context and history of adult education, one can find many philosophical connections between adult education theories and constructivism.

Because constructivist learning theory maintains that learning is a process of the learner constructing meaning from experience, it is congruent with the adult learning concepts of self-direction, transformative learning, and situated cognition (Merriam & Caffarella, 1999). It also connects directly to beliefs about the central role of learner “experience” in adult learning where the focus is on contextualising learning by providing instruction directly related to the life experiences or the functional contexts of adult learners (Sandlin, 2000).

2.2.3 *Transformation Theory (Transformative Learning)*

In 1991, Jack Mezirow, in his study of adult learning formally proposed “transformation theory” and “transformative learning”, the essence of which is grounded in constructivism. Transformation theory is defined as “a theory of adult learning which attempts to describe and analyze how adults learn to make meaning of their experience” (Mezirow, 1991, p. 198). In the preface to one of his books on the topic, Mezirow (1991) briefly explains the history from which his theory emerged:

My approach to transformation theory has as its current context . . . constructivism, critical theory, and deconstructivism in social theory and in all of the social sciences,

law, literature, and art. Transformation theory also grows out of the cognitive revolution in psychology and psychotherapy instigated by scores of studies that have found that it is not so much what happens to people, but how they interpret and explain what happens to them that determines their actions, their hopes, their contentment and emotional well-being, and their performance. (p. xiii)

Ten phases of transformative learning were identified by Mezirow based on a national study of women students returning to higher education (Taylor, 1998). The phases were:

1. A disorienting dilemma.
2. Self-examination with feelings of guilt or shame.
3. A critical assessment of assumptions.
4. Recognition that one's discontent and process of transformation is shared and that others have negotiated a similar change.
5. Exploration of options for new roles, relationships, and actions.
6. Planning of a course of action.
7. Acquisition of knowledge and skills for implementing one's plans.
8. Provisionally trying out new roles.
9. Building of competence and self-confidence in new roles and relationships.
10. A reintegration into one's life on the basis of conditions dictated by one's new perspective.

Mezirow's (1991) theory has also been influenced by the work of theorists Karl Popper and Paulo Freire. Popper focused on the generation of knowledge in that "new knowledge involves a negation and transformation of past beliefs", an idea that Mezirow espoused in his theory of transformation. Freire (1972) asserted that the major goal in education is to develop *conscientizacao* (conscientization), or critical consciousness raising, by which adults "achieve a deepening awareness of both the sociocultural reality which shapes their lives and . . . their capacity to transform that reality through action upon it" (Mezirow, 1991, p.40). Freire's focus was more concerned with social transformation and social and political liberation and activism, rather than personal transformation or individual change as promoted by Mezirow (King, 2003b). Freire's goal was emancipation through education where people would develop a theory of existence which views people "as subjects, not objects, who are constantly reflecting and acting on the transformation of their world so it

can become a more equitable place for all to live” (Taylor, 1998, p. 16). Mezirow also gives specific credit to the philosopher and critical theorist, Jurgen Habermas (1984), whose theory of communicative action “provides the social theoretical context for the transformation theory of learning” (Mezirow, 1991, p. 7). Habermas’ view of communicative rationality (where persons use language to reach democratic, cooperative agreement based on mutual understanding), influenced Mezirow’s interpretation of critical reflection (Taylor, 1998).

According to Mezirow, all meaning is based on the learner interpreting experience, with the critical dimension of an adult’s learning being reflection, or the process of validating ideas and assumptions based on prior learning. He believes the role of the educator is to help the learner focus on, and examine, the assumptions that underlie their beliefs, feelings and actions, assess the consequences of these assumptions, identify and explore alternative sets of assumptions, and test the validity of assumptions through effective participation in reflective dialogue. Mezirow (1991) states that transformative educators should help others, and perhaps themselves, to move towards a fuller and more dependable understanding of the meaning of mutual experiences. Transformation theory may be viewed as a subset of constructivism within adult education. Grabov (1997) further redefined Mezirow’s view of transformative learning by adding that learning is an intuitive, creative, and emotional process. This “inner journey” was also explored by Boyd (1991) whose model of transformation is grounded in the work of Carl Jung. Boyd’s view of transformative learning is of a journey of “individuation” defined as a lifelong process of coming to understand through reflection the psychic structures of ego, shadow, persona, and collective unconscious that make up one’s identity (Taylor, 1998).

Catalysts for transformative learning, according to Mezirow (1997) are “disorienting dilemmas”, situations that do not fit one’s preconceived notions. These dilemmas prompt critical reflection and in the event of a new experience, our existing meaning perspectives (our central meaning structures) “act as a sieve through which each new experience is interpreted and given meaning” (Taylor, 1998, p. 7). The interpretation of this new experience may either reinforce existing perspectives, be rejected, or an existing meaning perspective may be transformed to accommodate the new experience. Transformative learning involves reflectively transforming the beliefs, attitudes, opinions, and emotional

reactions that constitute our meaning schemes. Cranton (1996) observes that no other person can teach someone self-awareness, although another person can challenge, question, support, and otherwise foster the process. Because transformative learning involves challenging underlying assumptions, beliefs, and values that we have acquired through our life experiences, it must essentially be directed by the self.

The concept of a “dilemma” leading to “disorientation” (Mezirow, 1991) is not a new one. In Dewey's (1933) work, he declared that the capacity to reflect is initiated only after recognition of a problem or dilemma and the acceptance of uncertainty. The “dissonance” created in understanding that a problem exists engages the reflective thinker to become an active inquirer, involved both in the critique of current conclusions and the generation of new hypotheses. Dewey believed that traditional reinforcement of information only led to superficial learning. He believed the educator to be responsible for creating learning events in which the learner is presented with problematic situations that he/she would be motivated to solve by learning. According to Dewey, learning was driven by the learner's sense of “disequilibrium” (cognitive dissonance) when confronted with new experiences and ideas, rather than by reinforcement of existing ideas. If real growth is to occur, the learner must want to learn and be active in the learning process. The theoretical concept of disequilibrium is at the heart of the work of many developmental theorists such as Bruner (1960), and Piaget (1952).

What Dewey (1933) refers to as “perplexity, hesitation, doubt”, Greene (1975) calls “dislocations”, Brookfield (1987) refers to as “inner discomforts”, and Larrivee (2000) identifies as “inner conflict” or “inner turmoil”, parallel transformation theory's disorienting dilemmas. Greene (1975) believes that a learner's central concern is with “ordering [or bringing harmony to] his own life-world when dislocations occur” (p. 307) – when the learner experiences “moments when the recipes he has inherited for solving problems no longer seem to work”, or when “what was once familiar abruptly appears strange” (Greene, 1997, p. 142) . The failure of recipe learning often leads to critical reflection and perspective transformation (a world view shift), a move “beyond what she has been” (Greene, 1997, p. 139). She notes that “it is at moments like these that the individual reaches out to reconstitute meaning, to close the gaps, to make sense once again”.

Learning becomes,

a mode of orientation - or reorientation - in a place suddenly becoming unfamiliar . . . [and] . . . if he is to learn, he must identify what is questionable, try to break through what is obscure. Action is required of him, not mere gazing; praxis, not mere reverie . . . Only with the ability to be reflective about what he is doing will he be brave enough to incorporate his past into the present, to link the present to a future. (Greene, 1975, p. 308)

Greene (1988) refers to Virginia Woolf's book, *Moments of Being* and makes reference to Woolf experiencing certain shocks or "exceptional moments" which ended in a sense of powerlessness. However, when Woolf was able to find a reason, she found she was "not powerless, I was conscious...that I should in time explain it" (Woolf, 1976, p. 72, as cited in Greene, 1988, p. 183). Woolf came to realise that such sudden shocks were welcome and she supposed that the shock-receiving capacity is what made her a writer. Greene (1988, p. 183) observes that "it may well be that the same capacity is what makes people students and, in time, reflective practitioners". Greene (2001, p. 116) describes the experience as a "sense of surprise . . . an acute sense that things may look otherwise, feel otherwise, be otherwise than we have assumed", and that suddenly the world may seem new with new possibilities to be explored. However, the significance of these exceptional, inner discomforts and dislocations, is of no consequence if issues of safety and trust in the learning setting have not been considered (King, 2003a). Disorienting dilemmas must be carefully monitored to ensure that their impact does not result in negative outcomes for the learners. It is one thing to be disoriented but to have a "compass" or "map" on hand; it is another situation entirely to be totally lost without any support or guidance.

Brookfield (1990, as cited in Cranton, 1994, pp. 16-18) has observed that, adults can be particularly tenacious in holding on to their beliefs . . . routine, habit, and familiarity are strongly appealing and for some, the conduct of life is a quest for certainty, for a system of beliefs and a set of values . . . that they can adopt and commit to, for life.

These beliefs and values tend to be a reflection of one's cultural and psychological assumptions. Adults will resist contradictions to their beliefs and will deny discrepancies between new learning and previous knowledge which may have provided "a rationalization

for an often irrational world” (Taylor, 1998, p. 6). In response to a challenge to their assumptions, many learners entrench themselves even more firmly in their belief system and become hostile or withdrawn in the learning environment. Assumptions give meaning and purpose to who we are and what we do. Becoming aware of the implicit assumptions that frame how we think and act is one of the most perplexing (and enlightening) intellectual challenges we may face (Brookfield, 1995b). It is also something we instinctively resist, for fear of what we might discover. Who wants to clarify and question assumptions one has lived by for a substantial period of time, only to risk finding out that they don’t make sense?

2.2.4 Application to Online Contexts

When taking into account the literature on transformation theory, and the characteristics of transformative learning, there is an indication that online educational settings offer an environment conducive to this type of learning. Jacobsen’s (2002) study, which focused on the adoption of the use of technology by school-based educators used Rogers’ (1995) model of the innovation-decision process. Rogers’ (1995, p. 163) model, consisting of five stages outlines “a process through which an individual passes from first knowledge of an innovation, to forming an attitude toward the innovation, to deciding to adopt or reject, to implementation of the new idea, and to confirmation of this decision”. These stages were described by Jacobsen (2002) as knowledge, persuasion, decision, implementation, and confirmation stages, are relevant to the adoption of online approaches to teaching and learning, and appear to align with Mezirow’s stages of transformative learning.

Two writers who have had particular influence on this study and who strongly support and promote transformative learning in all educational settings (including online) are Patricia Cranton and Kathleen King. Cranton (1994, p. 22) writes that transformation theory has evolved into “a comprehensive and complex description of how learners construe, validate, and reformulate the meaning of their experience”. King (2003b, p. 33) further explains that transformational learning theory is “an educational theory that explains how adults [can] have learning experiences that profoundly change their frame of reference, or worldview”. King’s (2003b) stages of the journey of transformation in her work on technology adoption and use in higher education settings, are presented as:

1. Fear and uncertainty (hesitant, fearful, uncertain, embarrassed, nurturing needed).
2. Testing and exploration (beginning confidence, testing, exploring, guidance, challenges).
3. Affirming and connecting (affirming, connecting technology with education, connecting learning experiences).
4. New perspectives (vision, new perspectives of teaching, new connections, new strategies).

The challenge to an individual's long held beliefs is particularly relevant to this study as it explores the journey of experienced higher education teachers moving into a new realm of learning and teaching – that which occurs in online settings.

2.2.5 Concepts and Principles of Transformative Learning

The concepts evident in transformative learning have been topics of research and theory building in the field of education for some time (Boyd, 1991; Boyd & Myers, 1988; Freire, 1972) and have evolved into “a comprehensive and complex description of how learners construe, validate, and reformulate the meaning of their experience” (Cranton, 1994, p. 22). These concepts can be discussed with a view to applying them in online contexts. The process of transformative learning is not lock step nor rigid and involves a progressive critical examination of beliefs that may previously have been unexamined and unquestioned, to facilitate the development of “a frame of reference that is more inclusive of diverse understandings, perceptions, and even realities” (King, 2003a, p. 86). It has been noted that the process of transformative learning is likely to occur as learners “engage in discussing the changes in perspective, considering new possibilities, and exchanging insights” (King, 2003a, p. 86). King (2003a, p. 88) also remarks on the impact that “hardship and sacrifice” can have in stimulating transformative learning experiences and recounts how learning dilemmas in the lives of individuals can lead to life-changing experiences and significant changes in perspective and action.

The main concepts in the theory of transformation focus on critical reflection, centrality of experience, learner-centredness, and rational discourse (in contrast to everyday discussions) (King, 2003a; Taylor, 1998). According to the tenets of transformative learning, adult learners who are educators need to be reflective, critical thinkers who are

open to other perspectives and accepting of new ideas. Dialogue with others is crucial. Transformative learning and transformed practice involve critical self-reflection: an articulation of assumptions about practice and a questioning of those assumptions. Critical reflection can lead to changes in one's perspective on practice, or it can serve to confirm current practices.

When an individual finds that their assumptions are invalid or constraining and revises those assumptions, transformative learning takes place. Real change and growth in our practice is an ongoing process of examining and questioning our assumptions, values and perspectives. Cranton (1996, p. 95) observes, "We need to move beyond tinkering with teaching and consider our fundamental beliefs and philosophies". Mezirow (1991, p.117) notes, "fostering reflective and transformative learning should be the cardinal goal of adult education". According to Cranton (1996), if educators are to turn their reflection on their practice into transformative learning about their practice, many conditions need to be in place – seeing that the "old ways" simply do not work, a critical examination of the origin of beliefs must occur, the educator must be ready to change, support must be available from the organization and others, an alternative is possible, and a freedom from constraints can be achieved. By engaging in critical reflection on practice, the educator becomes a model for learners and develops an informed theory of practice. Rational discourse is "the medium for critical reflection to be put into action, where experience is reflected upon and assumptions and beliefs are questioned, and where meaning schemes and structures [may be] transformed" (Taylor, 1998, p. 11).

Many educational theories which focus on critical reflection are based on the work of Dewey (1933) who emphasised the importance of critical and reflective thinking, and the vital role education should play. These ideas are as applicable today as they are applied to learning in online settings. Dewey indicated, "while we cannot learn or be taught to think, we do have to learn how to think well" (Dewey, 1933, as cited in Boud & Walker, 1998, p. 191). He defined reflective thought as the "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it" and believed that once begun, reflective thought should be a "conscious and voluntary effort to establish belief upon a firm basis of reasons" (Dewey, 1933, p. 6). According to Dewey, reflective thinking required a continual evaluation of beliefs, assumptions and hypotheses

against existing data and against other possible interpretations of the data. Resulting decisions remained open to further scrutiny and reformulation. Engaging in critical reflection brought commonly-held beliefs into question. Beliefs are convictions we hold dearly, having confidence in their truth, while acknowledging they are not susceptible to proof. Our beliefs shape our identity; hence shedding a dearly-held belief shakes our very existence. For example, if a teacher tries to shed the belief that the teacher must be in control to be effective, it means revealing uncertainty and vulnerability (Larrivee, 2000).

Larrivee's (2000) interpretation of the process of critical reflection is represented in Figure 2.2.

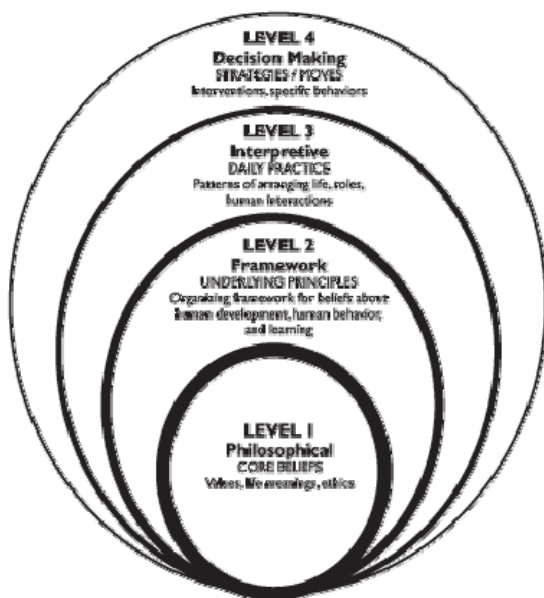


Figure 2.2. Larrivee's (2000) multi-level process for self-reflection.
(Source: Larrivee, B. (2000). Transforming teaching practice: Becoming the critically reflective teacher. *Reflective Practice*, 1(3), p. 302).

Larrivee (2000) explains that one's philosophy of life embodies core beliefs which govern all other levels and activities. Examining core beliefs is a critical aspect of self-reflection. Becoming a reflective practitioner requires teachers to face deeply rooted personal attitudes concerning human development in terms of human nature, human potential and human learning. Level 2 of Larrivee's model ("Framework") suggests a person's way of organising basic beliefs including the theories subscribed to by that individual. An individual's "framework" enables the person to attach meaning to what is happening. The

next level represents how the underlying principles of an individual's framework are put into practice and where beliefs and theories influence how an individual behaves. The last level represents single acts of behaviour based on moment-by-moment decision making. Reflective practitioners challenge assumptions and question existing practices, thereby continuously accessing new lenses to view their practice and alter their perspectives. As de Chardin commented in 1955, "reflection is . . . the power acquired by a consciousness to turn in upon itself...no longer merely to know, but to know oneself; no longer merely to know, but to know that one knows" (p. 164).

Larrivee's (2000) work has similar concepts to that of Mezirow's (1991) description of transformative learning. She proposes a structure for understanding the development of a critically reflective teacher which can be applied to reflective practice in online educational settings. The structure consists of 3 stages:

1. Current Practice – examination, questioning, challenging, desire for change.
2. Fear – struggle, inner conflict, surrender, uncertainty, chaos.
3. Transformation – perceptual shift, reconciling, personal discovery, new practice.

Larrivee (2000) notes that,

. . . our operating values steer how we behave on a daily basis to pursue educational goals and student outcomes. They also define the lines we will and will not cross. Values are our ideals, hence they are subjective and arouse an emotional response . . . We develop mental habits, biases and presuppositions that tend to close off new ways of perceiving and interpreting our experiences. (p. 296)

Although emphasising the importance of experience, she cautions that we must be aware of its "potential for distortion" because of its cultural and personal biases.

When education is linked to transformative learning, it results in an autonomous and developmental learning process where learners exhibit the following characteristics – co-operation, mutual respect, individual creativity, flexibility, rational criticism, inner-directedness, and independence. These characteristics are appropriate for learning in online environments. The major descriptors of the theory include emancipation, autonomy, critical reflection, equity, self-knowledge, and participation. Transformative learning involves an individual reflectively transforming the beliefs, attitudes, opinions, and emotional reactions that constitute meaning schemes. However, proceeding through

this process may not be easy. There may be quite a distinction between what we profess to believe in, and our values in action - those which actually guide our behaviour (Senge, Kleiner, Roberts, Ross, & Smith, 1994).

Associated with transformative learning is emancipatory learning, which has continued to be a goal of adult education, including adult learning in online educational contexts. Emancipatory learning is the process of removing constraints - of freeing ourselves from forces that limit our options and our control over our lives, forces that have been taken for granted or seen as beyond our control. Mezirow (1990, p. 18) defines emancipatory education as “an organized effort to help the learner challenge presuppositions, explore alternative perspectives, transform old ways of understanding, and act on new perspectives”. According to Cranton (1994), the educator may try to foster emancipatory learning, but it may not occur - the learner must be ready to question basic assumptions. She notes, “emancipatory learning is a difficult and often painful process” (p. 7).

Little of what adults want to and need to learn involves revisions of basic assumptions and beliefs or transformations of perspectives. Mezirow (1991, p. 223) explains, “not all learning is transformative. We can learn simply by adding knowledge to our meaning schemes or learning new meaning schemes...and it can be a crucially important experience for the learner”. King (2003a, p. 87) supports this view by noting, “in providing transformative learning opportunities, we need to delicately balance the value we place on transformative learning and the learner’s decision whether or not to pursue it”. Dirkx (1998, p. 11) notes that it would be “naïve and silly for us as educators to think . . . we can always foster transformation” and “persons will sometimes experience learning as transformative in spite of our actions”. However, if education is viewed as the means by which individuals and societies are shaped and changed, the fostering of such learning should remain a critical aim of adult education in all learning contexts.

Self-directed learning is an important component of transformative learning. The individual chooses to examine his or her practice and retains control over the process, in particular how they set their own learning goals, select their own learning methods, and evaluate their progress (Brookfield, 1995a). Becoming self-directed learners can involve reconsidering and perhaps changing beliefs and assumptions about education. Cranton

(1996) notes that Brookfield (1986) led this shift in thinking with his book *Understanding and Facilitating Adult Learning*. Cranton (1996, p.ix) observes that Brookfield, “challenged the notion that educators assume the role of ‘automatons’ meeting the expressed needs of self-directed adults, a notion that then had had a stranglehold on practice, theory and research for decades”. In 1987, Brookfield wrote *Developing Critical Thinkers* that further contributed to the field by providing a practical guide to stimulating alternative ways of thinking and learning. Candy (1991) also contributed to our understanding of self-directed learning with his analysis and integration of philosophical, theoretical, and research-based views of self-directed learning. If educators experience a situation where control is delegated to them, there may be resistance because they wish to “hear from an expert”. Moving from instructor-centred or subject-oriented learning to self-directed learning is an important transition that requires support and scaffolding along the way. The challenges associated with becoming a self-directed learner are particularly relevant for the goals of this study.

Adults should gain personal autonomy in their development as learners and as educators. Candy (1991, p. 113) writes that “an autonomous person is able to assent to rules, or modify or reject them, if they are found wanting”. An educator who is able to agree to rules, and modify, or reject them is an educator who is open to questioning and modifying his or her own assumptions, values, and beliefs about practice. Candy (1991, p. 118) summarises the characteristics of heteronomy and autonomy. The features of heteronomy include egocentrism, unilateral respect, conformity, rigidity, blind faith in authority, other-directedness, and dependence. Characteristics of autonomy include cooperation, mutual respect, individual creativity, flexibility, rational criticism, inner-directedness, and independence. Mezirow (1997, p. 11) considers that the goal of adult education is “to help the individual become a more autonomous thinker by learning to negotiate his or her own values, meanings, and purposes rather than to uncritically act on those of others”.

2.3 Learning and Teaching in Online Settings - Principles of Online Pedagogy

One of the propositions of this study is that the online setting appears to offer a context that can support quality learning environments as described in Section 2.2. A research project titled *Online Teaching and Learning in Higher Education: A Case Study* (Postle et al., 2003) explored the emergence of online learning and teaching in higher education and traced the adoption of flexible learning approaches at the University of Southern Queensland (USQ). The report revealed that there is a belief amongst some at USQ that an online pedagogy, supported by appropriate online instructional design exists. To date, however, this online pedagogy has not been articulated in any recognised, formal way. Postle et al. (2003, p. 24) state that a formal expression of online pedagogy might be considered “the holy grail, an elusive, but cherished prize that might solve the dilemmas and contradictions of online education”.

Steeple, Jones, and Goodyear (2002) have stressed that they have not been able to articulate an ideal online pedagogical framework, rather “the point is to suggest the kind of architecture that such conceptual entities ought to have” (p. 331). In the USQ Faculty of Education, preliminary work has been conducted on developing a “pedagogical framework” to guide the work of educational practitioners. This framework has not been extended to include online pedagogy but many of the principles evident in the existing framework provide a firm platform for such considerations.

Based on the insights and methodological approaches derived from scholars (researchers/practitioners) working in the field of online learning, and by reflection on practice, the researcher has extracted a number of key principles that guide much of the current online work globally (Anderson & Elloumi, 2004; Gunawardena & Zittle, 1996; Kimball, 1998; King, 2003b; Liber, 2000; Wenger, 1998). The principles defined in this chapter reflect the view that “good teaching is good teaching” (Ragan, 1998) or “an excellent e-teacher is an excellent teacher” (Anderson & Elloumi, 2004, p. 290) because the researcher believes that there are enduring premises about good teaching which transcend all learning and teaching approaches and contexts. These principles are also consistent with

what is known about the needs of adult learners (Knowles, 1990), and the principles of transformative learning (Mezirow, 1991). The key principles are:

1. An effective, cohesive electronic community (e-community) of learners should be established with a strong sense of “presence”.
2. Learning should be situated through the provision of authentic, meaningful activities and timely feedback.
3. Critical reflective practice is crucial to the learning process.
4. Learning should be interactive, collaborative and social with the learner central to the learning process.
5. Dynamic, lifelong learning opportunities must be encouraged and supported.

These principles seem to offer a “friendly” context for transformative approaches to learning and teaching, and have guided the design of the course (Design 1) that is the focus of the initial part of this study (described in Chapter 3). An elaboration of these principles follows.

2.3.1 Principle One: An Effective, Cohesive e-Community should have a Strong Sense of “Presence”

The importance of developing an electronic community (e-community) of learners is based upon assumptions as to what matters about learning and what is the nature of knowledge, knowing, and knowers. Four premises have been identified by Wenger (1998) and they are that:

1. Learning is fundamentally a social phenomenon which reflects our own deeply social nature as human beings – that is, we are social beings.
2. Knowledge is a matter of competence with respect to valued enterprises, for example, singing in tune.
3. Knowing is a matter of participating in the pursuit of such enterprises, that is, of active engagement in the world.
4. Our ability to experience the world and our engagement with it as meaningful is ultimately what learning is to produce.

The term “practice” is sometimes used as an antonym for “theory”. Wenger's (1998) use of the term,

. . . does not reflect a dichotomy between the practical and the theoretical, ideals and reality, or talking and doing. Communities of practice include all of these, even if there are sometimes discrepancies between what we say and what we do, what we aspire to and what we settle for, what we know and what we can manifest. We all have our own theories and ways of understanding the world, and our communities of practice are places where we develop, negotiate, and share them. (p. 48)

There is a need to shift the mindset from focusing on training teachers to manage technical and administrative aspects of online learning and teaching, to recognising that online technology has the potential to support communities of learners in the social activity of learning, and to provide an environment that supports transformative learning. A sense of community in learning is an important element because learning is a matter of belonging as well as an intellectual process, involving the heart as well as the head (Wenger, McDermott, & Snyder, 2002). The concepts of “presence” (often referred to as “social presence”) and “ambience” are considered by many as essential elements of a successful online learning community (Gunawardena & Zittle, 1996; Kimball, 1998). Kimball (1998) stresses the importance of the use of “metaphors” and the creation of ambience to engender the concept of “community” and shared understanding of space. Kimball also mentions the importance of managing “culture” in an online environment and the need for a clear role definition from the outset. Are the participants peer learners? Team members? Neighbours in a learning community? Travellers on a journey together? What are the expectations of the teacher? Expert? Supporter? A guide to other resources? Navigator? Pelz (2004, section C, ¶ 2) defines social presence in an online environment as the situation where “participants help establish a community of learning by projecting their personal characteristics into the discussion - they present themselves as ‘real people’”. He outlines three forms of social presence:

1. Affective - expression of emotion, feelings, and mood.
2. Interactive - evidence of reading, attending, understanding, thinking about other's responses.

3. Cohesive - responses that build and sustain a sense of belonging, group commitment, or common goals and objectives

Garrison, Anderson and Archer (2000) developed a conceptual model of online learning that focuses on the learning and teaching transaction. They refer to it as a “community of inquiry” model with teachers and learners as the key participants in the educational process. The model proposes that deep and meaningful learning occurs through the interaction of three components: social presence (the ability of learners to project themselves socially and affectively into a community of inquiry), cognitive presence (ability to construct meaning through sustained communication), and teaching presence (ability to design and manage learning sequences, provide subject matter expertise, and facilitate active learning). These concepts align closely with the principles of transformative learning. A clear understanding of the different roles and relationships of online participants guides behaviour in the e-community. Hung and Chen (2001, p. 5) suggest that online learning may be a possible platform for situated or contextual learning which is fundamentally “not constrained by specific locations and classrooms but can be infused into varying learning situations”. They also note that,

. . . knowledge lies less in databases than in people...The more creative we can get in connecting people through the Internet, the larger the pool of diverse expertise we can rally...learning is about dialoging in matters that we need to understand or that trouble us: not just dialoging with anyone, but with those who can challenge us, those who can provide us with a difference. (Hung & Chen, 2001, p.10)

2.3.2 Principle Two: Learning is Situated, Authentic, Meaningful and Timely

The concept of situated learning - that “knowledge is created and made meaningful by the context in which it is acquired” (Farmer, Buckmaster, & LeGrand, 1992, p. 46) - is embedded in the learning theories of constructivism and transformation, which are explored previously in this chapter. Situated learning, as Jonassen (1994) explains, is learning that occurs when students work on authentic and realistic tasks that reflect the real world and are guided by expert practitioners. Studies of differences in the performance of novices and experts (Billett, 1993) demonstrate that experts organise their base of constructed knowledge in order to recognize patterns and solve problems in new situations. Through

experience, experts amass a rich index of cognitive structures that they can easily recall and use. A method for helping novices to acquire expertise is cognitive apprenticeship (Brown, Collins, & Duguid, 1989). In cognitive apprenticeship, experts model the strategies and activities needed to solve problems, and coach learners with appropriate scaffolds (physical aids and supporting materials), gradually decreasing assistance as, through continued practice, learners internalise the process by constructing their own knowledge base and understanding.

Skills and knowledge are best acquired in context. Previously it was thought that in order to make skills and knowledge more generalisable, most learning should be general and separated from the context of everyday life. Now, however, many researchers argue that context is critical for understanding and thus for learning, for context gives meaning to learning. The task for educators is to create multiple meaningful contexts for learning, so that learners can have the experience of applying knowledge in a variety of contexts, and to form their own means of transferring skills from one context to another (Lave & Wenger, 1991). If knowledge is decontextualised, then it becomes, as described by Jonassen (1994), inert, and the student learns a new concept but is unable to utilise it because there is no realistic context for its use. Boud (1999) promotes the idea that much academic development takes place informally in locations where academics spend most of their time: in departments, professional settings, and research sites. He recommends that formalised approaches to academic development should also be located “primarily in sites of academic practice” (¶ 3). Laurillard (1996), however, draws our attention to the terms “first order” and “second order” constructs and explains how it is difficult in some knowledge areas to provide “authentic experiences” and that teaching at times is “mediated learning – allowing students to acquire knowledge of someone else’s way of experiencing the world” (p. 29).

From the literature on situated learning, authentic activity, and constructivism, Herrington et al. (2000) have identified nine characteristics to guide the design of online learning environments. In describing these characteristics, they stress the importance of using authentic contexts, authentic activities with real-world relevance, and authentic assessment in online pedagogy.

Herrington et al. (2000) note that,

... the [online learning] context needs to be all-embracing, to provide the purpose and motivation for learning, and to provide a sustained and complex learning environment that can be explored at length. It needs to encompass a physical environment which reflects the way the knowledge will be used [and] to provide the opportunity for students to be effective performers with acquired knowledge, and to craft polished, performances or products in collaboration with others. It also requires the assessment to be seamlessly integrated with the activity . . . (pp. 7-9).

2.3.3 Principle Three: Critical Reflective Practice is Crucial to the Learning Process

Critical reflective practice, as discussed in Section 2.2.5, lies at the heart of the contemporary learning theory of transformation. Donald Schön (1991) suggested that the capacity to reflect on action so as to engage in a process of continuous learning was one of the defining characteristics of professional practice. He argued that the model of professional training which he termed “technical rationality” - of charging students up with material in training schools so that they could apply it when they entered the world of practice - has never been a particularly good example of how professionals “think in action”, and is quite inappropriate to practice in today’s learning organisation and global environment. To be able to reflect *in* action (while doing something) and *on* action (after you have done it) should be important features of any learning activity. Schön (1991) observes that every practitioner continually makes judgments while in action and these judgments are often intuitive, and based on a continuously changing set of criteria and circumstances. Critical reflection refers to “questioning the integrity of assumptions and beliefs based on prior experience” (Taylor, 1998, p. 9).

Some literature (Boud & Walker, 1998; Brookfield, 1987; Tennant & Pogson, 1995) suggests that critical reflection is the key to learning from experience. Educators learn about teaching by talking about their experiences, becoming aware of the assumptions and expectations they have, questioning these assumptions, and possibly revising their perspectives. This process is considered by many in the field of adult education to be the basis of an educator’s development. Sparke & Skoyles (1998) suggest that the value of the

process of reflection is its ability to unearth hidden feelings, values and agendas with the possibility of increasing understanding of the self in relation to the wider political, social and institutional context within which professional action takes place.

In order to understand this process, we need to observe what we do, critically question ourselves, and reflect on our actions within our own context (Cranton, 1996). Atherton (2002) argues that “real” reflective practice needs another person as mentor or professional supervisor, who can ask appropriate questions to ensure that the reflection has purpose and direction. Mezirow (1991) sees reflection, critical reflection, and critical self-reflection as the distinguishing characteristics of adult learning and central to his theory of transformative learning (Dirkx, 1998). Mezirow (1991) noted that:

Even more central to adult learning than elaborating established meaning schemes is the process of reflecting back on prior learning to determine whether what we have learned is justified under present circumstances. This [reflection] is a crucial learning process often ignored by learning theorists. (p. 5)

This is supported by Laurillard (2002) who believes that teachers have to develop their model of the learning process well beyond the traditional “transmission model” and be reflective practitioners involved in transformative learning practices. Laurillard (2002, p.20) observes that education has tended toward a skills-driven product in the past at the expense of promoting reflective, thoughtful, engaged teachers and learners. The result has been “individuals unprepared to be practical change agents during a time of needed change.” Cranton (1996) suggests that the educator who engages in critical self-reflection on practice and questions that practice almost inevitably modifies that practice. She believes that an educator who is not critically self-reflective is not likely to stimulate critical reflection practices among their own learners. Larrivee (2000, p.293) believe that unless teachers engage in critical reflection and ongoing discovery they stay “trapped in unexamined judgments, interpretations, assumptions and expectations”. She also stresses that “critical reflection is not only a way of approaching teaching – it is a way of life” (Larrivee, 2000, p. 306). Sparke and Skoyles (1998) make the point that:

All teachers think about their practice, whether in the form of general musings on the way home from school or for the purpose of seeking to influence their future actions, but focusing reflections, injecting criticality and challenging oneself in

order to effect change, requires a disciplined approach and conscious attention to the process itself. (p. 2)

This significant evidence in the literature of the value of critical reflection has strongly influenced the design of the courses under review in this study.

Use of Critical Incidents

The identification and analysis of significant episodes or “critical incidents” provides learners with an effective strategy for operationalising the concept of critical reflection (Brookfield, 1994; Killen & McKee, 1983; Tripp, 1993). Tripp (1993, p. 8) observes that, “a critical incident is an interpretation of the significance of an event. To take something as a critical incident is a value judgment we make, and the basis of the judgment is the significance we attach to the meaning of the incident”. The use of critical incidents strongly supports the contemporary theories of constructivism and transformation, which seem to be well suited to online methods of learning and teaching. Tripp suggests that by focusing their attentions on such incidents in a structured and analytical way, teachers can develop their own “grounded theory”, in that they can theorise about aspects of their practice rather than trying to apply academic theory to their experience. It provides an approach to the investigation of practice and the enhancement of professional judgment. Tripp perceives that this is a very powerful technique if reinforced by the processes of action research (data gathering, wider reflection, action and evaluation), as is the case in this research study.

Tripp (1993, as cited in Sparke & Skoyles, 1998, p. 2) suggested a 4-step approach to the analysis of a critical incident:

1. Describe an incident from professional experience e.g., an event in a synchronous chat activity, an interchange with a fellow learner. The suggestion is to choose something interesting, annoying, inspiring, thought-provoking, challenging, or typical.
2. Suggest an explanation within an immediate context.
3. Ask questions that delve deeper into the meanings behind the incident, such as different ways of thinking about the incident, consideration of personal theoretical approaches and values that influence judgement.
4. Consider the implications this incident might have for future practice.

Brookfield (1995a) has applied the critical incident method in trying to help students to think over what they really mean by learning and give learners an opportunity to focus on their own experiences. Brookfield (1995a) believes that the critical incident technique is especially appropriate for teachers or individuals who are interested in developing learning of others. Before asking others to learn or think, teachers should be aware of their own assumptions (Soini, 2000). Burgum and Bridge (1997) describe their use of critical incidents with midwifery students to work through events occurring in everyday clinical practice in order to explore professional judgement through reflection, interpretation, opinion and wisdom. Brookfield (1994, p. 192) indicates that learners tend not to be intimidated by being asked “to talk about events in their own lives . . . about which, after all, they have more knowledge than anyone else”.

Herrington and Oliver (2002) describe the application of reflective activity in an online program, a Graduate Certificate in Online Teaching and Learning offered by their institution. They suggest that the inclusion of reflective practice in online learning

. . . enables teachers to encourage a process for examining past and reframing future actions, to assist students to engage in a cycle of reflection and action, and ultimately, to enhance the chances of those students to become lifelong learners. (p. 319)

Williamson and Nodder (2002, Conclusion section, ¶ 1, 2) report on the use of reflection in an online course which uses an industry-based project as its main assessment requirement. They note the importance of providing “a reflective learning space where students are able to explore perceptions and build knowledge through experiential dialogue in a setting that allowed them to reflect on both dialogue and on the learning that had already taken place”. In designing opportunities for reflection in an online environment, Williamson and Nodder (2002) observe that

. . . the discussion board goes beyond supporting the learning experience extending its potential to recreate experiential learning environments and support the students to learn in ways appropriate to themselves and their situation. The choice of such learning activities aligns well to an overall graduate profile where the student is being guided to develop a reflective approach to their acquisition of knowledge and ability to reason. (Conclusion section, ¶ 1, 2)

2.3.4 Principle Four: Learning should be Interactive, Collaborative, Social and Learner-centred

Postle et al. (2003) report in their study that respondents to a staff survey conducted at USQ stated that the adoption of online approaches to learning and teaching provides an increased opportunity for interaction, particularly between teacher and student, and between students, both synchronously and asynchronously. Synchronous and asynchronous electronic communication tools (discussion groups, email, and virtual chats) provide environments for collaborative group learning, where learners can actively exchange ideas and co-construct their knowledge within the context of an online learning community (Gunawardena & Zittle, 1996; Wenger, 1998). The fundamental premise is that the learner is central to the learning experience. Collaborative learning has its roots in social constructivism (Garrison, 1997; Jonassen, 1998), addresses “the strong socio-affective and cognitive power of learning on the Web” (Harasim, 2000, Section 4.1, ¶ 1), and aligns with the principles of transformation theory.

The tension between delivering content resources which are essentially one-way communications (articles, books, videos, lectures) and providing two-way interaction around those resources which make it meaningful to learners is identified by Kimball (1998). She observes that there is more to developing a relationship amongst an online group than sharing access to a file folder and that there is a clear distinction between collaborative and cooperative work although the terms are often used synonymously. By vertical cooperation we can mean splitting up the work, solving sub-tasks individually and combining the final results into the final product. However, during collaborative learning, cooperation which is called horizontal cooperation might occur. Horizontal division of labour is often spontaneous, and it might occur when people really work together to construct shared meaning about the world through interaction with others, and to produce a joint commitment to shared goals. A focus on “conversation” rather than the presentation of facts is recommended by Liber (2000) as being a critical strategy in the promotion of learning. This is further supported by the fact that businesses in the 21st century require employees who are competent in participating in team activities and environments.

Interactive and collaborative learning provide ideal opportunities for peer learning (Anderson & Boud, 1996; Boud, 1999; Boud & Middleton, 2003). Peer learning may be

construed as a “two-way reciprocal learning activity” (Boud, Cohen, & Sampson, 2001) and refers to networks of learning relationships, among students, facilitators, and others. Anderson and Boud (1996) consider the advantage of peer learning is that it offers a two-way, reciprocal learning experience and the opportunity for participants to teach and learn with and from each other in both formal and informal ways, with mutual, interdependent benefits. They emphasise that the focus is “on the learning process, including emotional support learners offer each other, as much as the learning task” (p. 16). In academic settings, peer learning builds on a collegial view of academic work (Boud, 1999). Another form of peer learning has been termed “vicarious learning” by McKendree and Mayes (1997, ¶ 1) – “the chance to observe . . . peers participating in discussions as learners” which helps the observers “to model the basic task of learning more effectively” (Mayes, 2002, section 4, ¶ 3). In online environments, participants are able to interact with the content, with their peers (e.g., in problem solving and generative writing activities), with experts in the field and with their facilitator (Reushle & McDonald, 2004).

2.3.5 Principle Five: Dynamic, Lifelong Learning Opportunities must be Encouraged and Supported

Online technologies are well suited to dynamic approaches to managing learning of a transformative nature where learning and teaching is seen as an ongoing process rather than a program with a fixed start and end point. Good teachers have always been open to changing their teaching methods and practices based on student input and online environments provide a context which can foster this change. The importance of widespread participation by learners in the design of their own learning has been recognised (Kimball, 1998). As a basic example, in an online environment, it is easy to provide additional reading materials based on learner interest instead of having to rely on a textbook ordered weeks or months before a course begins.

Online technology can provide space for continuing conversation among learners and others about what is working and what is not working in the learning environment. This dialogue can continue after the formal elements of a course cease and ongoing relationships may develop in many different ways. The need was evident in an evaluation of online postgraduate programs at USQ conducted by Reushle, Cleary, and Mangubhai (2004). The

raw data revealed requests by participants to “harness and foster a sense of alumni professional involvement” beyond the boundaries of online courses and programs in order to “evolve a more dynamic place . . . to contribute to the knowledge-base [and bring] the experiences of alumni in the field and their ongoing learning back into the USQ knowledge pool”. In keeping with Cranton’s (1996) tenet that *educators are learners*, she suggests that, “to be a critically self-reflective educator is to be a lifelong learner” (1994, p. 229).

2.4 Professional Development for Educators

A significant literature exists in the area of professional development for educators. As discussed in Chapter 1, for this study the term “professional development” refers to a process of engaging in continued learning to enhance knowledge of, skills in, and attitudes towards relevant practice and theory. This review focuses primarily on professional development for online educators in tertiary educational contexts (that is, post-compulsory settings e.g., polytechnics and universities). Concern was noted in Chapter 1 about the imbalance in investment in educational technology with the focus being given to technological production rather than technological implementation. How technology is being used and whether teachers are simply reinforcing old pedagogy better suited to production-like, educational environments also requires exploration. Salmon (2000, The rock 1, ¶ 2) observes that “millions of words have been written about the technology and its potential, but not much about what the teachers and learners **actually do** online”.

Professional development for educators might be considered as “a continuous process of improvement to promote high standards of . . . achievement and responsible citizenship which will increase the capacity of all members of a learning community to pursue lifelong learning” (Michigan State Board of Education, 2001, p. 1). Professional development can also refer to the total formal and informal learning experiences and should help educators not only learn new skills but also develop new insights into pedagogy and their own practice, and explore new or advanced understandings of content and resources. Unfortunately, professional development for educators has long been seen as skills training – how to write objectives, how to use technology, how to construct multiple choice tests.

Professional development should include personal growth. As mentioned previously, central to all professional development for adult educators should be Cranton's (1996) tenet "educators are learners". Professional development should provide new insights, stimulate critical reflection, and further the development of an educator's theory and practice. The educator who is not a learner becomes "an assembly line worker implementing well-worn habitual tricks and techniques to process learners' acquisition of knowledge and skills" (Cranton, 1994, p. 228).

Professional development for tertiary educators should be informed by the strong theoretical and practical literature emerging in adult education, and needs to acknowledge the realities of working in higher educational environments. The adult learning principles of relevance and situated practice need to be taken into account and used to address issues of flexibility and "just-in-time" training. As Cranton (1996) notes,

adult educator roles, the settings within which adult educators work, and the nature of adult educators' preparation for their practice are diverse. No one theory of adult learning informs all educators. No one model describes educator practice. No one paradigm underlies adult educator research. No one philosophical perspective determines the goals and responsibilities of adult education. Most educators identify themselves with their subject area, their clientele, the type of organisation within which they work, or even the medium they employ such as computer technology rather than with adult education as a profession or discipline. (p. 4)

What we do not often do, notes Cranton (1996, p. 4) is consider that we are all adult learners, that is, "learners in the discipline of adult education". As educators of adults, we share a common purpose of wanting to promote learning in others by being better practitioners. This purpose supports the collegial nature of academic work and promotes a more localised approach to professional development activities, including an emphasis on peer learning with colleagues in one's own field (Boud, 1999). Online technology has the potential to support professional development where learning can be customised for individual needs, and to make learning convenient for educators. Learning can be "just-in-time" when educators need it most. The online environment can provide a confidential setting in which

educators can learn basic skills or it can open doors to allow educators to network with colleagues across diverse contexts, and participate in interactive and collaborative knowledge generation.

2.4.1 Peer Learning Relationships

Eisen (2001, p. 30) suggests that a peer learning partnership role in professional development contexts is one which “promotes joint reflection and reciprocal learning between professionals”. The peer learning partnership model seems to be suited to professional development in online environments and supports the importance of concepts such as shared meaning, critical reflection, centrality of experience, learner-centredness, and rational discourse, all of which are highly valued in transformative learning practices. The peer learning model is considered more appropriate than the traditional mentor-protégé relationship which is often perceived as hierarchical and, as Shapiro et al. (1978, as cited by Eisen, 2001) indicates, tends to foster a power imbalance and a one-way flow of information from the mentor to the novice. This “one-way” arrangement, Eisen (2001) notes, is not suitable for groups of professionals as it fails to affirm and tap into their own expertise. She indicates that one of the challenges of adult education is finding the most effective ways to stimulate adults’ thinking and “energize them to enter new realms of inquiry and experimentation”. Eisen (2001, p. 31) notes that the use of the peer learning relationship model in professional development promotes “sharing of partners’ experience through action and reflection in the context of actual practice”. In order to facilitate “liberatory, transformative learning” in adults, she recommends the use of dynamic learning methods such as coaching, problem-posing, experiential learning, and dialogue. The point that people in workplaces often have explicit contacts for learning, either determined by structural relationships or created informally, has been made by Boud (1999) in his discussion of reciprocal peer learning. Boud and Middleton (2003) discuss the concept of informal, horizontal or sideways learning and development in which problem solving occurs through interactions among peers and not through more formal learning support. They view this process as sets of “overlapping communities of practice as well as informal networks contingent on work flow and organisational practices which may change

... over time” (p. 201). An economic advantage of using the peer learning model is the opportunity to use existing, in-house resources and expertise.

The literature review suggests that involving teachers as researchers and placing strong emphasis on critical reflection and reconstructing practice are necessary components of successful professional development programs. The shifting focus of professional development as being a personal reflective activity is encapsulated by Cranton (1997) when she observes that,

... a defining condition of being human is that we have to understand the meaning of our experience. For some, any uncritically assimilated explanation by an authority figure will suffice. But in contemporary societies, we must learn to make our own interpretations rather than act on the purposes, beliefs, judgments, and feelings of others. (p. 5)

2.5 Implications for the Study, and Concluding Remarks

In Chapter 1, six research objectives were proposed with the primary purpose of formulating a framework for the design of transformative approaches to professional development for online educators. Three of the objectives have been explored through a review of the literature:

1. To identify the learning theories appropriate for the professional development of educators (specifically constructivism, adult learning, and transformation).
2. To identify the emerging principles of online learning and teaching (online pedagogy).
3. To identify the key attributes of current professional development practice for educators.

It is evident in the literature that the emerging characteristics of contemporary online pedagogy, and the concepts and principles of the adult learning theory of transformation, have significant intersecting features. This suggests that an approach to professional development that takes account of transformation theory, when applied in an online environment may result in designs that will lead to improved learning outcomes for educators. However, there are gaps in the literature articulated by the following questions:

1. How can the concepts and principles of online pedagogy, transformation theory, and professional development for educators, be brought together to provide effective and efficient transformative approaches to professional development for online educators?
2. What evidence supports this?

These questions relate to research objective (4) which proposes the use of an iterative, cyclical process, to develop, implement, evaluate, and modify a professional development course which embodies the principles and practices identified in objectives 1-3. This process will be addressed through a qualitative action research method which is described in Chapter 3, and findings and conclusions will be discussed in Chapters 4 and 5.

CHAPTER 3

Method

The greatest thing in this world is not so much where we are, but in what direction we are moving.
Oliver Wendell Holmes

3.1 Introduction

The purpose of this study was to create a framework to support and guide the design of professional development for online educators in higher education settings. The design of the framework resulted from an analysis of empirical data collected from participants at the Singapore polytechnic, combined with the theoretical bases which emerged from a review of the literature (Chapter 2), and the practical, online education experience of the researcher. Because the study focused on a “new” area of research (online education) where literature and related theory are still in developmental stages, there was a need to adopt a method that was heuristic and creative in design. A qualitative research design with a focus on personal experience and introspection was selected. This decision was supported by the work of Sherman and Webb (1988, p. 5) who state that “the aim of qualitative research is not verification of a pre-determined idea, but discovery that leads to new insights . . . with [a] focus on the natural setting”. Data that are gathered using qualitative methods tend to be “rich, personal, close to the real world, and contain a depth of meaning that more abstract forms of evidence lack” (Sowden & Keeves, 1988, p. 513). In the future, this study may be followed by quantitative studies to gain more precision in outcomes and findings. To recap, the study had six research objectives:

1. To identify the learning theories appropriate for the professional development of educators (specifically constructivism, adult learning, and transformation).
2. To identify the emerging principles of online learning and teaching (online pedagogy).

3. To identify the key attributes of current professional development practice for educators.
4. Using an iterative, cyclical process, to develop, implement, evaluate, and modify a professional development course which embodies the principles and practices identified in objectives 1-3.
5. To determine the factors which contribute to successful professional development for educators engaged in learning and teaching online.

The overall objective was:

6. To formulate a framework for the design of transformative professional development for online educators, based on the developmental phases of this study.

The purpose of this chapter is to present background information relevant to the method used in this study, a rationale for the method used, and to describe the method in detail.

This chapter begins by outlining the context for the study, followed by a description of the research approach or method, including the role of the researcher. A justification for the research design is followed by a discussion of the phases of the study which are described in detail under the following headings:

Phase 1: Theory Application and Testing (Evaluating Design 1).

Phase 2: Theory Refinement and Modification (Formulating and Implementing Design 2).

Phase 3: Theory Generation (Evaluating Design 2, and Formulating Design 3).

Data collection procedures and sources of data are addressed within each phase. Issues of validity, reliability, and generalisability, as well as the protocols for ethical behaviour are discussed. Data analysis procedures are briefly identified and are elaborated upon further in Chapter 4.

3.1.1 Context

The study focused on the work conducted by myself in 2002 and 2003 with adult educators at a polytechnic located in Singapore. In 2002, teaching staff from USQ provided an online course for 31 polytechnic teachers on designing and facilitating online learning and teaching. Following an evaluation of the first offer of the course, a second offer was prepared and delivered to a new cohort of 26 polytechnic teachers in 2003.

The Singapore polytechnic was selected for this study for the following reasons:

1. The participants were from one teaching context associated with the consultative work conducted by the researcher. Thus, the polytechnic was a convenient location in which to conduct the research.
2. The polytechnic was adopting a blended or hybrid approach to learning and teaching. In this context, “blended” or “hybrid” was defined as the combination of face-to-face and digitally-based learning experiences for students. At the time, USQ was also investigating the implementation of a blended/hybrid approach to learning and teaching.
3. USQ was expanding into the global education market where online technology provides a powerful vehicle for enabling high quality educational experiences to be offered to a diverse range of clients. Working with an institution located in Singapore provided an opportunity for USQ personnel to explore international learning and teaching needs, requirements and methods.
4. The participants had similar characteristics to other clients (or potential clients) of USQ, that is, adult learners teaching in tertiary contexts but whose disciplines are not necessarily in the area of education, thus allowing for wider application of the findings.

3.2 Approach

The aim of this research was to enable informed decisions to be made about action and practice rather than to merely describe what was occurring from an outsider’s point of view. As noted by Greene (1988), research of this kind “cannot be carried out by people who see themselves as detached, neutral observers concerned with the kinds of observation, measurement and prediction that are presumed to be unbiased, [and] unaffected by the inquirer’s vantage point or location in the world” (p. 175).

3.2.1 Action Research

An action research method was used because its interactive focus and potential for involvement suited the context and objectives of the study. An additional reason was that

action research allowed for a strong link between theory and practice. The term action research is used to represent the extensive family of approaches to inquiry which draws on different research traditions but are all participative, grounded in experience and action oriented. Reason and Bradbury (2001, p. 1) define action research as “a participatory, democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes”. The basis of the research was “participation” characterised as reflexive, systematic inquiry, stimulated in part by ongoing collegial communication between researcher and participants. This research method pursued action (or change) and research (or understanding) at the same time.

Because this study is closely linked to practice and involves the researcher as an active participant, it may be regarded as “participatory action research”. This perspective attempts to break down some of the polarisation between the scientific and alternative paradigms and moves forward, informed by both. Reason and Bradbury (2001, p.7) state that the participatory world view, “places human persons and communities as part of their world, both human and more-than-human embodied in their world, co-creating their world”. Thus a participatory world view moves ourselves into the larger web of life and is able to draw on various traditions of inquiry, depending upon the purpose and aims of the inquiry. This broad based epistemological position was favoured in this study as it not only embraced both constructivist and critical positions, but left scope to consider new relationships or explanations that might be of a more universal perspective and of use to the broader teaching profession. The action research method, which can be developed out of a range of theoretical positions, sits comfortably within this perspective. The method allows practitioners to achieve better research outcomes from their practice without undermining the changes their practice is intended to achieve (Dick, 1993).

When selecting a research method, it is often hard to achieve replicability (able to be repeated), generalisability (global relevance), and responsiveness (local relevance) at one time: you often need to trade one off for the other. More traditional methods of research tend to sacrifice responsiveness in the interests of achieving replicability, thus making it unsuitable as a change technique. Action research values responsiveness over replicability, otherwise it is very difficult to achieve action as part of the research. Despite this, the

intention in this study was also to achieve some replicability so that the resulting framework could be considered for other contexts.

The basis of action research is involvement, improvement, change and action (McNiff & Whitehead, 2002). In the mid 1940s, Kurt Lewin (1948) constructed a theory of action research, and emphasised the importance of participation and collaboration where research is aimed at understanding and generating practical applications and solutions to real world problems (Reber & Reber, 2003). Lewin (1951) described action research as a series of spirals or iterations involving planning, acting, observing, reflecting, revising and implementing. In other words, the process alternates between action and critical reflection and provides a means for professionals to critically reflect on their practice (Denscombe, 2003; Zuber-Skerritt, 1996). Action research has been described as both “an approach to problem-solving and a problem-solving process” and is “adaptive, tentative and evolutionary” (Burns, 1994, pp. 294, 303).

The choice of an action research method for this study was further supported by the fact that the study proceeded in an iterative, cyclical way involving degrees of theory testing, modification, application and further refinement. The study was one where I subjected my professional practice to critical scrutiny with the aim of improving that practice. It was by being deliberate and intentional about this process that learning about the situation was maximised.

This is equivalent to what Gummesson (1991) calls the “hermeneutic spiral”, where each turn of the spiral builds on the understanding at the previous turn, and Damme (1998) illustrates as the iterative, cyclical nature of action research (Figure 3.1).

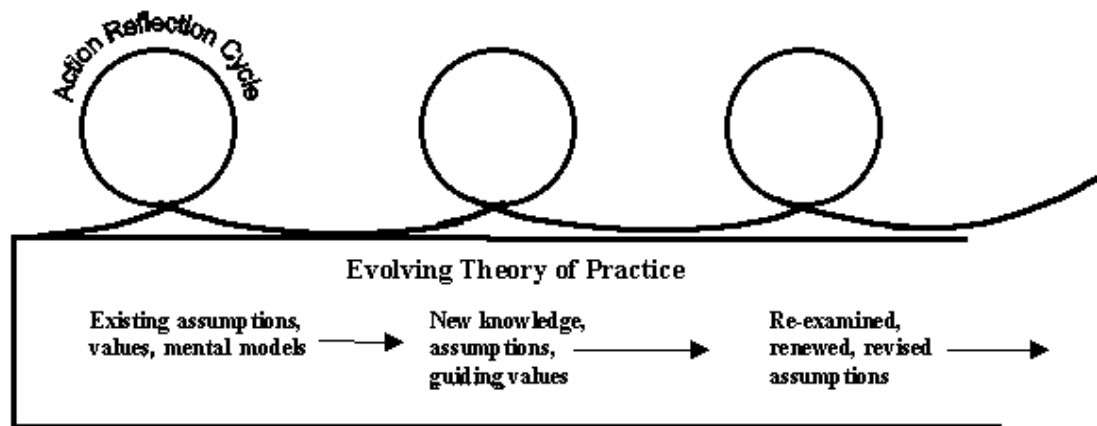


Figure 3.1. The iterative nature of action research.

(Source: Damme, S. (1998). The “outcomes” challenge: An action research approach to evaluation in community program development. *The Action Evaluation Project, The Aria Group*. Retrieved 6 January, 2005, from <http://www.aepro.org/inprint/conference/damme.html>)

Action research is an emergent process that takes shape as understanding increases. It is this - the responsiveness to the situation, and the striving for real understanding - which supported action research as an appropriate method for this study.

It was difficult to isolate a sample in a controlled setting as it was assumed, in this situation, that all participants would have access to the same learning experiences and would not be able to operate in a controlled environment. In addition, although there was a plan for this research, there had to be opportunity to change or adapt the method to reflect the emerging data. The evolving nature of action research provided this flexibility. The research design was also a case study because of its focus on a particular real-life situation, selected purposefully, not randomly, and because of the personal role the researcher played in the data collection and analysis. The case study is a useful method for exploring an area of practice not yet well researched or conceptualised (such as online pedagogy) although it does have the limitation of being non-generalisable (Merriam, 1998). The newness and characteristics of online learning and teaching suggested that a research approach that

enabled the “voices” of many participants to be articulated, and opportunities for participants to reflect on their learning and experience, was most appropriate. This again supported the choice of an action research method.

In summary, the research approach was a participatory paradigm designed around a core strand of action research where the research was conducted *with* the participants, rather than *on* or *about* them. This was articulated to the participants through the analogy of travellers together on a journey of discovery and learning.

3.2.2 Role of the Researcher

My role in this study was that of a collaborative practitioner researcher, with some elements of participative observation (Murphy & Torrance, 1987). Because I was the principal teacher of the course and manager of the project, I actively participated in the process and conducted the research while delivering the course.

Hopkins (1987) argues for a “teacher researcher” concept on the basis that traditional educational research has been less than adequate in terms of helping teachers to improve their practice. This is supported by Stake (1987) who found that the results of educational research were often too specific or too general and contained few signposts for action. As a consequence, teachers often regard educational research as something irrelevant to their lives and see little interaction between the world of the educational researcher and the world of the teacher (Hopkins, 1987). Connors (1991) noted in his study that this indeed holds true for Australian teachers who rated participation in academic research projects towards the bottom of a list of preferred methods to gain or improve teaching or administrative skills. It is possible, therefore, that teachers in other contexts may hold similar views. As mentioned previously, a concern that guided the research design of this study were consideration of how the participants would directly benefit from engaging in the study and how the design could emphasise research *with* the participants, not *on* them.

The two roles that I assumed in this study are outlined in Table 3.1.

Table 3.1

Role Clarification of the Researcher

Project Manager/Principal Teacher	Collaborative Practitioner Researcher/Participant Observer/Reflective Practitioner
Design a professional learning program for teachers	Design professional learning processes based on review of the literature, previous research and personal experience
Organise and conduct various discussion forums and synchronous chats	Analyse online contributions and changes that occurred in participants' attitudes, beliefs and practices
Request participants to post reflections about the course activity and readings	Analyse participants' reflections about their professional learning
Engage in regular email contact with participants	Analyse data created in these sources
Plan and conduct showcase of projects at end of course	Submit research papers to journals and conferences
Maintain a database in relation to administration of course	Maintain a personal reflective journal in relation to participation in course, and progress of course. This includes reflecting on one's own practice (participation and progress) as an educator.

Reflective Practitioner

In my role as a collaborative practitioner researcher, I needed to be a reflective practitioner (Schön, 1991). My participation in the research study was central to the study in that my presence formed part of the research design. Schön (1991) distinguishes between reflection *in* action (thinking that takes place in the midst of practice, rather than after the event), and reflection *on* action (reflection after practice has been completed), and acknowledges the cycles of thought that take place and the link with, and impact on, action. Cowan (1997, as cited in Jolly, 1999) extends Schön's work and also discusses reflection *for* action which is anticipative where the learner establishes priorities for subsequent learning and action. It was anticipated that the use of reflective activity would assist the participants and me (as the practitioner) to better understand professional practice by enabling us to understand, research and evaluate practice. The justification for reflection

was that it would help avoid the danger of being the servant of routine. It would allow the participants and me to interrogate our practice and to seek inspiration to improve that practice. In keeping with an action research method, the study needed to be practical and personal and related to this reflection on practice.

Freire (1972) proposed the relationship between reflection and action and the Aristotelian notion of praxis, which he concluded was reflection and action upon the world in order to transform it. Freire (1976) argued that reflection does not precede action, but takes place at the same time and as such they constantly and mutually illuminate each other. Praxis can lead to “conscientisation or the awakening of critical consciousness which arises from humans simultaneously being engaged in the world and transforming that world, resulting in further informed action” (Freire, 1973, p. 19). He believed that “the pursuit of full humanity cannot be an individualistic pursuit but must take place through dialogue with human beings united by their action and their reflection upon that action and upon the world” (Freire, 1972, p. 75). Freire’s views led to calls for combining research and teaching (Kincheloe, 1991). The use of journals as data-gathering instruments by participants and the researcher enabled further reflection to occur. Maintaining a reflective journal, notes King (2003a, p. 93), enables the “self-dialogue that runs across the page . . . [to] . . . bring to our consciousness beliefs, values and assumptions we may never have articulated before”. van Halen-Faber (1997, p. 52) refers to the connections between critical reflection and narrative (through the keeping of journals, diaries, and logbooks) as “discovering new meaning arising out of old stories”. Oldham (2002) highlights the value of maintaining a learning journal as being “a personal process which encourages the learner to be honest and open in their self appraisal” (p. 5).

When assuming such an integrated role, there is “always a horizon of pre-understanding on the part of the researcher, even as there is a horizon of pre-understanding in the situation being studied” (Greene, 1988, p. 176). Thus, the study was also influenced by reflection *to* action which occurred before the action took place (Butler, 1992). In other words, my expertise in, and knowledge of the area, guided the design and direction of the study and promoted higher levels of understanding and more in-depth analyses of the outcomes. This is described by Sowden and Keeves (1988, p. 514) as a process of induction in that “some of the orientating constructs – informed by the prior knowledge, the experience, and the

values of the investigator – have been put forward and operationalized and matched to the body of field data”. This, notes Sowden and Keeves (1988), has the advantage of “focusing and reducing the data that could be collected”.

3.3 Procedure

The procedure of conducting the research in a number of *phases* was tied closely to the six research objectives. Richard Hackman (as cited in Frost & Stablein, 1992) comments that “one lesson we learn is about the value of staying very close to the phenomenon one is studying, rather than doing scholarly work at arm's length ... the research question [objective] should drive the methodology” (p. 75).

3.3.1 *Phases of the Study*

The study consisted of three phases and is exemplified by an adaptation of an action research framework, originally developed by Salmon (2002, p.201) and illustrated in Figure 3.2. This adaptation of Salmon’s framework, based on Kemmis’ (1982) work, was considered a suitable basis for this study because it had already been applied successfully to a large-scale online action research study in a higher education business school.

The phases of my study (see Figure 3.2) consisted of:

Phase 1: Theory application and testing (evaluation of Design 1).

Phase 2: Theory refinement and modification (formulation and implementation of Design 2).

Phase 3: Theory generation (evaluation of Design 2, and formulation of a framework for design – Design 3).

Phases 1 and 2 provided much of the preliminary data for the main part of the study in Phase 3. Analysis was to be conducted in a cyclical way throughout the three phases of this study. The emerging insights and identification of trends shaped and refined the focus of the subsequent course designs. This process of merging phases of data collection with data analysis has been strongly supported by Miles and Huberman (1994) because of the opportunities to reveal gaps in the data, and allow hypotheses and relationships to emerge

before it is too late to gather additional relevant data. These phases fit well with qualitative, action research which is most appropriate “in human resource development for building new theory . . . and for exploring uncharted territory” (Swanson, Watkins, & Marsick, 1997, p. 2).

The phases of the study, illustrated in Figure 3.2, are then discussed in terms of:

1. process, and
2. procedure of data collection.

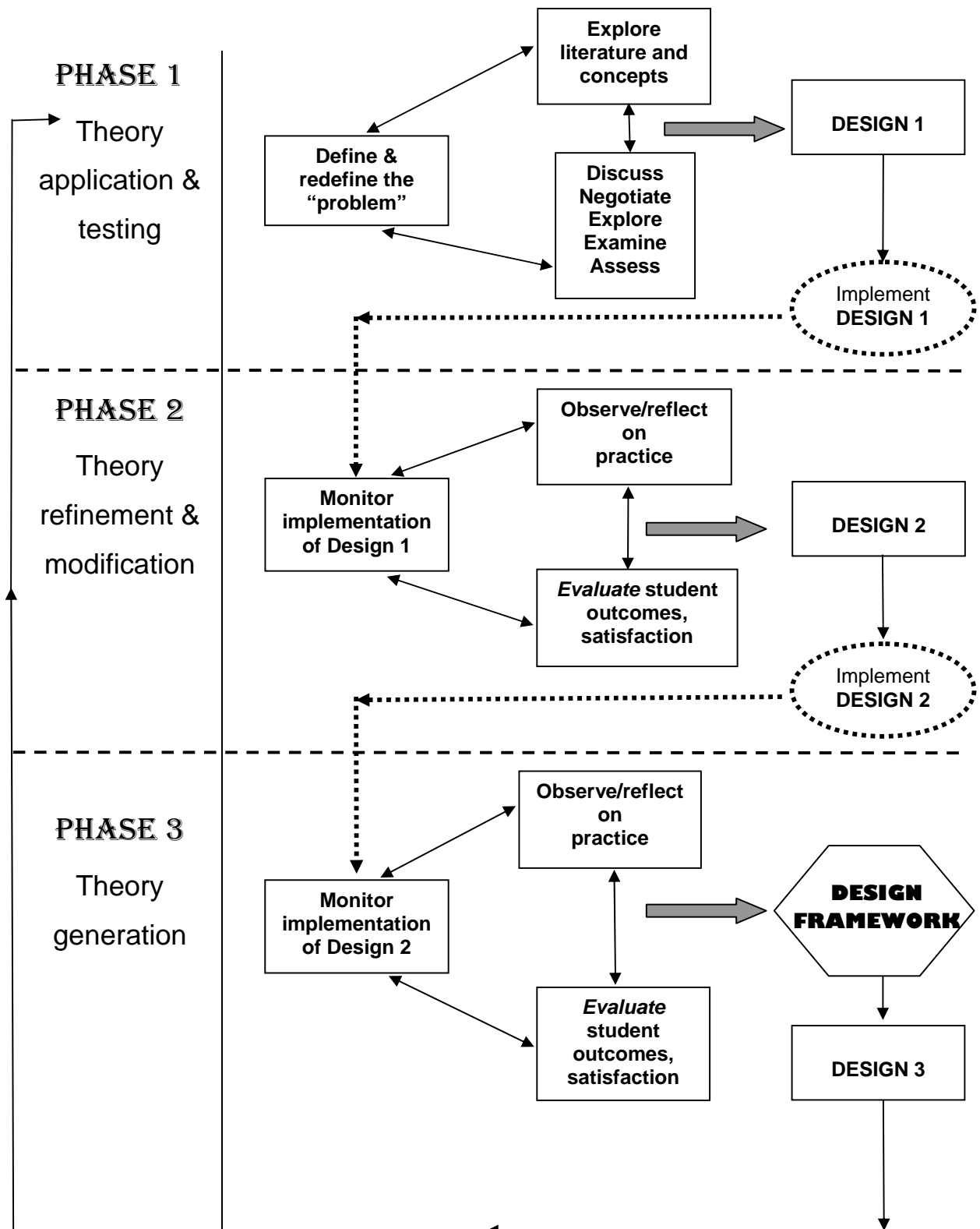


Figure 3.2. Research framework.

Phase 1: Theory Application and Testing - Defining the Problem, Formulating and Implementing Design 1

Phase 1 of this study involved the initial definition of the problem which was to design and deliver a professional development course for a group of tertiary teachers in the area of designing and facilitating online learning and teaching (e-learning). Phase 1, therefore, provided historical data in order to “set the scene” for the main part of the study and could be regarded as the “initial hypothesis” for the study. For Phase 1, data were gathered from four sources:

1. negotiations with the client (Singapore polytechnic) to ascertain needs and requirements,
2. a review of the technological infrastructure of USQ,
3. a review of pertinent literature,
4. the experience and reflection on practice of several key online teachers at USQ (including the researcher).

Research objectives (1), (2), and (3) were addressed in Phase 1. As reported in Chapter 2, key principles of effective professional development for online educators were derived from theories of adult learning, identification of key concepts, and principles of online learning and teaching (online pedagogy), and key attributes of current professional development practice, particularly for adult educators teaching in online contexts. In determining the concepts and principles, I needed to be mindful of the practicality of theory, as articulated by Wenger (1998. p. 9): “[A theory] is not a recipe: it does not tell you just what to do. Rather, it acts as a guide about what to pay attention to, what difficulties to expect, and how to approach problems”.

The refinement and distillation of these concepts and principles led to Design 1, as illustrated in Figure 3.2. Design 1 was offered to a group of 31 Singapore polytechnic teachers and was intended to equip participants with relevant knowledge and skills to meet the needs of their own students as they moved into the e-learning environment. The course utilised online delivery with a focus on learning through application in negotiated, authentic workplace projects. The aim was to have learners gain knowledge and skills in online teaching by experiencing the online environment as a learner with a group of professional colleagues, and to gain knowledge and skills in the conceptualisation, instructional design,

development, delivery and evaluation of online materials. The course integrated substantive content, interactive online activities, key professional readings, active online discussion, and negotiated work-based projects.

Phase 1 of the study also addressed the first iteration of research objective (4) and represented the first offer of the professional development course (see Figure 3.2, Implementing Design 1 - “Theory application and testing”). The online component of the course was preceded by a 3-day orientation visit I made to the polytechnic. The main focus of the visit was to establish rapport (establish “social presence”) with the group and provide an introduction to the course design, and to the facilitators. Each participant received an Orientation Book. The pedagogical principles which shaped the custom-built course, along with relevant examples, were articulated to the participants, as were the aims and objectives of the course. USQ’s expectations, background, and requirements were outlined. A number of “ice-breaking” activities were conducted to put the participants at ease with the facilitator and with each other. The group was divided into sub-groups and digital photos were taken of each sub-group. Various concerns were addressed e.g., the responsibilities of participants who intended taking leave during the course, and technical issues such as the slow response rate of the technological infrastructure (server).

Phase 2: Theory Refinement and Modification

During the implementation of the first offer of the course, online activity was facilitated and monitored by four members of a USQ teaching team (myself included), with each assuming a lead role at various points in the course. The course culminated in another on-site, face-to-face session which enabled participants to present their completed course materials to one of the members of the USQ team. Data were gathered throughout the offer of Design 1 and the outcomes from the analyses shaped Design 2. The analyses were presented in several reports which are outlined, in detail, in Chapter 4, Section 4.2.1.

From these reports, the researcher presented the findings (reported in Section 4.2) as pedagogical, administrative and technical recommendations. According to these recommendations and after a further examination of the literature, a refinement and modification of the theoretical basis resulted in Design 2 (see Figure 3.2, “Theory refinement and modification”, and refer to Appendix B9, *Proposal for Design 2*).

Design 2 was offered to a group of 26 participants from the Singapore polytechnic. In order to focus on the central design theme of “participation”, eight Co-Facilitators (Co-Fors) who were participants in Design 1 at the polytechnic volunteered to act in supporting roles in Design 2. The Co-Fors each assumed a peer learning partnership role (Anderson & Boud, 1996; Boud, Cohen, & Sampson, 2001; Boud & Middleton, 2003; Eisen, 2001) which was considered more appropriate than the traditional mentor-protégé relationship which could have been perceived as hierarchical and fostering a power imbalance with a one-way flow of information. The “one-way” arrangement was not considered suitable for these participants as it failed to affirm and tap into their own expertise (Eisen, 2001). This view was supported by the participants in Design 2 who rejected even the use of the term “mentor” because of its authoritarian connotation in their context. The Co-Fors shared ideas and experiences with the course participants by providing local contextual information, workplace examples, and support through online and face-to-face activity.

Phase 3: Theory Generation

Phase 3 included the monitoring of the implementation of Design 2, the analysis of data collected from an evaluation of Design 2, an updated review of current literature, along with practitioner reflection on practice. This resulted in “theory generation”, addressed research objective (6): “To formulate a framework for the design of transformative professional development for online educators, based on the developmental phases of this study” (Design 3), and constituted the main outcome of the study.

3.3.2 Validity, Reliability, and Generalisability

The scientific or positivistic research paradigm assumes that the only way to generate valid information is through the application of a rigorous methodology that follows a strict set of established rules and procedures (Kincheloe & McLaren, 1994). However, Kvale (1996, p. 229) suggests, “In modern science the concepts of generalisability, reliability and validity have reached the status of a scientific holy trinity”. He also proposes that these concepts “appear to belong to some abstract realm in a sanctuary of science far removed from the interactions of the everyday world”. In quantitative research, the concepts of

reliability and validity are used to judge and evaluate statistical findings. Because of the nature of qualitative studies, many qualitative researchers, such as Lincoln and Guba (1985) and Denzin and Lincoln (2000), have reclaimed ordinary language terms to discuss the credibility, trustworthiness, rigor and truth-value of their findings. Byrne (2001, p. 1) notes that in qualitative research, it is important to assess the findings for “plausibility and believability”.

I considered these perspectives and, despite this study being primarily qualitative in nature, chose to refer to the following “traditional” concepts in order to review the data collection and analysis methods:

1. validity (am I measuring what I think I am measuring? Are the data accurate and reflecting *truth and reality*? Are the constructions *plausible and believable* to those who constructed them? Is the researcher credible, that is, suitably qualified and experienced to conduct the research?).
2. reliability (are my instruments *consistent* in their measurement?).
3. generalisability (can the outcomes from this study be *replicated in or transferred to* other cases and contexts?). As mentioned previously, ensuring generalisability is a challenge when working with a case study within a qualitative research framework.

My roles included researcher and teacher in this study and I therefore participated in the learning and teaching activities. Ethical dilemmas could have arisen from my dual role as researcher and active participant in the process. To maximise research objectivity, care was taken to ensure that my opinion did not influence outcomes. Validity of the research depended partly on how well results reflected the participants’ meanings and understanding. In order to manage the issue of subjectivity, use was made of:

1. Reflective journals, maintained by myself, and by the participants (see Appendix D1).
2. Peer de-briefers, who helped me identify how my own worldview and experiences might be influencing the research. A peer debriefer’s role is to provide a fresh perspective for analysis and critique. This person should be a colleague outside the immediate context of the study but should have some knowledge of the method, content, or theory to challenge the researcher's assumptions regarding the findings

(Byrne, 2001). Two colleagues, one familiar with the study, and another removed from the study, provided this support.

3. Participant (member) checks of transcripts, analyses, and interpretations. This was built into the study, either with follow-up interviews or questions by email communication.

Validity and reliability of the identified themes, trends and understandings were established through the triangulation of the multiple data sources. Considerations related to both the usefulness and accuracy of the research findings followed by further testing of findings would involve additional cycles of collaborative validation and theory testing, modification and refinement. This would go beyond the time frame of the current study but would strengthen validity and reliability claims. I was guided by the criterion of “redundancy” in that, at a certain point in my data analysis, I found that I was gaining no new information relevant to my research objectives, even with additional observations, interviews, or documentary examinations. Therefore, I analysed the data until redundancy was achieved.

As mentioned in Chapter 1, a possible limitation of the study could be its lack of generalisability, or external validity. This study was sourced from one institution outside the Australian educational system - a Singapore polytechnic. Therefore, the application of the findings was restricted to this group. Beyond that, reader generalisability (Merriam, 1998) means that each reader will relate the findings to their own existing “picture” of online learning and teaching in their own educational institution or other context. The fact that the study was located in both an Australian and an Asian setting may be considered both a strength and a limitation.

3.3.3 Data Source - Participants

The participants in this study were tertiary teachers from a polytechnic in Singapore. Data were gathered from three groups (see Table 3.2):

1. From the 26 teachers from the polytechnic who participated in Design 2, a sample of 16 participants was purposefully selected. According to Maxwell (1996, p. 70), “this is a strategy in which particular settings, persons or events are selected deliberately in order to provide information that cannot be obtained well from other

choices”. To provide a representative cross-section from the polytechnic, the participants were drawn from a range of discipline areas, age groups, cultures, and an attempt was made to ensure gender balance. Personal experience alerted me to the possibility that differing views could emerge from such differences. Participants were drawn from the areas of Business and Accountancy, Mathematics and Computing, multiple Engineering strands, Film and Media Studies, Marine and Offshore Technologies, and Information Communication Technologies (see Appendix C5), representing the countries of Singapore, Malaysia, China, USA, and Australia.

2. Eight Co-Facilitators (Co-Fors) participated as students in Design 1 and then assumed a peer learning partnership role (Eisen, 2001) with colleagues in Design 2. Five of these Co-Facilitators volunteered to participate in the study.
3. Two USQ teachers (including myself) and one instructional designer were selected.

Table 3.2

Details of Participants in Research Study

Participants from Design 2	Co-facilitators from Design 2	USQ Participants
16 participants purposefully selected from the total group of 26	5 Co-facilitators purposefully selected from the total group of 8	2 USQ teachers (course facilitators) and 1 instructional designer

3.3.4 Data Sources and Data Collection

As it is important to maintain detailed documentation (Miles & Huberman, 1994), a number of documents were used to keep records of activities and data collected. Examples of the documentation are available as appendices in this report:

1. *Contact summary document* (Appendix C1). This document recorded information associated with each participant in the study. The document also recorded memoranda and information of importance which was noted as events arose.
2. *Contact summary (Post-Study Activity, 2004) document* (Appendix C2). This document recorded information associated with participants from post-study activity

in 2004. The document also recorded memoranda and information of importance which was noted as events arose.

3. *Document summary form* (Appendix C3). This form was used to maintain a concise record of all documents of relevance to the study e.g., transcripts of discussion forums, synchronous chat sessions, email correspondence, etc. This form also recorded notes about each document.

Data collected from the evaluation of Design 1, and the monitoring and evaluation of Design 2, were derived from a number of electronic text sources:

1. focus group report.
2. reflective journals.
3. online discussion forums, particularly critical incidents.
4. synchronous chat archives.
5. responses to standard web-based evaluation questionnaire.
6. unsolicited feedback.
7. semi-structured, online interviews

The online data collection facilities used in this study presented a new way of looking at an old challenge. Experience in this study suggests that using the Internet is a very promising method of conducting research and gathering data. The participants were not available to be interviewed in a face-to-face situation (because of their location overseas), so the interviews were conducted using the synchronous chat facility within the *Blackboard* Learning Management System. Thus the online environment was used to conduct interviews about online learning experiences. Participants had used this facility to take part in the course and were familiar with the environment and did not feel threatened by it. For researching the field of education, this method of data collection enables the researcher to gain easy access to a cross-cultural, remote (as in location) and international sample, as well as save the expense and delay of regular postage and other distribution methods.

1. Focus Group Reports

Focus groups were conducted at the polytechnic at the end of Design 1 by polytechnic personnel. Data collected from these groups contributed to the design of Design 2. Powell,

Single, and Lloyd (1996, p. 499) define a focus group as “a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research”. The main purpose of conducting focus groups in this study was to offer an open forum to draw upon participants’ attitudes, feelings, beliefs, experiences, and reactions to the course design and learning outcomes. Within focus groups, consistent, shared views of participants can emerge, as well as the identification of inconsistent, false, or extreme views.

The groups were organised by a polytechnic staff member who held a management and facilitatory role within the polytechnic and had worked with the design team from the inception of Design 1. It is recognised that because this person held a position of some authority within the polytechnic organisational structure, a possibility existed of bias occurring. Participants in the focus groups may not have felt inclined to reveal their true feelings about particular issues with this staff member present. However, participation in the focus groups was optional. A report from the focus groups was prepared by the polytechnic staff member and provided to the researcher (Appendix B6).

2. Reflective Journals

As “critical reflection” lay at the heart of this study, I, as the researcher and the teacher, maintained a reflective journal throughout the implementation of Design 2 (Appendix D1). The journal was viewed as a container of experience, expressed by Williamson (1997, as cited in Kerka, 2002, ¶ 1) as holding “experiences as a puzzle frame holds its pieces . . . [in that the] . . . writer begins to recognize the pieces that fit together and, like the detective, sees the picture evolve”. Participants were asked to maintain a journal throughout their learning journey which would illustrate their learning experiences. They were asked to record notes, descriptors, and metaphors (e.g., “light at the end of the tunnel”, “light bulb going on”, “seeing the world in a different light”, or “drowning in information”). They were also asked to provide examples of occurrences that prompted the noting of these thoughts. Given the personal nature of journals, acknowledging that writing for an audience can inhibit reflection, and the critical, evaluative approach participants were expected to adopt (which may have been challenging for some), these were treated as private documents, unless the participants chose to share them with me.

3. Critical Incident Online Discussion Forums

Throughout the implementation of Design 2, several critical incident activities (Brookfield, 1994; Tripp, 1993) were developed in the online discussion forums which enabled me (as researcher/observer participant/teacher) to focus on issues that arose during the online learning and teaching process. As discussed in Chapter 2, a critical incident is an interpretation of the significance of an event. The critical incident activities encouraged the participants to reflect on, and in, action. For example, the incidents focused on the topics of interaction, participation, and the use of the virtual chat facility. Identifying these incidents as “critical” arose out of dialogue occurring between learners, and the facilitators, in the discussion areas (asynchronous or synchronous), or through private email sent to the facilitator. Learners were then challenged to explore their “assumptive worlds” (Brookfield, 1994, p. 193) by discussing events in their own lives within a safe, trusting environment. To ensure this supportive environment was established, first the facilitator modelled the process of critical reflection by critically reviewing my own assumptions and meaning perspectives on the various topics. Data from these incidents were recorded, in text, in the discussion forums. These incidents were analysed for common responses, and to identify themes and categories. These themes and categories helped formulate questions to be explored further in the interviews.

4. Synchronous Chat Archives

Several synchronous (in real time), text-based, electronic chat sessions were conducted with the participants during Design 2. This medium provided another method of data collection where the researcher assumed the role of observer and participant, posing a series of focus questions. The archived transcripts were analysed to determine categories and themes that guided the development of the interviews.

5. Responses to Standard Web-based Evaluation Questionnaire

Participants were strongly encouraged to submit responses to the standard online questionnaire at the end of the offer of Design 2 (Appendix B10). This instrument required responses on a 5-point Likert scale, and to several open-ended questions.

6. Unsolicited Feedback

Unsolicited feedback (emailed comments) from participants was collected for analysis (Appendix B11). Preliminary investigation indicated that the comments might contribute to the emergent categories and themes.

7. Semi-structured Online Interviews

The interviews were primary methods of data collection. A bank of interview questions was generated guided by the researcher's understanding of three stages in transformative learning. The aim was to identify signs of perspective and action change. These stages were evident in the work of Greene (1975), and Mezirow (1991). The three stages were:

1. Dislocation (Greene)/Dilemma (Mezirow).
2. Deconstruction (Greene)/Questions and issues to be addressed (Mezirow).
3. Reconstruction, Regeneration, and Rediscovery (Greene)/Identification of sources to address the questions and issues (Mezirow).

Table 3.3 illustrates how I considered the work of these two authors and used their concepts to identify the stages. This enabled me to impose some structure on the development of the interview questions, aligning them with the apparent stages of perspective and action change, despite the artificial nature of the divisions between each developmental stage.

Table 3.3

Framework for Interview Questions Based on the Work of Greene (1975), and Mezirow (1991)

Stage	Greene (1975)	Mezirow (1991)
1	<p>Dislocation (experience dislocation, shock, inner discomfort)</p> <p>Unfamiliar, questionable, obscure experiences; failure of “recipes” for learning; “exceptional” moments</p>	<p>Experience a disorientating dilemma</p> <p>Undergo self-examination (sometimes feelings of guilt or shame)</p>
2	<p>Deconstruction (deconstruct)</p> <p>A new order for understanding resulting from fearful or enigmatic engagements</p> <p>Making sense and earnest efforts to raise consciousness and awareness</p> <p>Questioning, imagining, evolving</p>	<p>Questions/issues to be addressed:</p> <p>Conduct a critical assessment of internalised role assumptions and feelings of a sense of alienation from traditional social expectations</p> <p>Recognise that one’s discontent and process of transformation are shared and that others have negotiated a similar change</p> <p>Explore options of new ways of acting</p>
3	<p>Reconstruction (reconstruct), regeneration (regenerate) and rediscovery (rediscover)</p> <p>A focus for new perspectives, and insights</p> <p>Process of reconstructing meaning and re-ordering perceptions</p> <p>Bringing of harmony to one’s life-world</p> <p>Moving beyond where one has been</p> <p>Relishing a sense of incompleteness – developing a conscious sense of possibility of what might be</p>	<p>Identification of sources to address the questions/issues:</p> <p>Plan a course of action</p> <p>Acquire knowledge and skills for implementing one's plans</p> <p>Make provisional efforts to try new roles and to assess feedback</p> <p>Build competence and self-confidence in new roles and relationships</p> <p>Reintegrate into society on the basis of conditions dictated by the new perspective.</p>

The interview questions consisted of both *generic* questions (asked of all the participants) and *specific* questions (asked of some participants). The specific questions were generated after initial data from all participants were collected and examined. The interview schedule contained a series of pre-planned and sequenced questions which were followed by less structured and open-ended follow-up questions (probes) to collect deeper understandings and insights. Examples of the questions are in Table 3.4. Each question was coded to relate to the stages of the transformative learning process (identified in Table 3.3), and was assigned an identifier:

S1: Stage 1 (S1.1, S1.2, and so on);

S2: Stage 2 (S2.1, S2.2, and so on); and

S3: Stage 3 (S3.1, S3.2, etc.).

A complete record of the interview questions is provided in Appendix A4.

Table 3.4

Examples of Interview Questions Aligned to the Stages of Transformative Learning

Stages	Examples of Interview Questions
1	S1.1. You mentioned that you were “sceptical” about the value of synchronous chat. Why were you sceptical? What expectations did you have of virtual chat before participating in the course?
	S1.2. Can you identify an event or incident during the USQ course that led you to change your opinion about anything to do with online learning and teaching? If so, briefly describe. How did it make you feel?
	S1.7. You mentioned your resistance to e-learning and then later you said that you could see “some bright light” – can you please elaborate? How did this make you feel?
2	S2.2. You mention that you are “beginning to see a new light” in the use of virtual chat. You say that we need to “pin down” how and when to use it meaningfully. What further thoughts have you had re knowing “how and when to use” chat?
	S2.3. Are there any barriers to implementing your philosophy of teaching in an online environment? If so, what are they and what are the effects of those barriers.
	S2.5. Do you think e-learning is different to face-to-face learning and teaching? If so, in what ways?

3	<p>S3.1. Do you think the USQ course has assisted your preparation for the online environment? If so, how? If not, why not?</p> <p>S3.3. Has your perception of e-learning changed at all since your involvement in the USQ course? If so, how? If not, please elaborate.</p> <p>S3.5. What additional skills and knowledge do you feel you need in order to use the online environment more effectively? How might you gain these?</p>
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The advantage of semi-structured interviews is that there is both structure (ordered questions) and no structure (open-ended probes), thus allowing the predetermination of data that would be gathered as well as being able to follow the unexpected as it arose.

As mentioned earlier, the use of a web-based interface was considered an appropriate method to collect data. Because the Internet is available to anyone with appropriate access, data could be collected 24 hours a day which recognised the individual contexts (including time zones) of the participants. The researcher could provide links to additional materials online such as information about the purpose of the study. Study participants also had access to my online contact information which provided a convenient and instant post-participation method of communication. Security was monitored, as entry to the instrument was password protected and only accessible to those individuals who had been involved in the course. As noted by Anderson and Kanuka (2003, p. 89), “assuring confidentiality and explaining the techniques to protect the privacy of participants are important components of obtaining informed consent and building trust”.

The interviews were conducted with a sample of seven participants enrolled in Design 2 and with four Co-Facilitators. The interviews were conducted using the synchronous chat facility within the *Blackboard* Learning Management System (LMS). Participants had used this facility during the implementation of the course and so were familiar with it. The questions used in the interviews were validated prior to use through a process of iterative review conducted in collaboration with two experienced educators at USQ. The interview questions aimed to explore the participants’ experiences of the course designed to foster transformative learning and examine whether transformative learning had occurred as a result of these experiences. Part of the interview explored retrospective attitudes, that is, participants were asked to reflect on their assumptions, values, and beliefs about practice prior to the commencement of the course.

The outcomes of the interviews were available through the digital archives in the *Blackboard* LMS (see Appendix D3 for a sample of an interview transcript). To assure confidentiality, this LMS was password protected and enabled one-to-one interviews to be conducted synchronously (at the same time) in a “closed” electronic environment through the use of Group Pages and the virtual classroom facility. All of these “conversations” were conducted in text which provided an instant and accurate transcript of the interactions, thus removing the traditional intermediate step of transcribing in preparation for analysis. Group Pages enabled me, as the researcher, to assign the interviewee, and interviewer (me), to a group with all the facilities available to us (synchronous chat, email, discussion board, and file transfer). The interview transcripts were viewed by participants for validation and approval. Participants were invited to edit the transcripts prior to analysis. The exchanges between the participant and interviewer (me) were equally secure as they occurred within the Group Page facility. The anonymity of interview participants was protected. All identifying information was stripped from the transcribed interview after validation, quotations used for publication were framed in such a way that the individual’s identity was masked, and coded identifiers were assigned where necessary. The transcripts of the interviews were analysed for common and emergent themes using a constant comparison method (Cresswell, 2003; Glaser & Strauss, 1967), and sorted into major themes and recurring patterns of meaning.

The purpose of the interviews was “to understand themes of the lived daily world from the subject’s perspective” (Kvale, 1996, p. 27) and to reconstruct personal learning experiences. Although a list of topics and question categories were used to structure the interview session, it was anticipated that the results from each interview would be unique. The direction each interview would take would be influenced by the nature of the individual’s current knowledge of learning and teaching, particularly online. The open-ended, semi-structured nature of the questioning allowed me “to respond to the situation at hand, to the emerging worldview of the respondent(s), and to new ideas on the topic” (Merriam, 1998, p. 74). Questions were avoided that made participants uncomfortable for any reason, or reflected negatively on them, or required them to consult records or other information sources (Kvale, 1996).

The emergent design nature of qualitative research and, in this case, action research, dictated that the interview questions could change as the interview evolved. During the orientation workshops, and prior to the commencement of the course, participants had been asked to record details of their own teaching philosophies. Questions asked in the interview aimed at finding out what conceptions of learning and teaching the participants held, and initially they were asked to describe their own learning journey in the course I conducted (Design 2). They were then invited to offer information about any changes that may have occurred in their own teaching philosophies, their knowledge of learning and teaching, their perceptions about what types of learning they aimed at developing in students, how they went about developing this type of learning, how they assessed student learning, and how they evaluated their courses.

Interviews, like all social interactions, are co-constructed, meaning that both the interviewee and the interviewer shape the context of the dialogue and what is (and is not) said. When drawing inferences from this data, I needed to be mindful of that. Interview transcripts were analysed to look for recurrence (common responses) and therefore to identify themes and categories. Changes in philosophies and behaviours were also recorded. From the emerging data, a comparison was developed of the relationship between participants' learning experiences, their learning and teaching philosophies and conceptions and how they have worked, and will work, with their own students. These interviews were also intended to be a reflective activity that would reveal the participants' insights and aim to lift their awareness of changes in their teaching philosophy and their practice. Participant (member) checks were built into the study with some follow-up email contact and brief, informal interviews.

3.3.5 Ethical Issues

Ethical clearance was gained from USQ and the Singapore polytechnic prior to the commencement of the study. Informed consent for involvement in the study was obtained from the participants and from the senior manager (Director of the Centre) at the polytechnic. Informed consent consisted of a Consent of Participant letter (Appendix A1), emailed to the participants for response. As this study was conducted with a number of overseas participants, it was not feasible to get a signature of consent, so the participants

were asked to place their response at the bottom of the returned emailed letter. A similar letter was sent to the teachers (facilitators) who had participated in both Designs 1 and 2 (see Appendix A2). A follow-up email was used, where required to encourage maximum participation in the study (Appendix A3). The USQ University Ethics Committee approved this method for seeking consent. Voluntary participation was assured because participants had to respond to the emailed consent letter. Participants were informed they could leave the study at any time, without penalty or disadvantage. Examples of questions asked of the participant and Co-Facilitator (Co-For) groups in the interviews are included in this report (Appendix A4). These questions did not breach areas of personal sensitivity.

To achieve confidentiality and anonymity, all participant responses were coded and those codes were assigned for the identification of quotes in this report (e.g., P01). The transcripts of interviews were analysed for common and emergent themes and sorted into major categories. The transcripts, once analysed, were placed in a locked cupboard and will be stored for the required period of time (7 years). The electronic version of those transcripts were then deleted (i.e., destroyed) as hard copies have been retained in the locked cupboard. The same process was used for the self-reflective journal data, the transcripts from the various discussion forums, the completed web-based questionnaires and the collected, unsolicited feedback data.

3.4 Data Analysis Framework

In order to organise and analyse data from Design 2, the framework in Table 3.3 based on the work of Greene (1975) and Mezirow (1991) was considered. On examination, it was determined that there were a number of parallel themes evident in the later works of Larrivee (2000), Jacobsen (2002), and King (2003b) which more closely reflected the context of this study in terms of its technological focus. These works were used to formulate an elaborated data analysis framework (Table 3.5). In addition, the extensive work of Cranton (1996, 1997, 2003) was consulted. Throughout the process of framework development, and in line with the research conducted by King (2003b), it was decided that the stages would be used as a guide to understanding the participants' experiences and would not be used as a "rigid script" (King, 2003b, p.35).

Table 3.5
Scholarly Work which Contributed to the Elaborated Data Analysis Framework

Stages	Greene (1975; 1997)	Mezirow (1991)	Larribee (2000)	Jacobsen (2002)	King (2003b)
1	Dislocation Inner discomfort	Disorienting dilemma Self-examination	Struggle Inner conflict Surrender Uncertainty Chaos	Knowledge Persuasion	Fear Uncertainty
2	Deconstruction Earnest efforts to raise consciousness and awareness Questioning Imagining	Critical self-assessment Recognition discontent and process of transformation are shared Explore new ways of acting	Examination Questioning Challenging Desire for change	Decision	Testing Exploring Affirming
3	Reconstruction Regeneration Rediscovery New perspectives and insights Conscious sense of possibility of what might be Reconstructing meaning Re-ordering perceptions Moving beyond where one has been	Build competence and self-confidence in new roles Plan a course of action Acquire knowledge and skills Make provisional efforts to try new roles and to assess feedback Reintegrate into society	<i>Transformation</i> Perceptual Shift Reconciling Personal discovery New practice	Implementation Confirmation	Connecting New Perspective

The original category descriptions provided by these scholars were further combined, to provide a synthesised representation of their work. This process enabled a context-specific framework to be generated and presented as, for ease of reference, the Data Analysis Framework (Table 4.4). The Data Analysis Framework was used to guide the analysis of the data to determine whether (and to what degree) participants had experienced transformative learning and perspective and action change. Evidence was also sought of events that may have “triggered” this change. The application of the Framework is discussed in Chapter 4. The analysis of the data collected from Design 2 passed through five interrelated stages, that of data screening, data reduction, matrix display and examination, conclusion drawing, and reporting the findings (adapted from Sowden & Keeves, 1988). These stages are elaborated on in Chapter 4.

3.5 Concluding Remarks

This chapter has defined the methodological context in which the current study has been conducted. It provided a rationale for the methods chosen and described how these have been devised to suit the emerging area of electronic observation and research. The research purpose, goals and questions were used as starting points to design an appropriate method, which in turn indicated the strategies most appropriate for data collection and generation. The chapter has also addressed the participants, the methods of data collection, the types of data that were collected and the role of the researcher. The formation of a context-specific, data analysis framework (Table 4.4, Data Analysis Framework) was introduced and is discussed in Chapter 4.

Issues in relation to validity, reliability, and generalisability have been raised and addressed in the context of this research. The next chapter addresses the processes of data analysis, and the findings that emerged from the analysis of the data.

CHAPTER 4

Analysis and Findings

A moment's insight is sometimes worth a life's experience. Oliver Wendell Holmes

4.1 Introduction

In this chapter, the focus is on the analysis of the data and the findings which emerge from that data. Data collection proceeded throughout the phases of the study, as described in Chapter 3. To reiterate, the procedure of conducting the research in a number of phases was tied closely to the six research objectives. These phases, illustrated in Figure 3.2, were:

Phase 1: Theory application (formulation of Design 1).

Phase 2: Theory refinement and modification (formulation and implementation of Design 2).

Phase 3: Theory generation (evaluation of Design 2, and formulation of a framework for Design 3).

Research objectives (1), (2), and (3), were addressed in Phase 1; research objectives (4), and (5) were addressed in Phase 2; and the results of Phase 3 addressed research objective (6). The research objectives are outlined in Section 1.3.3, and details of the participants and data sources are in Chapter 3, sections 3.3.3 and 3.3.4 respectively.

4.1.1 Purpose of Data Analysis

Data collection and analysis occurred iteratively throughout the phases of this study. As successive pieces of data were gathered, the emerging insights and identification of trends shaped and refined the focus of the subsequent course designs. Many authors (e.g., Bogdan & Biklen, 2003) support an ongoing process of analysis which is in accordance with the action research method used in this study (see Figure 3.1).

In Phases 1 and 2 of the study, the main purpose of the analysis of data collected after the completion of Design 1, was to inform the development of Design 2. In Phase 3, the

purpose of the data analysis, which followed the implementation of Design 2, was to contribute to the blueprint for Design 3, and thus the framework for the design of professional development experiences for online educators. Analysis was conducted primarily to determine if transformative learning had taken place by examining how the learners had participated in the course, and the nature of outcomes. In order to understand the nature of the progressive analyses which occurred in this study, refer to the six research objectives outlined in Section 1.3.3 and the action research method illustrated in Figure 3.1.

4.1.2 Issues Encountered During Data Analysis

It is essential to recognise and discuss the issues that were encountered during the data analysis phase, and how they might impact on the analysis and findings. My multi-faceted role of collaborative practitioner researcher within the study involved designing the research guidelines that were used throughout the project. As the “project manager” and principal teacher, I was in a position to influence the experiences of the participants (and therefore in a position of power). I had a clear agenda for the project to support and facilitate transformative learning with the aim for participants to experience the development of a critical perspective, or possible change in perspective of profession and practice. As previously mentioned in Chapter 3, ethical dilemmas could have arisen during the analysis stage from my dual role as researcher and active participant in the process. In order to manage the issue of subjectivity, use was made of peer de-briefers, and participant (member) checks of analyses, and interpretations. Member checks were built into the study, either with follow-up interviews with the participants or questions by email communication. In addition, the Co-Facilitators played an important role in the member check process by participating in synchronous chat sessions with the researcher during the implementation of Design 2, in order to discuss the validity of proposed activities for the course.

During the conduct of Design 2 (around week 5 of the 10-week course), an event occurred that could not have been planned for (a contaminating variable). Many people worldwide contracted the potentially fatal respiratory illness known as Severe Acute Respiratory Syndrome (SARS). This caused education officials in Asia to close educational institutions for more than 2 million students. This forced students off-campus, and all of the

teachers at the polytechnic in Singapore which was the focus of this study. Some teachers were quite prepared to move immediately into a “virtual campus” environment and participate in the USQ course, online. These teachers continued to teach some of their students using technologies such as Web cameras, audio-video phones, web-conferencing software, instant-messaging tools, and multimedia applications (Borja, 2003). One participant in the program observed:

. . . the SARS crisis – [was] why it was difficult for me to concentrate more on [the course]. Maybe the course could have lasted longer? (P05)

Interestingly, the occurrence of this unplanned event also contributed to some change in perspective:

I realized that Virtual Chat is very useful when it’s not possible to have F2F classes, like when the Poly was closed for 3 days last month. (P15)

Although the polytechnic was only closed for a few days, the follow-up health precautions (e.g., having to check the temperatures of every student prior to entering an examination room) impacted upon the learning environment for several weeks, causing many of the participants in the course to fall behind in their course activities. To address this issue, the planned time frame for the course of 10 weeks was extended to 12 weeks by placing the course “on hold” for a 2-week duration. The researcher recognised the possibility of this unplanned disruption as being a potential distraction and interference with the validity and reliability of data analyses.

4.2 Phases 1 and 2 – Findings and Recommendations

4.2.1 Data Sources and Participants

Design 1 was based on:

1. The requirements of the client (the polytechnic).
2. The technological infrastructure at USQ.
3. The experience and reflection on practice of several online teachers at USQ.

4. Reviews of current, relevant literature.

Most of the negotiations with the client (the Singapore polytechnic) were conducted prior to the researcher's involvement in the project. Over a period of several months, discussions occurred between the client, the senior managers from the researcher's Faculty, and the company which provided the technological infrastructure and support to deliver the course to the polytechnic (NextEd Ltd). The researcher was brought into the project as a member of the four-member design and teaching team, once these initial negotiations had been completed, and for that reason is unable to report on the initial discussions. Details of the design and development processes for Design 1 are historical and beyond the scope of this study. However, a report (Appendix B1) exemplifies some of the interactions which occurred during the design and development phase. After the implementation of Design 1, an evaluation of the course was conducted.

Phase 2 of the study included this evaluation of Design 1. The recommendations which emerged from the evaluation informed the creation of Design 2. The evaluation data of Design 1 were presented in six reports:

1. A report (*Orientation Workshop Survey – Design 1*) prepared by polytechnic personnel at the conclusion of the face-to-face workshop for *PD01 Design and Facilitation of e-Learning* which reflected participants' opinions of the Workshop (Appendix B2).
2. A report (*Orientation Workshop Review – Design 1*) prepared by the researcher after conducting the face-to-face workshop for *PD01 Design and Facilitation of e-Learning* (Appendix B3).
3. A report (*Review Teleconference of Evaluation Outcomes of PD01 Design and Facilitation of e-Learning - Design 1*) generated after a teleconference was conducted between polytechnic management personnel and USQ Faculty of Education managers and teachers (Appendix B4).
4. A report (*Final Session of PD01 Design and Facilitation of e-Learning – Design 1*) prepared by one of the USQ teachers (not the researcher) who attended the culminating face-to-face session in Singapore (Appendix B5).
5. An electronically generated report (*Online Evaluation Feedback – Design 1*) of online evaluation feedback from course participants (this is automatically generated

within the *Blackboard LMS*) (Appendix B6).

6. A report (*Focus Group Evaluation Outcomes of PD01 Design and Facilitation of e-Learning – Design 1*) generated from focus groups conducted at the polytechnic by local personnel. This report provided data on perceived needs and requirements for course modification (Appendix B7).

Another report (*Recommendations for Future Developments of PD01 Design and Facilitation of e-Learning – Design 1*) was prepared after one member of the polytechnic management team travelled to USQ from Singapore and participated in two days of meetings with USQ Faculty managers and teachers (Appendix B8). Recommendations which informed the development of Design 2 resulted from an analysis of the data in the reports, along with further references to the literature and reflection on practice. These recommendations were formulated by the researcher in consultation with members of the Design 1 teaching team, polytechnic management personnel, and staff from NextEd Ltd. After scanning the recommendations data, the teaching team (including the researcher) noted emerging themes and grouped the data under three headings – pedagogical recommendations (i.e., learning and teaching requirements), administrative recommendations (e.g., course duration time, and hours allocated each week) and technological recommendations (e.g., technology infrastructure and training requirements), and presented them to the member of the polytechnic management team for ratification.

4.2.2 Pedagogical Recommendations

These recommendations are related to learning and teaching issues:

1. The concept of “process as content” where the learners’ experience the content (learning and teaching in an online context) by becoming part of that content was essential to the success of the design. Strong support for this was evident in the evaluation report prepared by the USQ teacher (Appendix B5) who attended a culminating on-site, face-to-face session where participants presented their completed course materials:

The most valuable part of the course [was] the fact that they were put in a position where they ‘experienced’ what it was like to be an online learner . . . they seemed to learn much from this.

Support was also evident in the report of focus group outcomes (Appendix B7) conducted at the polytechnic at the completion of Design 1:

The online experience is very useful. It has helped staff to know what they ought to look out for when implementing e-learning themselves. Real application to current project implementations was a strength.

2. The course should have a professional development focus. It should have a problem-based, project-based approach, aiming for the practical application of theoretical concepts. This was articulated in the focus group report (Appendix B7):

There is a need for more concrete, discipline-specific examples to ground understanding of instructional principles/concepts/ideas.

3. The course should use “champions” or mentors selected from participants in Design 1 to support the new cohort “on the ground” in providing relevant, workplace examples, and a strategy for pacing the program (see the focus group report, Appendix B7):

[The participants] suggested that some polytechnic staff might be used as course tutors. [This] would have a huge impact on some who have limited teaching experience and are less familiar with basic ideas on learning and teaching.

4. A blended/hybrid approach should be used consisting of an initial series of face-to-face workshops of 3 days’ duration followed by a 10-week online facilitated course. It was proposed that the program would be concluded with a videoconference conducted between the Singapore and USQ sites. This was supported in the focus group report (Appendix B7) which indicated:

The ‘face to face’ orientation session was extremely useful and helped immensely in preparing the participants for the course. It must be retained in future courses. It enabled an important sense of group to occur.

5. The opinions of the format, conduct and outcomes of the face-to-face workshop were mixed (Appendix B2):

I was looking forward to a more concrete overview of the 15 week program e.g. a summary of each module to motivate, excite and prepare the group for the online training.

I think the facilitator has achieved her objectives in setting expectations right and making participants think more positively about learning and teaching online.

Half-day F2F and half-day online interaction format for orientation would have been useful.

Despite these comments, general satisfaction with the conduct of the face-to-face workshops was positive, as is evident in Table 4.1.

Table 4.1
Ratings on Satisfaction with Face-to-face Workshops (N = 14)

Response Categories	Number of Responses	% of Total
Strongly Agree	2	14.29
Agree	9	64.29
Undecided	2	14.28
Disagree	1	7.14
Strongly Disagree	0	0

6. The participants should be required to design for their own blended/hybrid context – that of predominantly face-to-face activity, with some flexible components. Again, support for this in the focus group report (Appendix B7) was evident:

We must address the need for staff to design courseware which integrates face-to-face and online modes rather than focus purely on online learning.

4.2.3 Administrative Recommendations

These recommendations from Design 1 are related to administrative matters:

1. The participants from the polytechnic should be allocated a defined number of study hours per week. Managers of each discipline section (School) at the polytechnic should be strongly encouraged to make this allocation and monitor its implementation. The number of hours was determined by the polytechnic, and confirmed when a member of the polytechnic Management Team travelled to USQ from Singapore (Appendix B8):

The polytechnic participants have been allocated 4 hrs/wk study time.

2. The duration of the course should be no longer than 10 weeks (Appendix B8), excluding the initial face-to-face workshops, with a strict adherence to timelines. The evaluation report generated from the focus group activity (Appendix B7) indicated:

[The participants] were appreciative of the ‘flexibility’ offered but realise this has its downside as things can ‘drift a little’ if there are few deadlines.

However, the preferred start time was debatable with most participants acknowledging that there was no ideal time. Some expressed the need to have the course during term time rather than crossing into vacation periods. Others suggested that vacation time, which would be uninterrupted by teaching time, was a better alternative. Eventually, it was decided that the

course would commence at the same time as semester 1 2003 (3 March) at USQ and conclude on 9 May at the latest, to enable USQ teachers to align with the teaching of other USQ courses.

3. A preferred number of participants and teachers was articulated by the polytechnic (Appendix B8):

Similar number in cohort as first offer – 25-30 participants [and] 4 hours “contact” time provided by two USQ teaching staff per week.

4.2.4 Technical Recommendations

These recommendations relate to issues associated with technical infrastructure and requirements:

1. The polytechnic requested that a later version of the Learning Management System (*Blackboard* version 5) be used to deliver the course materials. This version was not in use at USQ but was the version used by the polytechnic. Some trialling and debugging by NextEd technical staff had to occur prior to the offer of Design 2. This caused some minor difficulties in the testing phase, but they were soon overcome by the technical staff from both institutions.
2. Due to the size of electronic files and lengthy download times, the polytechnic requested that the amount of online reading materials be limited to key readings (Appendix B8):

Explore slow downloads – are .pdf files too large? Consider making all .pdfs as optically read rather than scanned to reduce file sizes OR provide readings [to polytechnic] to make hard copies for participants.

The pedagogical, administrative, and technical recommendations were considered by the design team, integrated into the design, and implemented in Design 2 for the orientation workshop, course materials, and learning and teaching strategies.

4.3 Phase 3 – Procedures Used to Analyse Data from Design 2

Phase 3 of the research design involved the evaluation of Design 2 which addressed research objectives (4), “Using an iterative, cyclical process, to develop, implement, evaluate, and modify a professional development course which embodies the principles and practices identified in objectives 1-3”, and (5), “to determine the factors which contribute to successful professional development for educators engaged in learning and teaching online”. The final aim of Phase 3 was to address research objective (6), “to formulate a framework for the design of transformative professional development for online educators, based on the developmental phases of this study”.

The main data analysis technique used in Phase 3 of the study was the analysis of content created through Internet-based activity. In content analysis, indicators are defined and searched for in the content being investigated. These indicators are then classified, interpreted as descriptive data for the researcher to create a deeper understanding of the content, and are sometimes counted. However, this conceptual simplicity often hides practical complexities related to the subjective interpretations necessary to qualify and quantify the content created in Internet-based activity (Anderson & Kanuka, 2003).

The key to content analysis is clear identification of the object of the investigation. The process of demarcating and labelling a variable in content analysis is referred to as “coding”. The coding of a qualitative research study is important, as it operates as a labelling, retrieval and organising device. In this particular study, I was not interested in investigating surface questions which are easily measured such as “How often does a participant post in the discussion forum?” What I was searching for were the latent variables, referred to by Colford (1996, p. 40) as the hidden “interior being”. Measuring latent content is inherently subjective and interpretative (Rourke, Anderson, Garrison, & Archer, 2000). Latent variables of interest included evidence of some change in action or behaviour e.g., “I have actually cancelled a [face-to-face] class . . . and conducted the lesson via chat sessions” (P03); an indication of creative or critical thinking e.g., “I think discussions should be part of assessment . . . if I strongly believe in the value of discussion” (P04); or evidence of some perspective transformation e.g., “I have learnt to be more encouraging and give positive strokes” (P01).

Content analysis procedures used for this study constituted four interrelated steps (adapted from Sowden & Keeves, 1988):

1. Data screening (drawing the data together).
2. Data reduction and creating the initial key words for coding.
3. Displaying data in a matrix.
4. Interpretation of the matrix.

In keeping with the action research approach, these steps were not sequential but formed part of an iterative method that occurred, and re-occurred, throughout the process of analysis. Mutual relationships and internal structures of categories are more clearly displayed through the process of systematic sifting and comparison (Hammersley & Atkinson, 1995). The four steps of data analysis are addressed in terms of the tasks associated with each step. Reporting of the findings will be included as a separate, yet interrelated process.

4.3.1 Data Screening - Drawing the Data Together

The first cut of the data occurred immediately after leaving the field (and completing Design 2). The aim of the study was to address research objective (6) which was to formulate a framework for the design of transformative professional development for online educators. Three stages in transformative learning, indicating signs of perspective and action change had been identified in the work of Greene (1975), and Mezirow (1991), illustrated in Table 3.3. The researcher again used this framework to initially screen the data to detect evidence of participants' experiencing these stages. To reiterate, the three stages were:

1. Dislocation (Greene)/Dilemma (Mezirow).
2. Deconstruction (Greene)/Questions and issues to be addressed (Mezirow).
3. Reconstruction, Regeneration, and Rediscovery (Greene)/Identification of sources to address the questions/issues (Mezirow).

First, the raw records were brought together from the reflective journals, discussion forums, synchronous chats, the standard web-based evaluation questionnaire, and unsolicited feedback. Each participant was assigned a coded identifier e.g., P01 (Participant 1), P02, through to P16; and COF01 (Co-Facilitator 1), COF02, through to COF05. These

identifiers, along with detailed profiles of each participant (including gender, age, cultural and discipline backgrounds, and personal interests), were recorded, recognising that such variables may influence the data collected, and any subsequent analyses. The profile data was collected from enrolment records, orientation workshop activities, and the participants' statements of introduction in the course. In addition, data in the various reports prepared by the facilitators were examined, and also assigned a coded identifier e.g., F01 and F02.

The process of data screening focused on beginning to make sense of the data, in order to tell the story of what had occurred. The main intention in Step 1 was to identify participants' comments which exemplified the indicators of the stages of transformative learning identified in the Greene and Mezirow work (Table 3.3). Instances were coded, in the raw data, with the following letters: S1: Stage 1, S2: Stage 2, and S3: Stage 3. These were termed baseline data and were designed to capture starting points. Determining if the comments were true examples of the stages was a subjective process for the researcher. Such screening could not be value-free, with the values of the researcher influencing and shaping the development of the research. To address this, a critical friend was consulted to check the researcher's decisions and to provide some validation and objectivity. This critical friend was not involved in the study, but had some knowledge of the study. The following criteria were used to check validity, based on the guidelines recommended by Sowden and Keeves (1988) and Riffe, Lacy, and Fico (1998):

1. Level of intercoder reliability of 80% was sought.
2. The same section of the data was considered to represent a point.
3. For each point, the same key word, selected from a list of key words was used by both coders.
4. Each coder's interpretation of the same point was deemed to be the same or closely similar.

The validity of the coding procedures was estimated using a formula illustrated in Figure 4.1. A 77% agreement in coding of the data was achieved when this first cut of the data was carried out.

$$\begin{aligned}
 \text{Validity} &= \frac{\text{Number of agreements}}{\text{Total number of agreements and disagreements}} \\
 &= 10/13 \\
 &= 77\%
 \end{aligned}$$

Figure 4.1. Checking the validity of coding procedures.

A similar procedure was used at intervals throughout the processes of coding and analysis of the data. It was evident from the initial screening of the data that participants' experiences represented all stages identified in the Greene and Mezirow work. This process of coding according to the stages of transformative learning, is illustrated in Tables 4.2a, 4.2b, and 4.2c. Tables 4.2 (a, b, and c) and 4.3 used data collected from the synchronous chat transcripts.

To identify evidence in the data that participants were experiencing Stage 1 of the transformative learning process, I searched for words that suggested a sense of dislocation, hesitation, uncertainty, or inner discomfort. I determined that words and phrases such as "sceptical", "resistant", and "do not think I need" were indicators of this stage of the process (Table 4.2a).

Table 4.2a

Indicators of Transformative Learning and Corresponding Evidence in the Data – Stage 1

Stage	Greene (1975)	Mezirow (1991)	Participant Comments
1 (S1)	<p>Dislocation (experience dislocation, shock, inner discomfort)</p> <p>Unfamiliar, questionable, obscure experiences; failure of “recipes” for learning; “exceptional” moments</p>	<p>Experience a disorientating dilemma</p> <p>Undergo self-examination (sometimes feelings of guilt or shame)</p>	<p>I started off a little sceptical about the value of online synchronous chats. (COF01)</p> <p>I do not think I need the synchronous chat feature with my students. For those who are “task-oriented” and appreciate a “lot of structure” the chat room is not for them. (P01)</p> <p>I was resistant to e-learning before I attended the 2-day course. My main concerns were motivation and information management. (P03)</p>

I concluded that Stage 2 of the transformative learning process would entail the use of language that suggested a questioning, testing outlook where participants indicated that they were beginning to consider other possibilities. I determined that phrases such as “beginning to see new light”, and words such as “exciting”, “interesting”, and “hope” would indicate that participants were experiencing this stage of the learning process (Table 4.2b).

Table 4.2b

Indicators of Transformative Learning and Corresponding Evidence in the Data – Stage 2

Stage	Greene (1975)	Mezirow (1991)	Participant Comments
2 (S2)	<p>Deconstruction (deconstruct)</p> <p>A new order for understanding resulting from fearful or enigmatic engagements</p> <p>Making sense and earnest efforts to raise consciousness and awareness</p> <p>Questioning, imagining, evolving</p>	<p>Questions/issues to be addressed:</p> <p>Conduct a critical assessment of internalised role assumptions and feelings of a sense of alienation from traditional social expectations</p> <p>Recognise that one's discontent and process of transformation are shared and that others have negotiated a similar change</p> <p>Explore options of new ways of acting</p>	<p>...after these few sessions, I'm beginning to see new light! There is something unique and exciting about this medium... if we can pin this down we can then begin to know how and when to use it meaningfully... (COF01)</p> <p>Your idea of chats with guest speakers sounds very interesting. I think it will appeal to students. (P01)</p> <p>After the course, I see some bright light and hope to do something for my module. (P03)</p>

An indication that participants had experienced Stage 3 of the transformative learning process was harder to find at this stage of the analysis. It became evident that further data collection would need to occur in order to explore this stage further. However, as this was the first cut of the data, some suggestion that participants had reached this stage was detected and some new perspectives were emerging e.g., “I think there is a time and place for online chats”, and “. . . it is important especially for the full online course” (Table 4.2c).

Table 4.2c

Indicators of Transformative Learning and Corresponding Evidence in the Data – Stage 3

Stage	Greene (1975)	Mezirow (1991)	Participant Comments
3 (S3)	<p>Reconstruction (reconstruct), regeneration (regenerate) and rediscovery (rediscover)</p> <p>A focus for new perspectives, and insights</p> <p>Process of reconstructing meaning and re-ordering perceptions</p> <p>Bringing of harmony to one's life-world</p> <p>Moving beyond where one has been</p> <p>Relishing a sense of incompleteness – developing a conscious sense of possibility of what might be</p>	<p>Identification of sources to address the questions/issues:</p> <p>Build competence and self-confidence in new roles</p> <p>Plan a course of action</p> <p>Acquire knowledge and skills for implementing one's plans</p> <p>Make provisional efforts to try new roles and to assess feedback</p> <p>Build competence and self-confidence in new roles and relationships</p> <p>Reintegrate into society on the basis of conditions dictated by the new perspective.</p>	<p>I enjoyed virtual chat very much, I felt that it bring [<i>sic</i>] us closer -- It is social presence, a sense of belonging to the team. It is important especially for the full on-line course. (P03)</p>

The initial screening was also used, in line with Ely, Anzul, Friedman, Garner, and McCormack Steinmetz's (1991, p. 140) suggestion, to "establish and check emergent hunches, trends, insights, and ideas". It became evident from the initial screening that there were several themes emerging that required clarification through follow-up action. The process of reaching this conclusion and identifying the "gaps" is illustrated in Table 4.3 by taking a participant comment from Table 4.2a and following it through the gap identification stage.

Table 4.3
Data Screening and Identifying the “Gaps”

Participant Comment	Literal Interpretation and Commentary	Meaning Making, Link to Table 3.3	Validation: Further Data Required	Means of Gathering Further Data
I do not think I need the synchronous chat feature with my students. For those who are “task-oriented” and appreciate a “lot of structure” the chat room is not for them.	Changed from definite feeling that chat would not be useful to consideration that use of guest speakers would be useful.	(S1) uncertainty discomfort questionable events	1. Why were you so sure, initially, that you did not need the synchronous feature with your students?	Follow-up Interview
Your idea of chats with guest speakers sounds very interesting . I think it will appeal to students. (P01)	Change in teacher/learner focus – from concern about teacher timetable to interest in the appeal chat would have to students	Then self-examination: examining own practice questioning own beliefs	2. You suggested that the use of “guest speakers” might be useful. Why would this be so?	

As discussed in Chapter 3 (section 3.3.4), a bank of interview questions was generated to address the gaps and the need for clarification of some participants’ statements. The questions were constructed according to the work of Greene and Mezirow (Table 3.3) and the three stages of the transformative learning process, and assigned the identifiers S1: Stage 1 (S1.1, S1.2, and so on); S2: Stage 2 (S2.1, S2.2, and so on); and S3: Stage 3 (S3.1, S3.2, etc.). A record of all the questions is available in Appendix A4. The interviews were conducted using the synchronous chat facility within the *Blackboard* Learning Management System. The transcripts were automatically generated while conducting the interviews which made the process of screening the responses relatively straightforward. The use of this technology removed the time consuming work associated with transcribing interview data. The coding process commenced while the data was still being collected and evolved

as particular issues raised in the initial interviews were then pursued in follow-up emails. Inconsistency checks between interview and transcript were unnecessary. However, member checks of the researcher's interpretation of participants' views and perspectives were carried out with some of the participants. The data from these interviews was added to the raw data already assembled, and put through the process of data screening described previously.

4.3.2 Data Reduction and Creating Key Words for Coding

The primary task in data reduction was that of coding which aimed to establish order by categorising the data that had been generated and collected (Moustakas, 1994; Seidman, 1998; Sowden & Keeves, 1988).

Step 2 involved three tasks:

1. Refinement of the initial work of Greene (1975) and Mezirow (1991) (Table 3.3) by consulting other authors in the field. This resulted in an elaborated data analysis framework (Table 3.5) as described in Section 3.4.
2. The development of the Data Analysis Framework (Table 4.4).
3. The selection of key words and phrases using the Framework. The description of this process follows (Tables 4.5a, 4.5b, and 4.5c).

As explained in Section 3.4, the framework called, for convenience, the Data Analysis Framework, was used to guide the analysis of the data to determine whether (and to what degree) the participants' comments showed evidence of any perspective and/or action change i.e., transformative learning. The category descriptions provided by scholars in the field (Table 3.5) were combined and condensed to be represented in the Data Analysis Framework (Table 4.4).

Table 4.4
Data Analysis Framework

Stages		Indicators
1	A dilemma, dislocation, or inner discomfort	Uncertainty; suspicion; fear; shock; unease; uncertainty; discomfort; ambiguity; disorder; questionable events; “exceptional” moments
	Then: self-examination	Examining own practice, considering own values and beliefs, feelings of guilt or shame
2	Exploration of issues and posing of questions	Struggle; shared discomfort; testing; critical self-assessment; deconstructing ideas, values and beliefs; exploring options for new ways of acting and doing; questioning, imagining, raising consciousness and awareness; challenging; recognising one’s feelings are shared and others have negotiated a similar change; indicating a desire for change
	Deconstruction	Reorientation - affirming; decision making; reconstituting meaning; sense making; exploring new ways of acting
	Then . . .	
3	Identification of sources to help answer the questions	Change or shift in perspective/action; new perspectives and insights; reconstructing meaning; planning a course of action; confirmation; generation; implementation; acquisition of new knowledge or skills; building of competence, understanding and confidence; personal discovery; assumption of new role/s; assessment of feedback; harmony
	Reconstruction	
	Implementation	
	Regeneration and rediscovery	New practice
		Moving beyond where one has been; developing a sense of what might be

The Data Analysis Framework was used to further reduce the data in order to determine the key words and phrases which would exemplify the stages of the transformative learning process. In order to facilitate data reduction, I used a “helicopter view” approach to my data

analysis by attempting to go deeper and deeper into the data, at all times reducing and refining the words and phrases.

The identifiers S1, S2, and S3 continued to be used as the coding categories to represent the stages of the transformative learning process. One of these identifiers was assigned to each word and phrase as well as the code for the participant (P01, COF01, etc.) who had said the word or phrase. At all times, research objectives (5) and (6) were there to guide the motivation for the analysis activity:

To determine the factors which contribute to successful professional development for educators engaged in learning and teaching online, and to formulate a framework for the design of transformative professional development for online educators, based on the developmental phases of this study.

This method of coding enabled me to focus on essential features of the study as they developed. This process fitted well within the spiral character of an action research framework and followed an analytic induction method where the research problem was constantly refined, expanded, and modified as further data were obtained (Miles & Huberman, 1994; Sankaran, 2001). Categories were built by sorting and theorising to make sense of the data gathered. However, reflection by the researcher on this analysis strategy resulted in some dissatisfaction. Phrases were initially identified in the data and then reduced to key words (Table 4.5).

Table 4.5
Example of Key Phrases and Identification of Key Words

Key Phrases	Key Words
Started little sceptical about value of chat	sceptical
. . . was frustrating to see comments flying all over the place . . .	frustrating
. . . a lot of time I felt was “wasted” . . .	wasted
Felt more positive	positive
More inclined to promote	promote
Specific, unique attractions and benefits	attractions benefits

The researcher found the reduction of these statements to fine-coded key words tended to lose a sense of the whole, as well as losing participants’ voices in summaries. Ely et al. (1991) suggest asking questions such as: What is the smallest meaningful chunk of narrative that I will call a category? What concept does it imply? What categories will help me to organize the essential aspects of what is written here? Feedback from the critical friend reference group suggested keeping participants’ statements intact as much as possible during the analysis and using boldface type to indicate the key word or phrase.

Tables 4.6a, 4.6b, and 4.6c illustrate the identification of key words and phrases as they relate to the 3 stages of the Data Analysis Framework. Words taken from five participants (representing 30% of the total participant group), and five Co-Facilitators (100% of the total co-facilitator group) are presented in these tables. The words and phrases selected were considered, by the researcher, to broadly characterise the three stages of the transformative learning process e.g., words such as sceptical, reluctance, blame, uncomfortable, and concern linked closely to the concept of experiencing some form of “disorienting dilemma” (Mezirow, 1991) as illustrated in Table 4.6a.

Table 4.6a

Identifying Key Words and Phrases: Stage 1 (N/Participants = 4; N/Co-Facilitators = 5)

Stages	Data Analysis Framework (2004)	Key Words and Phrases
1	<p>A dilemma Uncertainty; suspicion; fear; shock; unease; uncertainty; discomfort; ambiguity; disorder; questionable events; “exceptional” moments</p> <p>Self-examination: Examining own practice, considering own values and beliefs, feelings of guilt or shame</p>	<p>sceptical (COF01, P06, P16) frustrating (COF01) do not need (P01) surprised (COF02) chaos (COF03) irrelevance (COF03) reluctance (COF04) blame (COF04) issues (COF01) uncomfortable (COF05) concern (COF05, P03) resistant (P03) time consuming (P01) little focus, little control (COF01)</p> <p>very ashamedly (P06) grew more convinced (P01)</p>

Indications of a “deconstruction” phase (Greene, 1975) or a desire to explore issues, make sense of, seek explanation for, and understand issues were evident in comments such as “need to pin this down”, “help my colleagues overcome this ‘fear’”, and beginning to see “new light”, as illustrated in Table 4.6b.

Table 4.6b

Identifying Key Words and Phrases: Stage 2 (N/Participants = 2; N/Co-Facilitators = 3)

Stages	Data Analysis Framework (2004)	Key Words and Phrases
2	<p>Exploration of issues and posing of questions Struggle; shared discomfort; testing; critical self-assessment; deconstructing ideas, values and beliefs; exploring options for new ways of acting and doing; questioning, imagining, raising consciousness and awareness; challenging; recognising one's feelings are shared and others have negotiated a similar change; indicating a desire for change</p> <p>Then . . . Reorientation - affirming; decision making; reconstituting meaning; sense making; exploring new ways of acting</p>	<p>need to pin this down (COF01) were participants conscripted against their will? (COF02) more concrete examples (COF05) help my colleagues overcome this "fear" (COF05) greater need for good design . . . good needs analysis (COF01) new light (P03, COF01) unique, exciting (COF01) felt more positive (COF01) avoid competition (COF05)</p> <p>insightful and enlightens me on how higher learning objectives can be achieved through technology (P07)</p>

At the sourcing of answers to the questions stage of the learning process (Stage 3), words and phrases such as "more inclined to promote [synchronous chat]", "learn more effectively working collaboratively", and "deeper appreciation of the potential" were evident (Table 4.6c).

Table 4.6c

Identifying Key Words and Phrases: Stage 3 (N/Participants = 3; N/Co-Facilitators = 3)

Stages	Data Analysis Framework (2004)	Key Words and Phrases
3	<p>Identification of sources to help answer the questions, Reconstruction, implementation, Regeneration and rediscovery</p> <p>Change or shift in perspective/action; new perspectives and insights; reconstructing meaning; planning a course of action; confirmation; generation; implementation; acquisition of new knowledge or skills; building of competence, understanding and confidence; personal discovery; assumption of new role/s; assessment of feedback; harmony</p> <p>New practice</p> <p>Moving beyond where one has been; developing a sense of what might be</p>	<p>. . . have cancelled a class and conducted the lesson via chat sessions (P03)</p> <p>. . . perception for me has changed . . . use of the forum . . . instills the sharing of knowledge with each other and ideas (P05)</p> <p>specific and unique attractions and benefits (COF01)</p> <p>. . . can't overemphasise the learning value of a good discussion (P04)</p> <p>more inclined to promote the use of this facility (COF01)</p> <p>. . . was an eye-opener (COF02)</p> <p>deeper appreciation of the potential (COF02)</p> <p>allows for learner-centred learning (COF02)</p> <p>learn more effectively working collaboratively (COF04)</p>

A challenge for the researcher was how to ensure that identified key words and phrases were a genuine exploration and representation of the insights emerging from the study. To attain acceptable levels of validity, these were checked by three members of a critical friend reference group (Lincoln & Guba, 1985). The critical friends were invited to participate based on their expertise, interest in the study, and willingness to provide advice, support, resources, and provocative questions (Kember, Ha, Lam, Lee, Ng, Yan, & Yum, 1996).

Using the guidelines previously outlined (Sowden & Keeves, 1988), validity and reliability were again checked using the same formula as was used in Figure 4.1. The critical friend, unrelated to the study, but with some knowledge of the study, again coded a sample of the data. I also used a quantitative approach by determining the frequency of responses, as illustrated in Table 4.7.

Table 4.7
Frequency of Responses

Key Words and Phrases	Frequency of Responses
sceptical	5
frustrated	2
very little focus	3
felt more positive	5
attractions, benefits	3

4.3.3 Displaying Data in a Matrix

The use of matrix displays enables the summarising of information “so that patterns are evident in a form that can subsequently be used in the presentation of results” (Sowden & Keeves, 1988, p. 520). The key words and phrases were aligned with the stages of the transformative learning process used in the matrix display of the Data Analysis Framework. I continued to reflect on whether the use of transformative learning strategies in Design 2 had changed the participants’ attitudes about learning and teaching – particularly online (perspective transformation - attitudes, beliefs and understandings), and if their approaches to learning and teaching, particularly online, had changed (action transformation - behaviour/practice).

I looked for evidence that would indicate that participants had moved through the stages (or some of the stages) of transformation. I screened for similarities and differences in perception, thought, judgment, feelings, and actions. This process of analysis entails an initial disassembling through coding, then a reassembling as descriptive findings or theories (Webb & Glesne, 1992). It is important to devise ways of developing and testing the ideas that emerge from the analysis (Hammersley & Atkinson, 1995). Data that appeared to be most central to the analysis was worked on with a view to clarifying meaning and exploring

relations with other categories. The aim was to identify the effects the course design had had on perspective and action transformation.

To exemplify the process of relating participant responses to the stages of transformative learning, I have selected six members of Design 2 (three co-facilitators and three participants) and documented their responses. This was a purposefully selected sample which reflected a cross-section of age, gender, cultural background, and discipline area (i.e., area of content expertise such as Engineering, Film and Media Studies, Business and Accountancy). The data has been collected from a number of sources, as outlined in Section 3.3.4, but has mainly focused on data relating to the synchronous chat activities.

The sample included:

1. A Malaysian male co-facilitator (COF01) with a sound interest in learning and teaching and strong support for the success of the project.
2. An Australian male co-facilitator (COF02) with a strong interest in pedagogy and staff development.
3. A Singaporean female co-facilitator (COF03) with a focus on the technical aspects of course design and a cautious view of the pedagogical processes employed in delivering the course.
4. A Singaporean female participant (P01) who hoped to learn about developing e-learning courseware, and who showed evidence of some perceptual shift.
5. A Singaporean female participant (P03) who expressed some resistance to the idea of e-learning prior to the commencement of the course.
6. A Singaporean male participant (P04) who tended to play the role of the “Devil’s Advocate” throughout the progress of the course, and referred to himself as the “cynic”.

Using a matrix, I assigned their contributions according to the stages of transformative learning in the Data Analysis Framework (Tables 4.8a, 4.8b, and 4.8c). Interpretation of the data included in this matrix along with observations made by the researcher on each stage contributed to articulating the findings of the study.

Table 4.8a

Data Analysis Framework to Trace Transformative Learning Development (Co-Facilitators and Participants) – Stage 1

Stage	Indicators	COF01	COF02	COF03
1	A dilemma Uncertainty; suspicion; fear; shock; unease; uncertainty; discomfort; ambiguity; disorder; questionable events; “exceptional” moments	Started little sceptical about value of chat - whether participants benefited frustrating (comments all over the place . . . little focus . . . little control by the convener/moderator . . . lot of time “wasted” on getting acclimatized . . . people fiddling with the features)	. . . surprised some staff did not participate lack of immediacy which comes from body language and other cues	you are the recognized instructor, not me things don’t get chaotic in a f2f class, but it tends to do so in a virtual chat if purpose of chat is social, chaos and irrelevance are good.
	Self-examination: Examining own practice, considering own values and beliefs, feelings of guilt or shame	must surely be something “unique and special” about this [electronic communication] to keep them at it for so often and for so long. If I have fixed (and closed) opinions, I tend to look ONLY for and at responses which are similar to mine. If I share and others don’t, I stop sharing [I have a] . . . need for online facilitation skills and technical skills		

Stage	Indicators	P01	P03	P04
1	A dilemma Uncertainty; suspicion; fear; shock; unease; uncertainty; discomfort; ambiguity; disorder; questionable events; “exceptional” moments	do not need synchronous feature with my students. For those who are 'task-oriented' and appreciate a 'lot of structure' the chat room is not for them. online teaching and learning very time consuming processes; hard to achieve the teaching objectives. I have ample F2F time with students Chatting - lot of interruption from the members and the instructor was hardly able to focus the group on the topic. so much more time needed in preparation.	resistant to e-learning [my] main concern [is student] motivation and information management.	
	Self-examination: Examining own practice, considering own values and beliefs, feelings of guilt or shame	was good socializing though.	have online discussions to encourage my students to express themselves online.	if I share and nobody gives feedback or comments, I'll eventually stop. if I want honest feedback, and I only get positive ones because others are afraid of offending me, I'll contribute less.

Five of the 6 participants selected from Design 2 experienced some form of “dilemma” at the beginning of the offer of the course. However, one of the participants (P04) showed no evidence of unease, uncertainty, suspicion or fear of working in the online environment. This person, however, had had a significant amount of experience working in this environment and was interested in moving quickly into more advanced stages of online pedagogy.

Table 4.8b

Data Analysis Framework to Trace Transformative Learning Development (Co-Facilitators and Participants) – Stage 2

Stage	Indicators	COF01	COF02	COF03
2	Exploration of issues and posing of questions Struggle; shared discomfort; testing; critical self-assessment; deconstructing ideas, values and beliefs; exploring options for new ways of acting and doing; questioning, imagining, raising consciousness and awareness; challenging; recognising one’s feelings are shared and others have negotiated a similar change; indicating a desire for change	[The issues may be] internal, individual self-imposed barriers eg. teacher mindsets ... teacher resistance to try... comes in many forms... eg. “can’t be done, have been done before and didn’t work, won’t work, no time, what’s the point... beginning to see new light! something unique and exciting about this medium... if we can pin this down can begin to know how and when to use meaningfully. something more beyond "novelty" element? Writing demands greater/thought/reflection	other experiences I had with on-line learning were pretty awful students more likely open up using computer than mouth. Were they (participants) conscripted against their will and maybe did not want to learn anything about it?	Instructor set the pace, the participants followed. (instructor-led) need not be a lecture - series of dialogs between the instructor and students (instructor-led)

	<p>Then . . . Reorientation - affirming; decision making; reconstituting meaning; sense making; exploring new ways of acting</p>	<p>commonly held perception of our students (short attention spans and want instant gratification) - wonder if we, as teachers, do them injustice if we "label" them (believe students incapable of reflecting on their understandings, and engaging in critical discourse for purpose of going beyond information exchange?)</p> <p>since then felt more "positive" about the environment...</p> <p>allowed me to reflect on the experience and articulate my own feelings...</p>	<p>most impact from experience itself – that is, being an on-line student.</p> <p>good to 'revisit' some of the educational theory.</p> <p>[Need] more thinking about how to do technical modules (like engineering) on-line. -whole issue of symbols and maths notation a problem and holds back development in area</p>	
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It was evident from the data that not all participants moved past Stage 1 of the transformative learning process. The researcher did attempt to pursue this further through an interview but was unsuccessful due to the unavailability of the member. Not surprisingly, this situation continued into Stage 3 of the process.

Stage	Indicators	P01	P03	P04
2	Exploration of issues and posing of questions Struggle; shared discomfort; testing; critical self-assessment; deconstructing ideas, values and beliefs; exploring options for new ways of acting and doing; questioning, imagining, raising consciousness and awareness; challenging; recognising one's feelings are shared and others have negotiated a similar change; indicating a desire for change	<p>Your idea of chats with guest speakers sounds very interesting. I think it will appeal to students.</p> <p>did not expect discussion is so much a part of e-learning. I was looking forward to learning more multimedia tools.</p>	<p>Discussion forum a tool to help the students to learn.</p> <p>The student'll go in automatically once they get addicted to it.</p> <p>Online discussion result in sharing of ideas, ...create team spirit, harmony & trust among themselves.</p> <p>use asynchronous communication to provides a 'great environment' to promote higher order thinking, develop independence in learners</p> <p>need to motivate or to activate a "start" button of our learners.</p> <p>How we lead them? How you make sure that they are in the right track?</p> <p>... asynchronous communication could help motivated learner, but on the other hand how to deal with the un-motivated (<i>sic</i>) learner?</p>	<p>how get less-than-ideal students . . . to become motivated learners</p> <p>USQ course turned out a little worse than I predicted. Most participants found the readings too much/tough discussions could be improved . . . facilitators could more actively encourage critical discussions?</p> <p>The culture here may have made it tough for someone to comment negatively on someone of a higher rank.</p> <p>. . . would have helped if participants could be selected more carefully. There should be some interest/enthusiasm. purely voluntary, and they have to know what to expect (readings, discussions, etc)</p> <p>level of discussion is poor in my opinion. Lack of critical thinking...there's a general fear of 'criticising' (culture?)...there's too much 'vicarious learning'.</p>

				“literature tells us that distance education students who evaluate their courses almost always express strong satisfaction for the personal attention and assistance they received from their faculty mentors.” I am still waiting to see if this is true, at least for my case.
	Then . . . Reorientation; affirming; decision; reconstituting meaning; sense making; exploring new ways of acting	[My perception of online teaching is that it is] exciting, a growing trend and need. I grew more convinced of the usefulness of discussion.	I see some bright light and hope to do something for my module I guess the student's maturity level is a main issue. To others it might have been traumatic	

Table 4.8c

Data Analysis Framework to Trace Transformative Learning Development (Co-Facilitators and Participants) – Stage 3

Stage	Indicators	COF01	COF02	COF03
3	Identification of sources to help answer the questions, Reconstruction, implementation, Regeneration and rediscovery Change or shift in perspective/action; new perspectives and insights; reconstructing meaning;	time and place for online chats specific and unique attractions and benefits since I have been more inclined to promote the use of this facility... importance of user interface and the need to constantly consider the experience from learner's	vote for having Chat available in Bb 6 sense of “group”; importance of timely feedback; importance and effectiveness of discussion forums whole business of discussion boards as a medium for social constructivism was an eye-	

<p>planning a course of action; confirmation; generation; implementation; acquisition of new knowledge or skills; building of competence, understanding and confidence; personal discovery; assumption of new role/s; assessment of feedback; harmony</p> <p>New practice</p> <p>Moving beyond where one has been; developing a sense of what might be</p>	<p>perspective.</p> <p>Value of personal experience of going thru' a chat session. And subsequent reflection and discussion about the experience.</p> <p>Need for more "elearning friendly" policies, recognition of online developmental efforts, greater understanding of skills and time required to enable + foster more meaningful online facilitation...</p> <p>... more convinced of value of good design and facilitation of meaningful activities using discussion forums ...</p> <p>greater need for good design, greater need for good needs analysis</p> <p>new competency skills related to online facilitation, greater need to design active learning opportunities (thru' meaningful and engaging activities/assignments)...</p> <p>need to design to enable constructivist learning and collaborative learning approaches.</p>	<p>opener.</p> <p>[I have a] deeper appreciation of the potential [of online]</p> <p>e-learning allows for learner-centred learning and social constructivist learning, possibly more so than in the 'conventional' setting.</p> <p>Already a lot of peer-to-peer help goes on but is not that visible to the lecturer – on-line just brings it out in the open more. Students feel that their circle of peer helpers is expanded in on-line mode.</p> <p>makes you more sympathetic to needs and frustrations of learners.</p>	
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Stage	Indicators	P01	P03	P04
3	<p>Identification of sources to help answer the questions, Reconstruction, implementation, Regeneration and rediscovery</p> <p>Change or shift in perspective/action; new perspectives and insights; reconstructing meaning; planning a course of action; confirmation; generation; implementation; acquisition of new knowledge or skills; building of competence, understanding and confidence; personal discovery; assumption of new role/s; assessment of feedback; harmony</p> <p>New practice</p> <p>Moving beyond where one has been; developing a sense of what might be</p>	<p>I learn that I should write in a way that invites students to think.</p> <p>I learn that to be more encouraging and give positive strokes.</p> <p>Yes, more persevering to incorporate it in my teaching.</p> <p>Communication with students is more efficient now.</p> <p>Time for online teaching need to be generously allocated in the staff schedule. Perhaps also employ full time developers to do the site for big modules</p> <p>Enlightening, time-consuming, interesting, tiring</p> <p>the challenge for me is how to enthuse the students to use the forums in such a way that benefits them in the module.</p>	<p>I enjoyed virtual chat very much, I felt that it bring us closer . . . It is social presence, a sense of belonging to the team. It is important especially for the full on-line course.</p> <p>I have actually cancelled a class on a pilot test and conducted the lesson via chat sessions</p> <p>The eventual outcome was rather disappointing but I will be trying it out again</p> <p>I have students coming to me with the all the supplementary materials they get from the other web sites. It is very positive, students want to know more, students search for their own answers. With e-environment, students are more resourceful.</p>	<p>...I think my view on online teaching became more positive...it could be due to seeing how much USQ has been doing in that area. I used to be a little more sceptical.</p> <p>going thru the programme, I'm not quite a convert, but I'm more positive. I think an effective course is possible, but tough</p> <p>the main fear of doing exams online is the security issue... but as someone who believes that exams should carry a minimal weight, the incentive to cheat would be less..... I'm not against paper-based exams, but I think too much emphasis is placed on them</p> <p>I think discussions should be part of the assessment. if strongly believe in the value of discussion.</p> <p>Can't over-emphasise the learning value of a good discussion.</p> <p>Opinion of chats? Hasn't changed. I've done chats before which were bad, and I've</p>

				<p>done good ones.</p> <p>[need] systemic changes in administrative policies before we can effectively go on to the next level of large-scale or full implementation.</p> <p>. . . this issue of motivation and incentive for the facilitator would have to be addressed sooner or later...</p>
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There was evidence that some participants reached Stage 3 in the transformative learning process.

4.3.4 Interpreting the Matrix – Looking Back to Look Forward

Consistent with the action research framework, I revisited the research objectives, and considered two questions to determine what the data were telling me:

1. *Did* the data demonstrate that participants had experienced some or all of the stages of transformative learning?
2. *If so, how did* the data demonstrate this?

From these questions, I reflected further on whether the adoption of transformative learning strategies in Design 2 had changed the participants' perspectives (attitudes, beliefs, understandings) about learning and teaching – particularly online, and if their approaches (action, behaviour, practice) to learning and teaching, particularly online, had changed.

Most participants experienced some perspective transformation as a result of the course. However, some of the participants showed little evidence of change in perspective. There were indications that how participants perceived related prior experience influenced the likelihood of whether they would experience perspective or action transformation as a result of Design 2. For example, one member, when referring to the virtual chat facility, stated:

It's strange how things don't get chaotic in a f2f class, but it tends to in a virtual chat.

and

. . . you are the recognized instructor, not me...

There was little evidence to suggest that this participant experienced transformation of perspective or action throughout the duration of the course. The differences between the sampled members are illustrated in Figure 4.2.

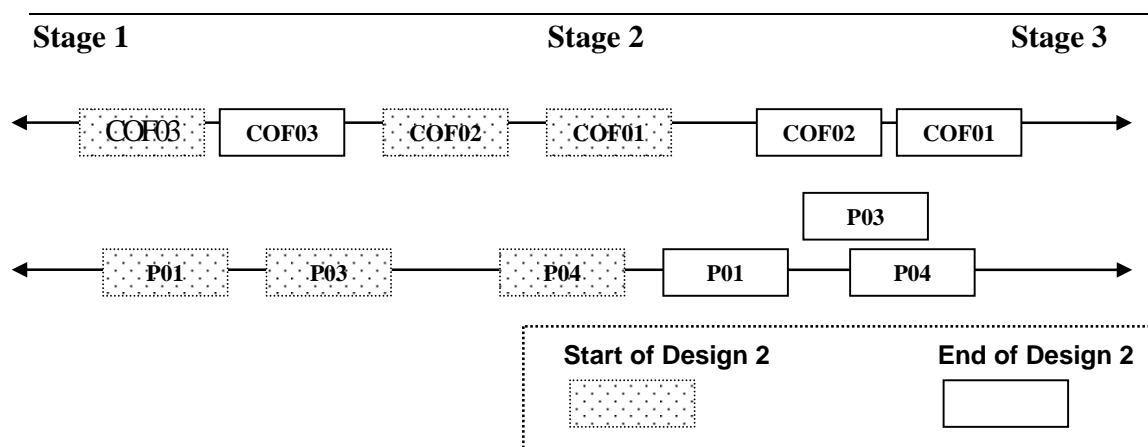


Figure 4.2. Sample of participant progress in course according to Data Analysis Framework.

Because the sample of Design 2 members was a purposefully selected sample reflecting a cross-section of age, gender, cultural background, and discipline area, the researcher feels justified in being able to relate these interpretations of the data generally to the rest of the participants in Design 2.

In general, there were quite different transformative learning outcomes among the most and least developed participants. For example, those participants who had previously experience Design 1 (that is, the Co-Facilitators) were more likely to explore perspective and action change than their first-time colleagues. Developmental stage appeared to influence participants' experience of transformative learning, the nature of the support they required and their use of particular strategies. However, this was not always the case. Three first-timers showed evidence of considerable perspective change as the course proceeded.

The affective nature (feelings and emotions) of transformative learning influences critical reflection. Some of the participants noted a specific time when they reached these realisations; other experience gradual changes, and a few broached new ideas because of the interview discussions. An articulation of assumptions about practice and a questioning of those assumptions took place. King (2003a, p. 203) notes that "when assumptions are found to be invalid or constraining and when those assumptions are

revised, transformative learning takes place”. Some assumption revision was evident when participants noted,

I wonder if we, as teachers, do [our students] an injustice if we “label” them . . . and thus believe that they are incapable of sitting back, reflecting on their understandings, and engaging in, what Garrison describes as, “critical discourse for purpose of going beyond information exchange”? (COF01)

. . . I realise that the use of the forum to discuss topics and ideas has helped to be able to instil the sharing of knowledge with each other and ideas. Learning from each other I find is easier in the online mode as long as the community of learners is willing to share and have the same attitude of wanting to learn from others as well. (P05)

After the experience of the online chat event + subsequent discussions on the asynchronous group discussion forum – which allowed me to reflect on the experience and articulate my own feelings . . . since then I have been more inclined to promote the use of this facility . . . (COF01)

Once I had decided whether perspective and action transformation was evident, I again enlisted the support of the research peer de-briefers (three colleagues) to examine the validity and reliability of my interpretations. Once these general interpretations had been made about the data, it was necessary to consider a further two questions:

1. What findings could be extrapolated from the data?
2. What did the findings mean (interpretation), and what issues were apparent?

4.4 Findings and Interpretations

The fundamental purpose of data analysis is to articulate the findings from the study and to provide an interpretation of those findings. This also enables issues to be revealed and sound conclusions to be drawn from the evidence available. In Chapter 1, the purpose and scope of the study was illustrated in Figure 1.1. This figure showed that, at the

intersection of three areas of work lay a proposed framework that would enable the exploration of the online environment in terms of its effectiveness in offering professional development for educators using transformative learning approaches. These three areas of work (learning and teaching in online settings, learning theories, particularly transformation theory, and professional development for educators) were then reviewed in Chapter 2 through pertinent literature. The findings for this study can be explored through those three areas of work and discussed in terms of:

1. Learning and teaching in online settings.
2. Professional development for educators in online settings.
3. Transformative approaches to professional development for educators in online settings (Figure 4.3).

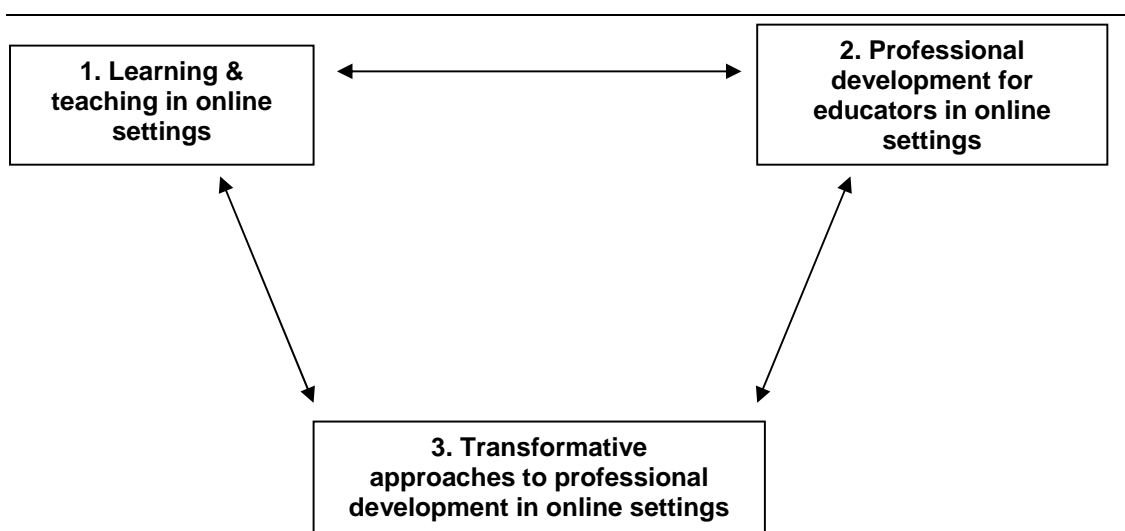


Figure 4.3. Scope of findings of the study.

Although I had access to much feedback from learners I worked with in the post-study period of semesters one and two, 2004, I have felt an ethical caution in terms of how far I can go to reveal such views (these people had not been invited to be participants in this study and had not signed consent forms). Therefore I made a decision to report statements that individual participants indicated I could use in writing up this study. In doing so, I have referred to these participants as PS01, PS02, (Post-Study 01, Post-Study 02), etc. in the findings which follow.

4.4.1 Learning and Teaching in Online Settings: Findings

In Chapter 1, I considered that although online learning and teaching models might have similar characteristics to “traditional” (teacher-focused and directed, classroom based) educational situations, online environments are *different* to traditional educational settings. From the data, it is evident that the question is not so much one of difference, but more of defining principles that set online contexts apart from other learning contexts. It is not that the critical concepts of online education are different from other forms of education, but the way in which these concepts are operationalised (put into action) that sets the online learning environment apart from other learning contexts. It is not that the use of technology has resulted in an improved quality of learning, but that sound pedagogical approaches embedded in these defining principles can positively impact learning and teaching conducted in settings that rely on technology to support the learning process i.e., online environments. It is evident in the data that:

1. The text-based nature of dialogue in online learning environments makes interaction and discussion between learners and facilitators visible and accessible, but because it occurs in a password-protected Learning Management System, the discourse remains secure and safe. This permanent record of dialogue provides an excellent resource for (and indicator of) reflective professional development activities, and maintains evidence of the “human” presence. In the study, participants made these observations:

[It is] . . . more secure [in online environments] to talk and share opinions. I can read the postings of others and it allows me time to reflect on what has been said and get a clearer view of what has been said. (P05)

Already a lot of peer-to-peer help goes on but is not that visible to the lecturer – online just brings it out in the open more. Students feel that their circle of peer helpers is expanded in the online mode. (COF02)

2. The Internet enables participants to access large amounts of information quickly and easily, supporting a learner-centred, and learning centred approach, as noted by one of the Co-facilitators:

I have students coming to me with supplementary materials they get from the other web sites...students want to know more, students search for their own answers.

With the e-environment, students are more resourceful. (P03)

3. Use of the written word enables learners to provide reasoned, reflective comment which involves the disciplined and rigorous higher order thinking processes of analysis and synthesis (Kanuka & Anderson, 1998; Lapadat, 2002). Garrison (1997, p. 5) notes that, “in higher education, writing is crucial to thinking about complex issues in a meaningful manner”. The online learning environment established in this study was primarily text-based where the written word was the principal form of communication. This visibility of text-based interactions enables learners to experience transformative approaches to learning by reflecting on others’ contributions, and crafting responses that are personally meaningful and that build and elaborate upon existing ideas. Participants in online learning environments are writing for a real audience of their peers which motivates them to express their perspectives clearly. The contributions are recorded in the permanent course transcript which is an added incentive to express one’s thoughts clearly and succinctly. Furthermore, social and cognitive meaning construction occurs as Lapadat (2002, p. 12) points out, “not one conformist or homogenized viewpoint emerges, but, rather, multiple strands weave together . . . [dynamically] in a collaboratively constructed and unique fabric”. This link between meaning and motivation is supported through observations made by two participants from courses I facilitated in the post-study period:

It surprised me how much time I was willing to spend on the reflective assignments – writing and rewriting as I worked out how I felt about a particular experience. It wasn’t a matter of ‘getting it done’. I wanted to do it. It was *meaningful*. (PS04)

My Evaluation Reflection is self-driven, I write the whole thing without referencing, and then have to return to the literature to reference it. I feel powerful,

for this very reason, I submit it for assessment – it is mine, not a synthesis of the thoughts of others. I feel a great sense of ownership of my assignments too. (PS09)

4. The online environment supports learning as a community activity. Dialogue or discourse (learners to learners; learners to facilitator/s) is vital to sustaining the learning community and maintaining a sense of connected, human presence. Participants in the study made the following comments which support a community-based approach to professional development:

Online discussion with classmates will not only result in sharing of ideas, but will also create team spirit, harmony & trust among themselves . . . (P03)

Learning from each other I find is easier in the online mode as long as the community of learners are willing to share and have the same attitude of wanting to learn from others . . . the use of the forum to discuss topics and ideas has helped to be able to instill the sharing of knowledge with each other and ideas. (P05)

5. Learning in an online environment should be learner- and learning-centred (focused on the learner rather than the teacher, and on learning rather than teaching). In addition, the promotion of self- or inner-directed learners who are independent and examine their own practice and retain control over the process is very important in transformative learning. A comment from a co-facilitator illustrates this point:

. . . the essence of the learning . . . is the importance of user interface and the need to constantly consider the experience from a learner's perspective. (COF01)

6. The online learning environment has potential in terms of attending to issues of diversity. Use of the Internet for learning and teaching can address the challenges of prejudice, and discrimination, and celebrate the notion of difference.

A participant in the study noted:

[The Internet can] provide the risk-free learning environment for the students to express themselves freely without any prejudice, that they will not be embarrassed, that they will be complimented . . . (P12)

Participants from the post-study period observed:

[Online environments have a] . . . liberating effect for quieter students, who now have a say . . . (PS04).

I really enjoyed meeting and working with students from varied international backgrounds and settings - this is a key strength . . . I was able to gain perspectives on a number of educational issues from four different continents - fantastic!
(Anonymous)

4.4.2 Professional Development for Educators in Online Environments: Findings

A number of findings emerged in terms of professional development for educators working in online environments. It is evident in the data that:

1. Professional development for online educators must accommodate the needs of adult learners. This includes the significance of learner experience and relevance of learning activities, the importance of flexibility, and a focus on content as process rather than content as product (the process of learning is of greater value than acquiring the knowledge). A comment from a participant supports this finding:

. . . the most impact was from the experience itself – that is, being an online student
. . . it makes you more sympathetic to the needs and frustrations of learners.
(COF02)

The most valuable part of the course seemed to be the fact that they were put in a position where they ‘experienced’ what it was like to be an online learner. (F01, Appendix B4)

2. The provision of exemplars in online courses supports and enhances the professional development experience for online learners by providing models of good practice. It was evident from the data that participants placed significant value on the provision of exemplars and considered that more needed to be provided in future designs:

. . . need more concrete examples to show the advantages of using PBL (especially in our Electronic Engineering context). (COF05)

What to avoid eg. too much text, consideration of cognitive load... how to enhance eg. use of examples, meaningful graphics . . . (COF01)

. . . greater use of real-life examples (including student responses). (P07)

3. Because online environments can accommodate dynamic (constantly changing, growing, adapting) activity, educators need to continually evaluate the learning situation in order to promote and nurture an atmosphere that supports the development of ideas, exploration of alternatives, and encourages change in perspective and action.

What is holding participants back from participating (No time? Other priorities? What else?). How might the Co-Fors encourage participation? . . . [Facilitators] to email all participants – then CoFors to contact their teams. Are the participants reading the discussion forums and Announcements? Be more explicit with tasks – what and by when . . . Prioritise readings. (F01, Appendix D1)

4. The peer learning partnership model is an effective way for learners to support each other in a trusting, respectful, empathetic, non-threatening manner. The boundaries of participants' roles in the learning process tend to be blurred in online environments. The peer learning, two-way reciprocal model (Boud, Cohen, & Sampson, 2001) provides an opportunity for participants to teach and learn with and from each other in formal and informal ways. Support for a peer support model was indicated by several participants:

I think the co facilitators was (*sic*) very successful. (Anonymous)

They [the co-facilitators] were very helpful in participating in the forums as they were more experienced, they had done it before. (Anonymous)

Mine [the co-facilitator] provided technical guidance which was helpful.
(Anonymous)

I am much more motivated through interaction with people rather than the web.
Mentors are very helpful. (Anonymous)

However, these comments contrasted with some concerns with the experience:

The co-fer idea was a good one, but only very few contributed and was (*sic*) helpful. (Anonymous)

The co-facilitating model we used helps ... I guess the real test is if an effective 'community of learning' can be formed. (Anonymous)

The cofer could help to encourage more critical thinking. 'if a peer can do it, maybe i can too'. (Anonymous)

I do not personally think that their presence had any impact or bearing to my new found faith in eLearning If any, their impact is negligible. (Anonymous)

A comment from a co-facilitator, when asked to describe their experience, expressed conflicting views:

. . . disappointing (lack of response), frustrating, difficult (to know when to comment and when to leave well alone), enlightening (to see who participated and when). (Anonymous)

Finding ways of encouraging partners to "go the extra mile" given the considerable time commitment required to work closely with a peer, emerges as an issue.

One suggestion by a participant in the study was the need to:

recognis[e] that co-fers is a full time job, just like instructional designers ... as long as such activities are done as a “part-time” basis, you can never get the type of dedication required to pull it through. (Anonymous)

Training for peer learners, and a “small stipend” to offset the considerable time commitment are suggestions which have been made by Eisen (2001, p. 34). This might go some way towards addressing resourcing issues raised in the findings of this study.

4.4.3 Transformative Approaches to Professional Development for Educators in Online Settings: Findings

In this study, transformative learning practices have been described as learner-centred and related to learning which occurs when an individual reflects on assumptions and expectations and is empowered to transform their beliefs, attitudes, opinions, and emotional reactions. Mezirow (1991) has described transformative learning as the process of adults learning to make meaning of their experience. With this in mind, it is evident in the data that:

1. The human element is critical to an authentic, online learning experience. The role of the educator is to help the learner focus on, and examine, the assumptions that underlie their beliefs, feelings and actions, assess the consequences of these assumptions, identify and explore alternative sets of assumptions, and test the validity of assumptions through effective participation in reflective dialogue e.g., facilitating dialogue to explore participants beliefs about “unmotivated” students and how to address this issue.

[A problem is] change management and some staffs' reluctance to . . . consider other options to the methods they've used for many years, to their mind successfully ... they [see] the current problems [as] unmotivated students ... successes [come] through finding individuals [with] interest in new possibilities and conducting pilots with them . . . (COF02)

2. Reflection is one of the main tenets of transformative learning. It is evident in the data that the online environment provides a fertile ground for transformative, authentic, reflective practice to occur. In order to experience growth and development, participants need a predisposition for change and transformation and be prepared to consider that their “old ways” may not work, to critically examine their beliefs and values, and be ready to change if those beliefs and values are found to be wanting in some ways. The aim is to develop an informed theory of practice. Two participants from post-study courses noted:

I think, for the first time, I can now truly see the richness of an online learning experience – the potential of what *can* be . . . Here, I can interact with others, both academics and colleagues, either in a real sense or vicariously, to test ideas and reach new understandings. Through reflection, I can then consider the multiple perspectives that I’ve been exposed to, and come to some understanding of where my own truths lie. These truths become part of me, and change the way I act in the real world. They aren’t merely a string of abstract facts that slide in and out of my consciousness with equal ease. They stick . . . I feel confident in saying what I learned in this course will stay with me, not just filter in and out of my consciousness like some random piece of information. Reflection was the core process that achieved that. (PS04)

The course is impacting on my teaching, I am far more conscious of the things I do, and am trying lots of new things, particularly collaborative learning . . . My Design Reflection was not hypothetical, I am pretty determined to see this through into the new work programme – it is one opportunity for change. (PS09)

3. Authentic activity is essential for adult learners participating in professional development in online environments with the need to view learning as a process, not a product. A problem-based, project-based approach to professional development must be considered. Several comments in reports support this:

All participants at the session indicated they wanted a more practical course. What we have provided is too theoretical although they realise the place of theory.

Because they have other demands on their time they want us to provide more of the

‘how’ and less of the ‘why’. Related to this is a request for more ‘exemplars’ so that they can more readily relate the theory with the practice . . . Some suggested we should begin the course by outlining the nature of the task and then ‘feed in’ the course material as it’s needed-could this be an appeal for more ‘problem-based’ learning? . . . Need for more concrete, discipline-specific examples to ground understanding of instructional principles/concepts/ideas. (F02, Appendix B5)

4.4.4 Principles of Transformative Online Pedagogy

In Chapter 2, I identified five guiding principles for the design of effective learning experiences for online environments. These principles were determined by reflecting on experience and practice, reviewing relevant literature, and referring to previous research activity. Following my critical reflection on the data in this study, and the findings which have emerged and been reported in this section of Chapter 4, along with a further review of current literature, I have redefined the principles to comprehensively address the design of transformative professional development for online educators. The intention is not to focus on the *content* of any particular course or program but on developing a set of guiding principles that can be applied to online educational contexts. The redefined principles (Principles 1-10) are:

1. The CHE factor. Central to transformative online pedagogy are the concepts of **C**onnectivity, **H**umanness and **E**mpathy.
2. Learning in an online environment is learner-centred (focused on the learner rather than the teacher) and learning centred (focused on learning rather than teaching).
3. Immerse to converse - reflection is critical. Critical reflection is essential to transformative online learning. In order to reflect authentically, a learner will be immersed in the learning environment, have opportunities to dialogue with others, and to be able to relate concepts to their own context.
4. Learning in a transformative online environment is a community activity. Dialogue (discourse) (learners to learners; learners to facilitator/s) is vital to sustaining the learning community and maintaining a social presence.

5. Online educators are learners and learners are online educators – the boundaries of participants' roles are blurred in online environments.
6. VIP Communication. Communication in the online environment is **V**isible, **I**ntant, and provides a **P**ermanent record.
7. Interpret and respond to signs of change. In transformative online learning contexts, the environment consists of static (prefabricated) and dynamic (constantly changing, growing, adapting) content. Educators must interpret signs of change in the learning environment and respond accordingly to encourage dynamic growth.
8. Lead by example - create a model experience. The provision of exemplars or models supports and enhances the online experience for learners and support transformative learning processes.
9. A successful online learning environment will not just happen. It needs to be built, managed, and nurtured.
10. Motivation and preparation – in order to experience growth and development, participants in an online educational setting need a predisposition for change and transformation.

In Chapter 5, each of these principles is considered in terms of its characteristics or qualities, its relationship to extant theory, activities that exemplify the principle, and its relevance to learners, facilitators and/or designers.

4.5 Concluding Remarks

In Chapter 4, a review of the purpose of data analysis in this study has been provided, along with the steps taken to conduct the data analysis. A summary of the findings and recommendations from the implementation and evaluation of Design 1 has been given. The latter sections of the chapter have then described the steps taken to conduct the analysis of data collected from Design 2 which has led to the findings of this study. An interpretation of these findings has enabled the researcher to articulate factors which contribute to transformative professional development for educators engaged in learning and teaching online. Ten principles are outlined and will be elaborated upon in Chapter 5.

These principles form the basis of the framework for the design of professional development for online educators using transformative learning approaches.

CHAPTER 5

Conclusions and Recommendations

A mind that is stretched by a new experience can never go back to its old dimensions.
Oliver Wendell Holmes

5.1 Introduction

In Chapter 1, the study began with the *question*: What are the characteristics of effective professional development for educators engaged in learning and teaching in online contexts? It was prompted by a *dilemma* – a “disorienting dilemma” (Mezirow, 1991) that suggested to me that learning and teaching in online environments is *different* to learning and teaching in traditional educational environments, and offers a potentially useful setting for transformative professional development. This study has explored that difference, and determined the contributing factors to successful professional development for online educators. Those factors have been evident in data gathered and analysed (reported in Chapter 4), supported by relevant literature (described in Chapter 2), and merged with the experiences and reflections of myself as a collaborative practitioner researcher. The findings from this investigation both confirm conclusions from previous research, as well as uncover some unexpected results when viewed within a transformative learning framework.

In Chapter 4, the findings and recommendations from Phases 1 and 2 of the study were outlined. The data analysis process for Phase 3 of the study was discussed, limitations and issues highlighted, and the findings of the analysis were described. From these findings, I have identified ten principles that define a transformative approach to professional development for online educators. The principles are described in detail in this chapter, together with the contextual issues that need to be considered in conjunction with these principles. By reflecting on these principles and the contextual considerations,

I have been able to formulate a framework that can support and guide the design a transformative approach to professional development for online educators.

In addition, I have since facilitated two online courses with educators enrolled in postgraduate studies in 2004. Through this facilitative activity, I have been able to further test and refine the design principles prior to describing them in their present form in this chapter. There are some limitations to generalising the results of the present investigation, and concerns that require and warrant further study are identified. Chapter 5 concludes with a reflective epilogue.

Evidence in this study suggests that the online educational setting can provide an environment conducive to transformative learning. In fact, evidence indicates that the online environment may have some advantages over other educational contexts in terms of achieving transformative learning outcomes. This transformation focuses on change which exists in two forms – the transforming of perspective (how people view the world and their work), and action (how this translates to their practice). As previously discussed, the process of transformative learning reflects the “vital experience of learners critically examining their understanding and new knowledge and transforming and integrating new perspectives” (King, 2003a, p. 85). The study also reflects the journey of discovery and transformation that I have made in my development as an adult educator, and supports the tenets referred to in previous chapters that “educators are learners” (Cranton, 1996) and “learning is a journey” (Fox, 1983).

5.1.1 Contribution to the Field

What is unique about this study is that it has brought together three distinct areas of work. It has taken transformation theory and applied the tenets of that theory in an online environment to provide professional development for online educators. The study has contributed to the field of contemporary educational theory, specifically in the areas of adult learning, and transformative learning. The findings also contribute to the principles of online pedagogy, and professional development for online educators. Whereas Cranton (1994, 1996, 1997, 2003) has worked extensively with professional development for contemporary educators, and King (2003a, 2003b) with educators working with

technology in continuing higher education fields and in English as Second Language contexts, my study relates specifically to transformative learning in the online environment. Some of the measures used in this study have been successfully used and validated in previous investigations, but this study has been conducted primarily in an online setting, focusing on professional development for educators working in online contexts.

The findings in this study reflect King's (2003b) work with the professional development of adults using educational technology. She found that participants consistently revisit what they **did** (learning activities) and **who** they worked with (relationships) as the catalysts for experiencing transformative learning outcomes. The focus on *dynamic* activity rather than *static* content, emphasised in this study, is also supported by Herrington et al. (2000) who noted that the primary focus in an online learning environment is on the activity that learners complete, and that activity does not supplement a learning environment - it *is* the environment. It was apparent in my study that learning is not a one-off event, which reflects King's (2003b, pp. 98-99) opinion that, "transformation is a process; it does not happen in an isolated flash of a moment . . . transformation is a fundamental shift in how adults understand, perceive, and make sense of their world".

As a side issue which could be the focus of another study, the use of the online facilities (email, synchronous chat, and discussion forums) to collect data suggests that using the Internet is a very promising method for conducting research. Using an online Learning Management System to collect data enabled the researcher to gain easy, secure access to a cross-cultural, remote (as in location) and international sample, and to use the online environment to conduct interviews about online learning experiences. The participants had used this facility to take part in the course and were familiar with it. In addition, it saved the expense and delay of regular postage and other distribution methods. This method of data collection has been documented by Anderson and Kanuka (2004) who note that although a benefit of web-based interactions is the elimination of the transcribing process, it must be acknowledged that the transcription task is transferred to the participant.

5.1.2 *The Influence of Post-Study Facilitative Activity*

This study formally concluded in 2003, but the facilitative (teaching) work I have undertaken in 2004 with learners studying in the online Masters program at USQ has greatly impacted on my identification of the principles discussed in section 5.2, and my current view of transformative learning. In 2004, in my own personal journey as an educator and learner, I experienced “the turmoil, the conflict, the uncertainty, and the chaos” which enabled “personal discovery to emerge” (Larrivee, 2000, p. 306) in terms of transformation as an educator, and a learner. I experienced several “ah-ha” moments leading me to formulate my own solutions to educational questions. This personal shift can be compared to Larrivee’s (2000) view of critical reflective practice where I have been able to restructure my way of thinking and change my overall perspective of learning and teaching in the online context. My experiences have enabled me to recognise the power of reflection, as described by de Chardin (1955) and mentioned in Chapter 2:

. . . the power acquired by a consciousness to turn in upon itself . . . no longer merely to know, but to know oneself; no longer merely to know, but to know that one knows. (p. 164)

This reflective experience has allowed me to discover and begin to structure my own study of, and beliefs about, knowledge and knowing – my own epistemology. This growth of myself as an educator reflects King’s (2003a) advice when she notes that transformative learning provides an opportunity for us (as educators) to work as co-learners with adult learners and to explore our own understandings and meaning structures. This is not to suggest that my learning journey is over – it is, I believe, just beginning, an experience shared by Dirkx (1998, p. 11) who remarked, “The more I learn about transformative learning, the more I regard it as a way of *being* rather than a process of *becoming*”.

In this chapter, I have also included data gathered from learners who were enrolled in post-graduate courses I facilitated in 2004. As mentioned in Section 4.4, I have reported statements that individual participants indicated I could use in writing up this study and referred to these participants as PS01, PS02, and so on (Post-Study 01, Post-Study 02, and so on).

5.2 Reviewing the Journey – Principles that Underpin the Transformative Online Terrain

The purpose of this section is to first review the journey that this study has taken. This will set the scene for describing the principles which I have identified that guide transformative online learning experiences for adult educators. In Chapter 1, I considered whether learning and teaching in an online environment was *different* to learning and teaching in traditional educational settings. However, this preoccupation with proving difference between various learning environments has provided little useful evidence in recent years. McDonald and Reushle (2000) observed that studies conducted in the last decade have tended to explore the effectiveness of online pedagogy by comparing online experiences and results with face-to-face activities using similar learning materials. *The No Significant Difference Phenomenon* (Russell, 1999) reported on the findings of hundreds of research reports, summaries, and papers on the impact of technology in distance education, but here too the focus was most often on comparisons between on-campus and distance learning. This approach to researching the value of online innovation has been challenged by many, including McGreal (2000) who makes this observation about *The No Significant Difference* report:

Without exception, all their criticisms of online learning can be applied to face-to-face teaching as appropriately as they can to online learning. The report compares an ideal face-to-face teaching situation with imperfect online experiments. (¶ 8)

He goes on to repeat many of the conclusions of the report, but adds “face-to-face” next to “online” e.g.,

. . . online teaching [face-to-face] teaching is time and labor intensive . . .

High quality teaching online [face-to-face] requires smaller student-faculty ratios . . .

The good news is that high quality online [face-to-face] instruction can occur . . . if professors take the time and effort to maintain the human touch of attentiveness . . .

This tendency to compare the perfect with the imperfect has also been considered inadequate by others such as Herrington et al. (2000, p. 3) when they note that “many of these studies make a considerable effort to define the innovation, but not the ‘traditional’ method”. In fact the “traditional” method of learning and teaching can range from a teacher talk (transmissive), whole class, face-to-face context to an independent, correspondence-style learning environment, with many permutations in between. Twigg (2001, p. 4) suggests that we need new approaches that go beyond producing “no significant difference”. Rather than comparing online learning with traditional higher education, Twigg (2001) asks, how can we identify new models and talk about what online learning is, and what is better rather than what is “as good as”?

As indicated in the findings of Chapter 4 (Section 4.4.1), the issue is not so much one of difference, or a “collision of world-views” as expressed by Garrison (1997, p. 3), but more of defining principles that set online contexts apart from other learning contexts. It is not that the critical concepts of online education are different or that the use of technology has resulted in an improved quality of learning, but that sound pedagogical approaches embedded in these defining principles can positively impact learning and teaching conducted in settings that rely on technology i.e., online environments.

In Chapter 2, I identified a set of guiding principles for the design of effective learning experiences for online environments. These principles were determined by reviewing relevant literature, previous research activity, and by reflecting on experience and practice. The principles outlined in Chapter 2 of this study were:

1. An effective, cohesive electronic community (e-community) of learners should be established with a strong sense of “presence”.
2. Learning should be situated through the provision of authentic, meaningful activities and timely feedback.
3. Critical reflective practice is crucial to the learning process.
4. Learning should be interactive, collaborative and social with the learner central to the learning process.

5. Dynamic, lifelong learning opportunities must be encouraged and supported. These five principles are very relevant to learning in an online context. However, it is noted that the essence of the five principles can, in fact, be applied to all learning contexts, if one applies a constructivist perspective to learning and teaching. The following 10 principles elaborate upon these general principles and are more specific to transformative approaches to professional development for educators in online environments.

As explained in Chapter 4 (Section 4.4.4), the 10 redefined principles have emerged from the analysis of data in this study, the findings which have emerged, reflection upon previous work, a further review on the work of other practitioner/researchers (the literature), and from my critical reflections as a researcher and online practitioner. These 10 principles underpin effective online pedagogy, reflect the tenets of transformative learning, and support transformative approaches to professional development for online educators:

1. The CHE factor. Central to transformative online pedagogy are the concepts of **C**onnectivity, **H**umanness and **E**mpathy.
2. Learning in an online environment is learner-centred (focused on the learner rather than the teacher) and learning centred (focused on learning rather than teaching).
3. Immerse to converse - reflection is critical. Critical reflection is essential to transformative online learning. In order to reflect authentically, a learner will be immersed in the learning environment, have opportunities to dialogue with others, and to be able to relate concepts to their own context.
4. Learning in a transformative online environment is a community activity. Dialogue (discourse) (learners to learners; learners to facilitator/s) is vital to sustaining the learning community and maintaining a social presence.
5. Online educators are learners and learners are online educators – the boundaries of participants' roles are blurred in online environments.
6. VIP Communication. Communication in the online environment is **V**isible, **I**ntant, and provides a **P**ermanent record.

7. Interpret and respond to signs of change. In transformative online learning contexts, the environment consists of static (prefabricated) and dynamic (constantly changing, growing, adapting) content. Educators must interpret signs of change in the learning environment and respond accordingly to encourage dynamic growth.
8. Lead by example - create a model experience. The provision of exemplars or models supports and enhances the online experience for learners and support transformative learning processes.
9. A successful online learning environment will not just happen. It needs to be built, managed, and nurtured.
10. Motivation and preparation – in order to experience growth and development, participants in an online educational setting need a predisposition for change and transformation.

In the next sections, each of these principles is considered in terms of:

1. Its characteristics or qualities.
2. Its relationship to extant theory.
3. Its relevance to learners, facilitators (managers/teachers), and designers.
4. Practical examples or operational activities.

Other evidence for these statements has been reported in Chapter 4 as data which support the findings of the study.

5.2.1 Principle 1 – The CHE Factor: Connectivity-Humanness-Empathy

I propose that **the CHE factor** (with the qualities of **C**onnectivity, **H**umanness, and **E**mpathy) **is the central tenet** of effective and successful transformative online learning and teaching. The significance of these three qualities is not exclusive to the online learning environment but they are critical in establishing and maintaining the “presence” factor in online settings, as discussed in the original guiding principles (Principle 2, Section 2.3.1). As part of the transformative learning process, online educators will assist learners to question assumptions underlying their structures of understanding or to realise alternatives to their ways of thinking and living. This must be done with care and sensitivity. Brookfield (1994, p. 179) notes, “It is no good encouraging people to

recognize and analyze their assumptions if their self-esteem is destroyed in the process”. Viewing “trusting” relationships as the foundation of rational discourse, “relational knowing”, and a catalyst for helping learners validate new perspectives and deal with the discomfort of change (Mezirow & Associates, 2000, p. 225) influences how an online learning environment is conceived, perceived, and managed by all members of that online community. King (2003a, pp. 89-90) refers to this stage in the learning process as “building safety and trust” which can be communicated in “word, attitude and environment”. The creation and maintenance of the human touch throughout the online learning experience encourages learners to feel they are members of a safe, supportive, productive learning community. Twigg (2001) notes that human contact is necessary for more than just learning and that “encouragement, praise, and assurance that [learners] are on the right learning path are also critical feedback components” (p. 15).

Learner feedback gathered during this study, and also during post-study facilitative activity, has highlighted the importance of these human qualities being present in an online environment. Learners have described the online experience by using the following words and phrases: “sense of connectedness” and “sharing”, enabling the “construction of new understandings and relationships”, “exhilaration”, “euphoria”, “inspiration”, and “passion”. Learners from post-study activity have described:

. . . the feeling of connectedness – almost as if our brains were networked in the chat session . . . gave me a sense of real consciousness expansion . . . (PS06)

and

. . . group interaction is based in concepts such as mutual respect, safety, and willingness to share a bit of self . . . caring, respectful human relationships are a necessary ingredient. (PS08)

Garrison et al. (2000) report on descriptors that can be attributed to both social presence and “teacher immediacy” (the nonverbal behaviours that reduce the “distance” between teachers and learners). They include “closeness”, “warmth”, “affiliation”, “attraction”, and “openness”. These words all point to affective interaction where the expression of emotion, feelings, and mood are defining characteristics of presence.

The CHE factor is of relevance to online learners, facilitators, and designers. Empathy and understanding (facilitator-learner, learner-learner, and learner-facilitator) are critical emotions that are highly valued by participants in an online learning environment. This position (and the supporting evidence) challenges the perception that human-computer interaction online is an impersonal, individual activity. Rourke et al. (2001) report on several studies that focus on computer mediated communication and its use in educational settings and its capacity to support highly affective interpersonal interactions. Given the appropriate online environment, learners and teachers can live inside each other's minds, and souls, if they choose. They can drop in on each other at any time of the day, or night – like friendly neighbours, and the boundaries between formal and informal learning often disappear. A participant from post-study activity observed that,

What technology affords us is the opportunity to reach out without the need for touch or eye contact. Perhaps we are challenging the notion that you can see a person's soul in their eyes, and that in fact, the soul transcends the physical to such an extent that you can feel and touch it even through a chat on the computer. (PS06)

Kassop (2003, point 9, ¶ 2) reports on similar experiences, where,

. . . one instructor after another note the surprisingly close relationships that they have developed with their online students . . . my online teaching experience disproves the notion that online courses are impersonal and do not foster relationships . . . I still regularly receive emails from [a student] several states away who took an online course with me several years ago.

Table 5.1 provides details of practical activities (operational activities) for Principle 1 – The CHE Factor.

Table 5.1

Principle 1 – The CHE Factor: Connectivity-Humanness-Empathy

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
1. The “CHE” factor: Connectivity- Humanness- Empathy	<ul style="list-style-type: none"> • Design an online environment where interaction and collaboration is considered model behaviour (learner, facilitator, designer). For example, use familiar discourse and visual imagery which promotes a sense of sharing and belonging, such as: <ul style="list-style-type: none"> ○ Talk to you tomorrow ○ See you in the forums ○ Meet you in the “coffee shop” or by the “water cooler” <p>although avoid hardwiring old models into a new medium (Kimball, 1998) (facilitator, learner)</p> • Design electronic (online) discussion groups and electronic synchronous chats to encourage on-going interaction amongst learners (facilitator, designer) • Use small online groups within large groups (facilitator) • Use peer learning partnerships where experienced and inexperienced learners support each other online (facilitator) • Use personal email to support, guide, reassure and generally remind learners of the importance of their presence (facilitator) • Be flexible with timelines in the design and facilitation (facilitator, designer) • Value individual differences, affirm the individual and recognise multiple perspectives and realities (King, 2003a) (learner, facilitator, designer) • Design the online environment using photos, audio welcomes, conversational tones (in text) (facilitator, designer) • Provide learners with opportunities for personal reassessment to explore beliefs, values, knowledge, skills, and abilities. The belief in the essentially failed self can distort the minds and lives of learners (Cohen, 1997).

5.2.2 Principle 2 – Focus on the Learner and Learning

Recognising the importance of the affective (feelings and emotions) side of learning places the online learner and learning firmly at the centre of the educational experience. This factor could be regarded as implied in Principle 1, and a significant factor in any learning environment. However, considering the learner (and not the teacher/facilitator) and learning (not “teaching” or “transmitting”) as central to the learning process is so important in an online adult learning environment and can require a complete change of mindset on the part of the adult learner, and the teacher. Learners must be actively involved in and responsible for their own learning (Lim, 2001). Traditional modes of didactic instruction, which view students as passive learners and the teacher as the sole provider of information, are not adequate in providing learners with the necessary capabilities to exist in the global 21st century. Teachers need to embrace and celebrate the diversity that learning in such an environment can promote and be conscious of generalisations and the stereotyping of learners. Unproven assumptions about diversity in terms of culture, age, gender, learning preference, and so on, can lead to missed learning opportunities.

In a learner-centred online environment, there is an emphasis on adult learners becoming increasingly proficient at learning from each other and at assisting each other to learn in problem-solving groups (Kassop, 2003). The educator functions as a facilitator and as a provocateur rather than as an authority on subject matter, with the learner as the “primary agent in the learning process” (King, 2003a, p. 85). The online facilitator models the critically reflective role expected of learners. Ideally the facilitator changes from authority figure to co-learner by progressively transferring her leadership to the group as it becomes more self-directive (Cranton, 1997).

Transformative learning is an emotional, creative and often intuitive process (Grabov, 1997) for the learner – it involves significant shifts in one’s world view – changing one’s assumptions, beliefs and values - a change of perspective and of action. As mentioned in Chapter 1, the transformative approach is learner-centred and relates to learning which occurs when an individual is empowered to reflectively transform their meaning schemes in terms of their beliefs, attitudes, opinions, and emotional reactions. The process must come from within the individual – it cannot be directed by another. As discussed in

Chapter 2, adults may resist contradictions to their beliefs and will deny discrepancies between new learning and previous knowledge. In response to a challenge to their assumptions, many adult learners will entrench themselves even more firmly in their belief system and become hostile or withdrawn in the learning environment. Brookfield (1990, as cited in Cranton, 1994, p. 16-18) has observed, “adults can be particularly tenacious in holding on to their beliefs . . . routine, habit, and familiarity are strongly appealing and for some, the conduct of life is a quest for certainty, for a system of beliefs and a set of values . . . that they can adopt and commit to, for life”. Evidence in this study and post-study activity favours an approach to adult learning and teaching in the online environment, with a focus on the learner, dialogue, learning partnerships, the emotional aspects of online learning and teaching, and the co-construction of knowledge. A participant in post-study activity observed that:

[This course] gives a voice to the learner, gives space for thinking and reflection, and allows genuine co-construction of learning . . . (PS05)

Table 5.2 provides details of practical activities (operational activities) for Principle 2 – Focus on the learner and learning.

Table 5.2

Principle 2 – Focus on the Learner and Learning

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
2. Focus on the learner and learning	<ul style="list-style-type: none"> • Design problem-based and case-based learning activities, and role-plays (facilitator, designer) that enable learners to focus on their own contexts. Complex and sustained activities can guide learning in entire online courses of study, where the activity does not supplement the course - it is the course. Incorporate in its design a metaphor based on a realistic and authentic context to preserve the complexity of the real-life setting (Reeves, Herrington, & Oliver, 2002) • Provide opportunities for learners to participate in online debates which require them to assume an active role so that they are able to reflect on their own perspectives and those of others. (learner) • Design project work to be completed online by teams. This encourages learners to actively participate in a learning community (learner, facilitator, designer). • Design and structure group-learning, learner-focused activities (e.g., peer assessment, collaboration and interaction) (facilitator, designer) • Be conscious of generalisations and the stereotyping of learners. Ensure that assumptions about the characteristics of learners (in terms of culture, age, gender, etc.) are supported by sound evidence (learner, facilitator, designer) • Establish learners' needs and goals and modify activities to address these (learner, facilitator, designer) • View learners as autonomous, independent, self-motivated managers of their own time (Berge, 2000) (learner, facilitator, designer). • Design assessment that enables learners to negotiate requirements with the facilitator (learner, facilitator, designer) • Provide the opportunity for learners to examine an online task from different perspectives, using a variety of resources (facilitator, designer)

5.2.3 Principle 3 - Immerse to Converse: Reflection is Critical

In order to facilitate transformative learning, educators need to assist learners to become aware and critical of their own and others' assumptions. Learners need practice in "recognizing frames of reference and using their imagination to redefine problems from a different perspective" (Cranton, 1997, p. 10). Cranton (1997) notes that adult learners need to be supported to participate effectively in discourse which is particularly relevant in the online context used for this study where discourse through text occurred with no visual or auditory cues. Discourse is necessary to validate what and how one understands, or to arrive at a best judgment regarding a belief. In this sense, "learning is a social process, and discourse becomes central to making meaning" (Cranton, 1997, p. 10). Learners need support to actively engage the concepts presented in the context of their own lives and critically assess the justification of new knowledge.

The importance of critical reflection in the online learning environment has been strongly promoted in the original set of guiding principles outlined in Chapter 2 (see Principle 3). Critical reflection is a fundamental tenet of transformation theory. Learning technology cannot by itself facilitate a change in our meaning perspective leading to perspective transformation or a shift in world view. Being immersed or situated in an authentic online learning and teaching environment (as outlined in Principle 2 of the original set of guiding principles), accompanied by reflection on that experience, and shared discourse about that experience, enables participants to consider new perspectives of learning and teaching. The belief that context is critical for understanding and thus for learning remains an essential ingredient for successful online learning outcomes.

In order to embrace work-based learning and action learning principles, Lefoe (2000) supports professional development that aims to immerse the user in the environment, or place the teacher in the learner's shoes. Brookfield (1993) has made the point:

In particular, I argue that regularly experiencing what it feels like to learn something unfamiliar and difficult is the best way to help teachers empathize with the emotions and feelings of their own learners as they begin to traverse new intellectual terrains. (p. 21)

Instruction on how to use the online environment must be located within an online environment. This approach is supported by Osborn and Johnson (1999, p. 1) who refer to a “work embedded professional development approach” and O’Reilly, Ellis and Newton (2000, p. 3) who promote “staff development in an authentic context” rather than staff development resources and activities “at arm’s length to the needs of the staff” (O’Reilly & Brown, 2001, Staff immersion program section, ¶ 1).

Consistent with Mezirow’s model of transformative learning, perspective transformation is a process that includes reflection-on-learning and reflection-in-learning and the related changes of perspective behaviour (Boud & Walker, 1998; King, 2003b; Schön, 1987). Candy (1981, p. 5) suggested over 20 years ago that we should not be so much concerned with the content of programs for professional development for educators but should be more interested in a strategy whereby “teachers might be encouraged to reflect on their own structures of meaning, to explore and perhaps modify, their personal and professional value systems”. Brookfield (1995b, Hunting Assumptions section, ¶ 1) supports the process of critical reflection on theory and practice and makes the point that “unexamined common sense is a notoriously unreliable guide to action”.

How to engage in the process of critical reflection can be misinterpreted in an online context. Boud and Walker (1998) suggest that reflection must not be restricted to matters outlined by the teacher within the teacher’s “comfort zone”. In fact, the nature of reflective activities may lead to “serious questioning and critical thinking, involving the learners in challenging the assumptions of the teachers or the learning context in which they are operating” (Boud & Walker, 1998, p. 193). Online facilitators need to be aware that reflective activity can be both an intellectual and emotional process. Adult learners need to be able to express themselves and to know that such expression, and discussion of it, is legitimate and accepted (Boud & Walker, 1998). My advice to my learners is – when you are a facilitator in a contemporary, reflective online “classroom”, leave your ego at the door. Differences of power or status, or oppressive behaviour need to be addressed and resolved in order to actively engender an online environment based on respect and trust.

Should a learner’s reflective activities be “assessed”? Boud and Walker (1998, p. 193) note that “students expect to write for assessment what they know, not reveal what they

don't know". I suggest reflective journals or diaries not be directly used as part of the assessment strategy in online learning environments, because of their potentially personal nature. Reflective activities may result in a "journey for which neither the instructor nor the learner can chart or predict the outcome" (Stein, n.d., ¶ 9). The learner's analysis and interpretation of such journals can be assessed as long as the reflective writing is judged in terms of pre-determined, explicit criteria made available to the learner from the outset of the activity. Evidence gathered from participants in online, post-study activity support the importance of critical reflection:

My reflection is self-driven, I write the whole thing without referencing, and then have to return to the literature to reference it. I feel powerful, [and] for this very reason, I submit it for assessment – it is mine, not a synthesis of the thoughts of others. I feel a great sense of ownership . . . (PS09)

Reflection is half the learning process. It is only now, ironically, upon reflection that I 'get it'. The gift of a good online facilitator is to give the learner's time to reflect and discover for themselves. (PS06)

Table 5.3 provides details of operational activities for Principle 3.

Table 5.3

Principle 3 – Immerse to Converse: Reflection is Critical

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
3. Immerse to converse: Reflection is critical	<ul style="list-style-type: none"> • Learn about online learning by being an online learner (learner) • Use activities such as critical incidents (which, by their very nature cannot be planned), metaphor analysis, concept mapping, ongoing journal writing and reflection records to capture significant events which have occurred in the online learning environment and to encourage critical reflection and experience in discourse (facilitator, designer) • Use learning contracts, group projects, role play, case studies, and simulations to enable online learners to undertake “action research” projects. Adult online learners need to be frequently challenged to identify and examine assumptions, including their own (Cranton, 1997). (facilitator, designer)

5.2.4 Principle 4 – Learning is a Community Activity

In a transformative and constructivist online environment, which focuses on interaction and collaboration, it is an ideal setting for a sustained, supportive learning community. Promoting a sense of community online is closely aligned to the concept of “presence” as discussed earlier in this chapter (Section 5.2.1). The concept of “community”, whether it is in an educational context or in other spheres of life, is highly valued by society. Hung and Chen (2001) argue strongly for the centrality of the concept of learning community when adopting online approaches. They suggest that the “learning management system” provided by the technology has seen enterprising teachers begin to think about the organisation and management of learning and teaching quite differently. Peer-to-peer support is not new or atypical. In a physical community, you are seen and your presence is evident and registered in the minds of others. In a virtual community, with the lack of visual cues, you must make a determined effort to communicate with others in order to establish your existence. However, once that communication occurs, the online environment makes the circle of peer support more visible and evident.

Much research has been conducted over the last decade into the relationship between the physical separation of adult learners in educational programs and higher dropout rates. Research has revealed that such separation and its resultant reduction in the sense of community, leads to feelings of disconnection, isolation, distraction, and lack of engagement (Rovai, 2002) and is often a major contributor to attrition (Morgan & Tam, 1999). Rovai (2002, Background section) further reports that research has provided evidence that

strong feelings of community may not only increase persistence in courses, but may also increase the flow of information among all learners, commitment to group goals, cooperation among members, and satisfaction with group efforts... Additionally, learners benefit from community membership by experiencing a greater sense of well being and by having an agreeable set of individuals to call on for support when needed. (§ 5)

Virtually every community that exists for any length of time has to have a notion of place or an event, where people gather in the physical world. These places and events punctuate the life of the online community, give it vibrance, and help sustain it. Regardless of the strategies employed by the teacher, the decision to join an online community appears to rest with the “will” of the individual (Brook & Oliver, 2003). Members need a reason to come back, time and time again, to an online community. Data gathered for this study, and evidence from post-study activity, indicate that the establishment of a supportive learning community is highly valued in the online context.

Johnson and Johnson’s (1985, as cited in Andres, 2002) research indicates that cooperative learning experiences promote higher achievement than do competitive and individualistic experiences. Kimball (2001) notes the importance of creating a community where participants can “share their deepest thoughts and feelings about their own personal growth and its relationship to their role as educators”. The *UNESCO Task Force on Education for the Twenty-first Century* website has been established to further debate and reflect on the ideas expressed in *Learning: the Treasure Within*, the 1996 report to UNESCO of the International Commission on Education for the Twenty-first Century. The UNESCO report is promoted as “a powerful plea for viewing education in a broader

context”. On this website, it is stated that education throughout life is based upon four pillars: learning to know, learning to do, learning to live together and learning to be.

Delors (2004, Introduction section) in the introduction on the website, states:

It is the view of the Commission that, while education is an ongoing process of improving knowledge and skills, it is also - perhaps primarily - an exceptional means of bringing about personal development and building relationships among individuals, groups and nations. (¶ 4)

“Learning to live together”, as one of UNESCO’s central pillars of learning in the 21st century states that an essential tool for education is a suitable forum for dialogue and discussion which promotes an awareness of the similarities and interdependence of all people. No distinction is made in terms of educational context and the researcher believes that these findings and statements are equally applicable to online learning environments.

Despite coming from one educational institution, the adult learners in this study were brought together from a diverse number of discipline areas and cultural groups. As part of this study, one of the variables was the conduct of an initial workshop on site in Singapore. It became evident at that workshop that many of the participants knew very little about each other. However, a shared sense of identity emerged and strengthened their communal identity. During the face-to-face workshops, learners were able to interact with teachers and fellow students which encouraged the participants to consider issues from multiple perspectives. The feedback from participants supporting the inclusion of the workshops in the program suggests that for this context, a “mixed mode” or “blended” approach to online learning may be appropriate:

. . . all participants found our [orientation] sessions . . . very helpful. This could be one of the must haves for any future courses . . . (Anonymous)

This finding is of interest to the researcher given the multicultural profiles of the adult learners at USQ and the institution’s vision to be a leader in transnational education. In many Asian contexts, a sense of community takes precedence over the individual. Asian students often prefer sharing ideas and co-operating rather than competing.

In response to my question, “Why have online discussions?” a participant in the study responded,

To encourage my students to express themselves online. Especially for Asian students who are not used to voicing their problems in public. (P03)

The Kuwait culture from which USQ also draws students, is strongly relationship based, and teachers need to concentrate on creating a learning community and a sense of presence. A student working in the Middle Eastern region observed that

building a relationship is more important than content or assignment due dates to students in Kuwait. (PS10)

It is apparent from the facilitative work I have undertaken in 2004 with learners studying in the online Masters program that the notion of an ongoing community of learners and a learning community relates well to the idea of “future orientation” (Misanchuk & Anderson, 2001, Characteristics of Community section, ¶ 6). Online learners have indicated a strong interest in participating in a learning community that spans an entire program of study, and is not specifically related to the courses in which they are enrolled. In fact, some have indicated a desire for the development of an online “alumni” which extends beyond the boundaries of graduation which will enable participants to maintain and nurture professional associations and relationships in order to “share and generate knowledge in a mutually supportive and reciprocal manner” (Misanchuk & Anderson, 2001, Characteristics of Community section, ¶ 9). Online participants from post-study activity have noted:

The interactive element has made me much more motivated and interested in the learning materials. Getting to understand material from everyone else’s perspective has been an incredibly worthwhile and efficient way for me to get my head around the material and develop my own perspective. (Anonymous)

...the concept [of online learning] is akin to a virtual campus that I can enter from my desktop . . . in which communities of practice are intentionally cultivated so that

I may interact and collaborate in the construction of new understandings and relationships. (PS05)

Table 5.4 provides details of operational activities for Principle 4.

Table 5.4

Principle 4 – Learning is a Community Activity

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
4. Learning is a community activity	<ul style="list-style-type: none"> • Provide formal and informal activities in an online environment to develop a sense of community, especially at the beginning of a course e.g., introduction forums, home pages, and small group activities that focus on the process rather than an outcome. (facilitator, designer) • Make email an integral part of the online learning community and use it creatively to maintain contact with participants, prompt activity, and promote a caring, safe environment for learning. (learner, facilitator) • Explicitly state, and actively model the recognition and acceptance of difference in terms of perspectives, values, beliefs, etc. (facilitator) • Ensure there is a sense of substantive, meaningful purpose for the existence of the online community e.g., participating in interactive, collaborative activities that are tied to assessment requirements. The notion that an online community can be solely about coming together to talk is questionable. (facilitator, designer)

5.2.5 Principle 5 – Merge the Roles of Educators and Learners: Blurring the Boundaries in Online Contexts

The roles of participants (teachers and learners) in online learning contexts are different to those roles adopted in conventional, instructivist learning environments. In online constructivist settings, where the learner is viewed as central to the learning process, the teacher often adopts the role of a peer learner offering alternative perspectives. The teacher can assume the role of companion, or fellow traveller in the learning situation (Hung, 2001; Jonassen, 1998). This environment places both the learner (and the teacher) on a level setting without the dominance of authoritative influences. Research and anecdotal evidence suggest that many adult learners are looking for opportunities for dialogue and more involvement in their learning. Laurillard (2002, p. 22) argues for the idea of a “conversational framework” for learning which she believes captures the essence of university teaching as an “iterative dialogue between teacher and student(s)”. The online environment provides the opportunity to engage students by exploiting “the communicative, interactive, and adaptive capabilities of the technology” to facilitate this iterative dialogue. Online learning environments using constructivist approaches support “active learners, who construct knowledge, rather than passively absorb it” (Andres, 2002, ¶ 1). Learners are encouraged to work together to be problem solvers who refine their questions and search for answers. The emphasis is on knowledge use for the real world (Palloff & Pratt, 1999).

The changed role for a teacher moving from a traditional to a constructivist learning situation is particularly relevant when describing contemporary online learning contexts. Instead of relying solely on a teaching process where information is dispensed, the teacher’s role has been extended to embrace constructivism in order “to arrange conditions in which learning can occur” (Collins 1999, p.10). For the teacher this requires “a consequential shift from the person culture typified by the academic freedom and lecturer autonomy, to a role culture” (McDonald & Postle, 1999, Roles, ¶ 1). The changes include moving “from a teacher in front of a classroom to a facilitator who is one with the participants and whose primary role is to guide and support the learning process” (Gunawardena, 1992, p. 61); “from purveyor of knowledge to facilitator of personal

meaning making” (Jonassen et al., 1995); and from “sage on the stage” to “guide on the side” (Airasian & Walsh, 1997). In online constructivist learning situations, the teacher assumes the role of mediator, modeller, and motivator (Airasian & Walsh, 1997), consultant, advisor-counsellor, researcher and resource provider, expert questioner and provocateur, and member of a peer learning team sharing control with the learner as fellow-learner (Goodyear, Salmon, Spector, Steeples & Tickner, 2001; Herrington et al., 2000). 2. The peer learning, two-way reciprocal model (Boud, Cohen, & Sampson, 2001) illustrates the network of learning relationships that occurs among students, facilitators, and others in an online setting and the opportunity for participants to teach and learn with and from each other in formal and informal ways.

The multiple roles of the online facilitator illustrate that teachers are very important to learners studying online. An NCVER report (NCVER, 2003a) notes that rather than removing teachers from the learning equation, integral to the whole process of online learning are interactive, responsive teachers. The notion of the “cookie cutter” teacher (Serim, 1996, *How Will You Learn* section, ¶ 6) who was provided with an adequate curriculum to produce adequate results for many people is a thing of the past.

Promoting and fostering transformative learning in an online environment requires the educator to set the stage and provide opportunities for critical reflection. The online context with tools such as discussion forums and synchronous chat facilities provides an excellent environment where learners can examine their beliefs and debate how their values, assumptions, and ideologies have come to be constructed. Cranton (2003) suggests that a transformative educator should not impose their own views on others. They need to question, challenge, support, and open up alternative views – they need to foster the process of transformative learning.

Spender (2000) observes that:

Our future prosperity depends upon students coming up with new ideas – with using their intellectuality and creativity to solve problems, generate new methodologies . . . our old knowledge transfer system is more of an obstacle than a help. In a knowledge society, the emphasis shifts from the teacher to the student . . . where the teacher and the student work together to produce new information; where the teacher is another resource assisting the

student to solve problems and to come up with new ways of doing things.

(p. 18)

A participant from post-study activity noted that online environments have altered the role of the learner in the learning process and that some have experienced

a shock that they no longer are driven by their teachers to gain knowledge and skills, but guided and assisted. Some symptoms that have been noted are denial, strong emotion, resistance and withdrawal, surrender and acceptance. (PS10)

Table 5.5 provides details of operational activities for Principle 5.

Table 5.5

Principle 5 – Merge the Roles of Educators and Learners: Blurring the Boundaries in Online Contexts

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
5. Merge the roles of educators and learners	<ul style="list-style-type: none"> • Provide opportunities for learners to assume facilitative roles in online environments promoting a sense of ownership and self-direction. This can be in the form of the learners facilitating group activities with their peers (peer learning relationships). (learner, facilitator, designer) • Provide opportunities for peer editing and peer evaluation to give learners the opportunity to view evaluation and assessment criteria with fresh eyes, to critically review the work of others, and to get the benefit of a perspective other than the facilitator's. (learner, facilitator) • Be aware that facilitator interaction in discussions can provide some moderation and direction but should not control the discussion. When the facilitator becomes part of the "team" activity, they become less of a provider and more of a participant (Harasim, 2000) in the activities. (facilitator, designer). • Work as a member of the learning team and embrace the new role culture (facilitator, designer). • Create a balance of independent, interactive and interdependent course activities. This may take more time than designing face-to-face activities (Collins & Berge, 1996).

5.2.6 Principle 6 – “VIP” Communication: Online Communication is Visible - Intant – and provides a Permanent Record

The synchronous (e.g., virtual chat) and asynchronous (e.g., discussion forums) communication tools for online interaction can create a *visible*, *instant*, and *permanent* text-based record. The permanent visibility of discourse sets online learning environments apart from other settings and provides an excellent opportunity for

formal, vicarious learning where participants in the learning process can “watch” others learn (Bandura, 1986; McKendree & Mayes, 1997). Despite the visibility, the environment also enables a certain degree of anonymity. Disinhibition (Suler, 2002) is one of the more frequently mentioned effects of online learning. It is sometimes described as the increased likelihood that a shy student will speak up, for example, or that students will be more forthright. This aligns with Lapadat’s (2002, Introduction, ¶ 3) observation that online environments “democratize” participation in that the teacher is less likely to dominate, and the learners have equal opportunity to contribute to discussions, assuming the variables of technology access, language usage, and typing skills are reasonably equitable. Postle et al. (2003) report that a survey respondent in their research study suggested there are gender and equity benefits arising from the use of an online learning environment:

Operating in the online environment means that bodily differences and social values attached to visible differences are invisible and irrelevant - teachers and learners online construct themselves through text in the discussion forums, for example (distinctions of gender, ethnicity, body shape or impairment, accent or speech styles ‘don’t matter’ – visual cues of difference are missing) and the challenge is to know more about online sociality and the ‘special circumstances’ of learners. (section 5.3.3, ¶ 7)

An advantage of communication in the online environment is its focus on the written word. As Kassop (2003, point 2, Writing intensity), points out, “for many years, our colleagues in the English department have . . . [said] . . . that the best way to teach students how to write more effectively is to have them write *more often*”. Communicating in an environment that is primarily text-based using the written word has made this adage a reality. A post-study participant noted that

. . . an advantage of discussion boards . . . [is] students can go back to the discussion boards when they have time and catch up on what has been happening. (PS01)

Another post-study participant observed the value of vicarious learning by making the comment that

I began to see how much I really learned from what others had to say both in formal and informal learning contexts. (PS03)

In addition, communication in online learning environments needs to be clear and carefully crafted in order to be sensitive to the nuances of different cultural expectations and interpretations. Table 5.6 provides examples of text-based activities for the online environment.

Table 5.6

Principle 6 – VIP Communication: Visible - Intant - Permanent

Principle	Examples of Text-based Communication Activities in Transformative Online Environments
6. VIP Communication: Online communication is <u>V</u>isible - <u>I</u>ntant – and provides a <u>P</u>ermanent record	<ul style="list-style-type: none"> • Maintain a text-based record of experiences throughout a learning period to develop permanent and visible evidence of a learning journey e.g., through a learning log or diary. Events of significance become apparent and recognisable when they can be re-read and reflected upon in order to make meaning of those experiences. (learners) • Work collaboratively to negotiate and reach consensus on shared rules of engagement, and develop guidelines for the responsibilities of group members. (learners, facilitators) • Provide reasoned, reflective comment through the use of the written word. This can involve the disciplined and rigorous higher order thinking processes of analysis and synthesis. In higher education, writing is crucial to thinking about complex issues in a meaningful manner (Garrison, 1997). Rational discourse is at the heart of transformative learning. (learners, facilitators) • Use the text-based, online environment to participate in “conversations” that can occur over a period of days. The flow and direction of the discussion is permanently captured in visible, permanent text. This enables review, revision, and reflection on the activity. (facilitators, learners) • Conduct online, role-playing activities in groups with each group member assuming a different role e.g., in a post-

	<p>study activity, the researcher used the concepts of de Bono's (1999) six thinking hats to stimulate online group debate over several days in order to view an authentic problem from multiple perspectives, and propose solutions. (facilitators, learners)</p> <ul style="list-style-type: none"> • Have group representatives present summaries to an entire "class" area enabling learners to analyse and then synthesise a wide variety of material. This permits learners to feel involved in the larger group while maintaining the interaction and focus in smaller groups. (facilitators, learners)
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5.2.7 Principle 7 – Interpret and Respond to Signs of Change

As discussed in Chapter 2, societal expectations of education in the contemporary world have changed to reflect the knowledge society where technological advances have encouraged and enabled pedagogical change. This change has been reinforced by the move to online education. The changes encourage educators (including the researcher) – even force them, to question, critically reflect upon and re-evaluate their existing teaching practice. Innovative models of online pedagogy including situated learning, authentic content and contexts, and access to real life examples and experts, do mean that people need to discuss and work together to formulate solutions. Assessment activities can be integrated into ongoing activities and not be separated from them. The online environment is a perfect "incubator" for these activities to occur.

Cranton (1997, p. 7) observes that "we do not make transformative changes in the way we learn as long as what we learn fits comfortably in our existing frames of reference". Adults can be quite persistent in holding on to their values and beliefs and, as Brookfield (1990, p.15) points out, "routine, habit, and familiarity are strongly appealing" and "for some, the conduct of life is a quest for certainty, for a system of beliefs and a set of values . . . that they can adopt and commit to". Cranton (1994, p.18) observes that adults will resist contradictions to their beliefs and will deny discrepancies between new learning and previous knowledge. In response to a challenge to their assumptions, many learners (and educators) will entrench themselves even more firmly in their belief system and become hostile or withdrawn in the learning environment. Traditional pedagogies can

translate to online practice easily with emphasis on content driving the learning environment and the roles of the teacher and learners. Activities can be individual, and don't need to be situated in real life examples. Communication can be limited to teacher-learner.

As with transformative learning, change is a process, not one single event. The online learner must be prepared to move from a linear learning mode with the teacher as presenter, to an adaptive learning approach which incorporates the idea of a learning cycle. According to Mayes (2002), this concept of a learning cycle acknowledges that learning is not a one-off process but involves “continuous (even lifelong) revisiting and tuning of concepts and skills” (Section 2, ¶ 1). This process consists of three main elements, phases, or stages - conceptualisation, construction and dialogue. Mayes (2002) suggests that the conceptualisation stage involves an interaction and contact with other people's concepts, thus generating an interaction between the learners pre-existing cognitive framework and a new position. It involves the process of coming to an initial understanding. This is followed by a construction stage where the learner builds and combines concepts through the use of meaningful tasks, into a new knowledge. Lastly, the consolidating or dialogue stage enables the testing of the new understandings. This is the stage when expertise begins to appear, and the learner begins to use the new understanding within the context of real application. In online practice, this means being involved in a social context with other online learners, and engendering the use of dialogue and interactivity in the learning environment.

Table 5.7 provides details of operational activities for Principle 7.

Table 5.7

Principle 7 – Interpret and Respond to Signs of Change

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
7. Interpret and respond to signs of change	<ul style="list-style-type: none"> • “Read” the learning environment regularly and be prepared to adapt and change according to the context. This is an ongoing process which occurs throughout the learning experience. (facilitators) • Refer to evaluation data gathered in formal and informal ways in order to revise course offerings. Provide facilities in online courses for informal feedback (through the use of a dedicated discussion area), private email comment, and a formal process for course evaluation where data can be collated and presented in a meaningful format.

5.2.8 Principle 8 – Lead by Example: Create a Model Experience

The provision of exemplars for learners and the modelling of appropriate activity and behaviour continue to be powerful ways to encourage and foster learning in the online environment. A central element in Imershein's (1977, influenced by the work of Kuhn, 1970) theory of organizational change was his belief that exemplars provide group members with concrete models for their activities and an opportunity for developing a shared understanding of these activities and the roles of people involved in the activities. Campbell (1977, as cited in Candy, 1981, p. 89) observed that “training for adult education ought to demonstrate, indeed to epitomize, the principles inherent in adult education”. Evidence in this study strongly supports the desire of online participants to have access to exemplary materials and “model” answers, particularly those that are pertinent to their discipline or area of work. Berge (1996) stresses the importance of the facilitator emulating (and encouraging) appropriate behaviour in order to establish clear norms for participation. In the case of online learning, this can relate to establishing rules and standards of *netiquette* (internet etiquette). This is supported by Kimball (2001, p. 8) who stresses the importance of spending more time “being explicit about mutual expectations”.

Those advocating the adoption of flexible teaching-learning in higher education settings often argue that the main reasons for non-adoption of change can be directly linked to the lack of skills of the participants or to a lack of knowledge or understanding of the nature of the change. This is a deficit view of change, which assumes that the organisation's members need to acquire the "new" knowledge and skills in order to achieve the aims of the change. Imershein's (1977) framework is not consistent with this deficit view of change. It suggests that the members of an organisation are guided by what they understand **can** be achieved, given their shared understanding of the nature of the activities and tasks they perform, and their understanding of the roles and responsibilities of members within the organisation. They do not deliberately set out to sabotage an innovation. They will seek new ways of doing things if they collectively perceive that things require improvement (Reushle & Postle, 1999). An online participant noted,

I hope to be able to emulate yourselves in the conduct of my own module in the e-component aspects. (P08)

A post-study participant made the observation that

. . . learning some of the tactics used by the example set was probably more important to my learning context than the tasks themselves. (PS01)

Written communication, Porter (2004) notes, "must be a model for your learners . . . because [it] may be studied and interpreted long after you send it . . . [and] . . . must be able to stand up to scrutiny by a variety of readers" (p. 22).

Table 5.8 provides details of operational activities for Principle 8.

Table 5.8

Principle 8 – Lead by Example: Create a Model Experience

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
8. Lead by example: Create a model experience	<ul style="list-style-type: none"> • Provide quality models or exemplars as a basis from which to build sound online learning experiences. The belief that if technology is used, pedagogical change will emerge has not been justified. Equally, “if you build it, they will come” approach to online may very well result in poor outcomes. (facilitators) • Ensure the “first words” provided set tone and expectations, and provide models for online communication for learners. Use words such as “welcome”, “shared”, “learning journey”, “exciting”, “experience”, and “fun”. (facilitators) • Provide model answers, responses to assessment questions, or quality project reports from previous course offerings. (facilitators) • Provide guidelines for online etiquette (“netiquette”) such as models of behaviour in group activity, and procedures for sending, receiving, and responding to email messages. Have learners participate in a collaborative activity where guidelines for online engagement are negotiated by the whole group. (facilitators, learners) • Model facilitation techniques to provide sound examples for learners. (facilitators)

5.2.9 Principle 9 – Build, Manage, and Nurture the Learning Environment

Because the learners are remote physically to the learning context, it is necessary to “build” an environment. Tools such as synchronous discussion boards, group pages, and email facilities must be used in a way that helps to convey to learners that the environment is not just drifting but there is some purpose to it all.

To build and manage efficient online learning environments, Kimball (1998) has identified some strategies which are very pertinent to the framework in this study. As

introduced in Chapter 2, some of these strategies include the managing of metaphor, meaning, culture, time, and collaboration. She suggests choosing metaphors to define spaces for different kinds of interactions (e.g., water cooler, or coffee time) to create a “rich mental construct” about various activities. A focus on “atmosphere” and “ambience” is of paramount importance and requirements and expectations must be explicitly stated in terms of communicative styles (risky, focused, fast-moving, academic, conversational) and behaviours (supportive, reflective, challenging, team focused). Kimball (1998) has identified a time situation she refers to as the “rolling present” where learners’ perceptions of what is *current* can be quite different. Learners can be working “on a number of fronts” and Kimball (1998) notes that this can be a difficulty in an online context where there is a need to allow some flexibility while, at the same time, keeping on track and with some common sense of purpose. The online teacher must be very aware of the need to build and manage the learning environment in a way that the group feels part of a learning community which is making progress. Time-based goalposts or milestones can provide this structure in the form of study or progress charts, regular group and personal electronic contact, and scheduled synchronous chat activities. The tension between delivering content resources and creating a motivating, productive online learning environment continues to be of concern and as noted by Kimball (1998), “there’s more to developing a relationship among a collaborative learning group than sharing access to [an electronic] folder”. Through the use of the “journey” analogy, the learner can assume the role of “explorer” where the teacher sets up specific “landscapes” in which the learner can then be encouraged to explore certain issues or concepts.

Reliability of the online setting is another critical issue that cannot be ignored in nurturing a successful online environment. Cashion and Palmeri (2002) have found that significant deterrents to a high-quality online learning experience for students are problems with technology and access to the internet. Their research found that students believe technical systems and issues are the areas most in need of improvement and that quick and easy access to technical support is what learners value.

In an evaluation conducted by Reushle et al. (2004), a respondent noted that,

. . . USQ is well aware that technology must strive to be as seamless as an f2f environment. Most problems were taken care of within 24 hours, oftentimes less, and at one time I even received a telephone call all the way from Australia, querying about the problem I was experiencing. (Anonymous)

In their study, Cashion and Palmieri (2002) also identified another feature students believe constitutes a high-quality online learning experience was the importance of *responsive teachers* who exhibited high levels of interactivity, availability, and who negotiated response times which they subsequently adhered to. As mentioned previously, merely building a learning environment does not guarantee that *they will come* (Manktelow, 2004). Working successfully and effectively in an online environment requires the educator to enjoy their work, to keep up with trends in design and information, to feel comfortable with using the tools of the Internet, and to be an efficient online researcher (Porter, 2004).

Table 5.9 provides details of operational activities for Principle 9.

Table 5.9

Principle 9 – Build, Manage, and Nurture the Learning Environment

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
9. Build, manage, and nurture the learning environment	<ul style="list-style-type: none"> • Maintain a structured folder and file system in which to store online interactions, messages, responses, and other course data. Because an online environment is primarily text-based, record keeping can be quite complex. (facilitators) • If the facility is available, “prioritise” discussion forums by moving some toward the bottom of the screen as topics are dealt with and by archiving other forums in an attempt to reduce download times. (facilitators) • Use facilities such as the “Announcements” facility, and group email to keep learners informed. (facilitators) • Regularly monitor the online learning environment and respond to queries, and concerns. Within a day or so, with a class of fifty learners, a multitude of online communications can be generated. (facilitators) • Ensure technical difficulties experienced by learners (and facilitators) are addressed quickly and efficiently. (facilitators)

5.2.10 Principle 10 – Motivation and Preparation: A Predisposition for Change and Transformation

Evidence suggests that those with a greater predisposition for accepting change are more likely to experience perspective and action transformation. Taylor (1998) reports on a number of studies that reveal that some learners have a greater predisposition toward change than others. He reports on a study into fostering transformative learning conducted by Pierce (1986, as cited in Taylor, 1998) and notes that those who experienced the greatest degree of change in perspective were those learners who came to the educational context with recent experiences of critical incidences in their lives.

These findings may be transposed to this study, and to the development of the framework for design. Some of the participants in this study may have come to the course which was the focus of this study with greater levels of readiness for transformative approaches than other less experienced learners. Those more prepared appeared more open and receptive to change. Wenger, McDermott, and Snyder (2002) describe five stages of development through which a community of practice may pass over time: potential, coalescing, maturing, stewardship, and transformation. Although these authors are referring to “learning communities”, these findings have some bearing on this study. Within any course with “timeline parameters”, it cannot be assumed that all learners will achieve the maximum outcome. This is supported in the doctoral work of Harris (2002) who found that there were dramatically different transformative learning outcomes among the most and least developed students. She concluded that developmental stage appears to influence a students' experience of transformative learning, the nature of the support they require and their use of particular strategies.

Because some teachers believe that their particular learning environment has constructivist attributes, it does not mean it has and in fact, many current learning situations may merely be traditional teaching in “different clothes”. Findings in this study indicate that this could be the situation at the polytechnic in Singapore where some participants have indicated that their philosophy of teaching is grounded in constructivist principles, but they are, in fact, reverting to their more traditional ways of teaching. Muirhead (2004) has noted that students who are cognitively immature may not actively participate in online discourse and may look for the provision of the “right” answer, viewing knowledge not as critical thinking but as a collection of information. Many of the learners in the educational context within which this study was conducted come from traditional Asian educational systems where concrete thinking is encouraged. The constructivist learning methodologies can be a challenge for some. Some of the participants in the study had expectations of instruction, and felt that the teacher was not teaching, for example, “you are the recognized instructor, not me . . . it’s strange how things don’t get chaotic in a f2f class, but it tends to do so in a virtual chat . . .” (COF03). Some of the participants believed that they would need to discard any, and all craft knowledge they had about teaching, and that they would have to learn how to teach all

over again. Some participants feared that what they knew about teaching was no longer valued, reflecting what Collins (2000) found in her study with faculty personnel:

Many faculty feel a deep sense of discomfort and ill-ease . . . often stems from a fear that they cannot cope with the technical requirements, that they must learn to teach all over again and lose their role as the 'dispenser of knowledge' in the course. (§ 8)

Again, the move to embrace constructivist approaches is merely an extension of the more traditional approaches to learning and teaching.

In addition, the high level of written (text-based) English that is needed for online learning might pose another challenge. Individual self-imposed barriers such as mindset can also contribute to a resistance to try, for example, "it can't be done", "it has been tried before and it didn't work", "it won't work", "we have no time", "what's the point", and "Why try? It causes too much pain" (COF01).

Emancipatory learning has remained a goal of adult education through time and across cultures. The educator may try to foster emancipatory learning, but it may not occur - the learner must be, in some way, ready to question assumptions (Cranton, 1994).

Emancipatory learning is the process of removing constraints - of freeing ourselves from forces that limit our options and our control over our lives, forces that have been taken for granted or seen as beyond our control. Mezirow (1990, p. 18) defines emancipatory education as "an organized effort to help the learner challenge presuppositions, explore alternative perspectives, transform old ways of understanding, and act on new perspectives".

Similarly, the influence of the facilitator may have a significant impact upon the learner's outlook to the learning experience. Highly motivated, committed, enthused, knowledgeable facilitators can strongly impact on learner attitudes and related outcomes.

Table 5.10 provides details of operational activities for Principle 10.

Table 5.10

Principle 10 – Motivation and Preparation: A Predisposition for Change and Transformation

Principle	Operational Activities for Learners, Facilitators and Designers in Transformative Online Environments
10. Motivation and preparation: A predisposition for change and transformation	<ul style="list-style-type: none"> • Build a working/learning climate that is positive, supportive, “safe”, tolerant, respectful, nurturing, and participatory. For some, the online environment is new, exciting, but somewhat confusing, and not all participants will be prepared for change. (facilitators) • Provide some initial face-to-face contact with participants, if required by the learning and teaching context. (facilitators) • Provide opportunities for demonstrations (modelling), sharing of innovative ideas, development of formal and informal support networks, discussion, questions, risk taking, raising of concerns – “no question is a dumb question”. • Focus on building a collegial, learning community where ideas can be cultivated, exchanged, tested and evaluated, elaborated upon, and applied.

5.3 Principles + Context = ?

A Practitioner's Guide to Online Design for Transformative Professional Development

In Section 5.2, ten principles were identified that set online environments apart from other learning environments. These principles provide the foundation for achieving the primary goal of this study which is to formulate a framework for the design of transformative approaches to professional development for online educators. Principles, however, cannot exist in a vacuum. Principles need to be identified and then applied in a particular context. In a design situation, the principles outlined in section 5.2 must *pass through a contextual screen* which will then enable an appropriate framework for design to emerge. This contextual screen represents the factors unique to the educational context in which the design is being applied. This does not imply that the specific characteristics that are unique to that context must remain fixed and unable to be changed. To successfully apply these principles, the context may need to be fluid and responsive in order to create an effective learning environment.

The contextual screen is described in terms of three themes:

1. The contextual “conditions” – the organizational philosophy, “high level pedagogy” (Steeple, Jones, & Goodyear, 2002), organizational policies, structures, procedures and resources, discipline and/or content areas.
2. The “travellers” – the learners, teachers (facilitators, tutors), and other support personnel (providing administrative, technical, and additional learning support) located in that context.
3. The contextual “roadblocks” – the specific challenges and constraints that can influence the progress and directions of the learning journey.

Thus, we have the equation:

$$\text{Principles} + \text{Contextual Screen} = \text{Online Design.}$$

This equation is represented graphically in Figure 5.1.

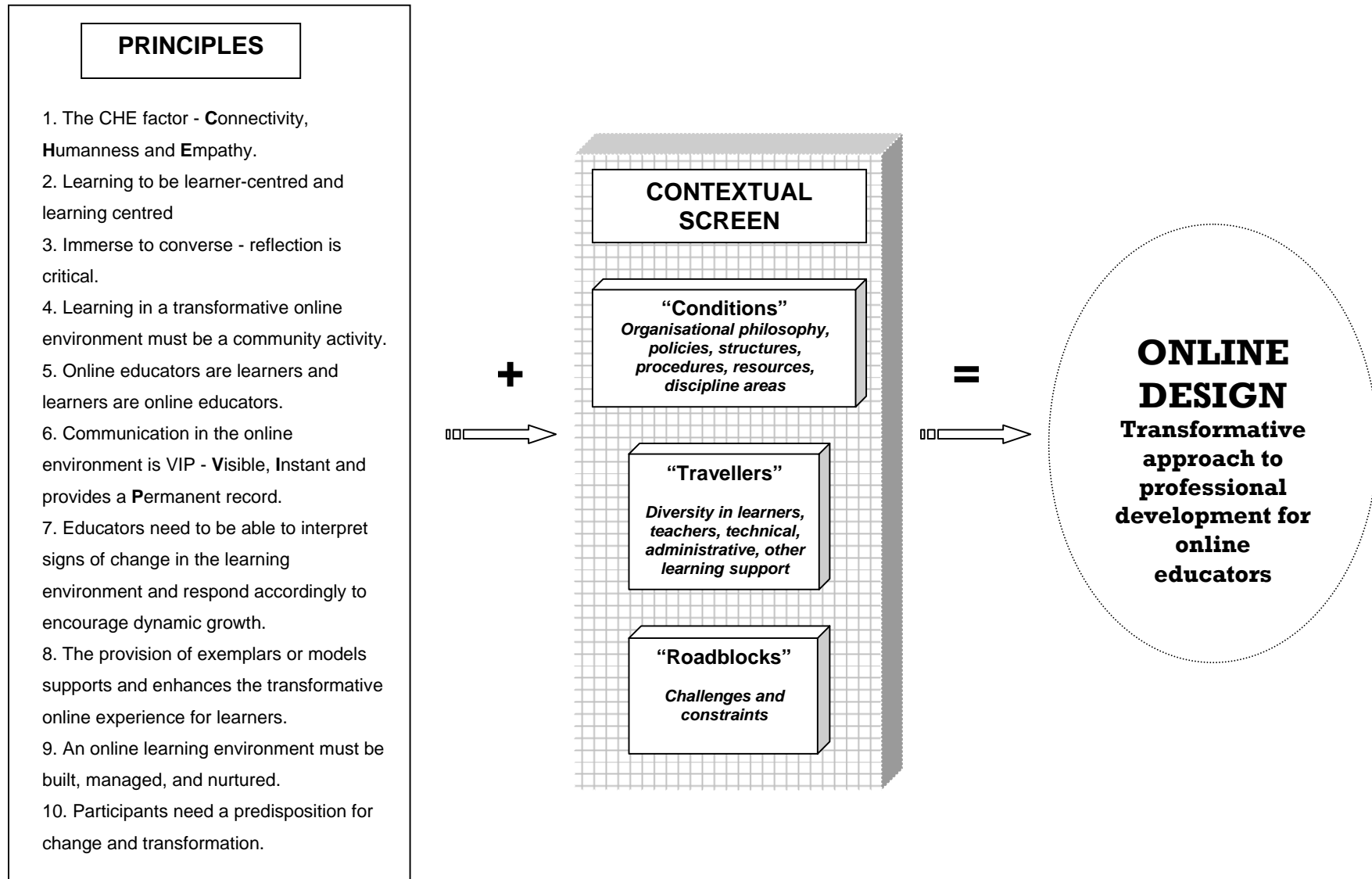


Figure 5.1. Reushle framework for the design of transformative approaches to professional development for online educators.

A design framework cannot be prescribed and used as a recipe or as a “one size fits all”. The framework provides a catalyst for action, *not a recipe* for success. Given what I know about online learning and teaching (my experience), what others have proposed in terms of sound pedagogical practices both generally and online (the literature), and what has emerged from this research study, this framework for online design represents my *hypothesis* about how to achieve transformative approaches to professional development for online educators. The framework (Figure 5.1) can be regarded as a “roadmap” for design but this does not suggest that the path is a simple, one lane country road. It also does not suggest that there is only one road to follow. It can, in fact, be a “multi-lane superhighway with plenty of interconnections” (American Society for Training & Development, n.d.). If learning is a lifelong journey, no learning destination can be defined or accurately predicted. In fact, Dirkx (1998, p. 11) notes that transformative learning has “neither a distinct beginning nor an ending. Rather, it represents a potential that is eternally present within [us] and our learners”.

5.3.1 The Contextual Screen – Conditions, Travellers, and Roadblocks

The “Conditions”

Organisational philosophy, policies, existing infrastructure, requirements of accrediting bodies, procedures, and resources are the conditions which are a reality in most learning and teaching environments. In some instances, these organisational characteristics can create barriers to the adoption of the principles discussed in Section 5.2. Learning and teaching contexts, such as discipline or subject areas, sizes of classes, physical facilities and resources, and working conditions all contribute to the environment “conditions” that influence learning design.

The “Travellers”

The travellers refer to the people who exist within a particular context, or are related to that context. They include the learners (who may be located on a certain campus, or who may be scattered across the globe in diverse locations), the facilitators (teachers, tutors,

instructors, trainers), the administrative and technical support personnel, the management of the organisation, learning support services, and many others. Every learning context will have a different mix of learners, and personnel providing academic, administrative and technical support, and the successful coordination of this learning community can be a complex process. This notion of “individual difference” is critical to the design e.g., educators’ and learners’ psychological and pedagogical preferences will play an important part in influencing how they engage in the learning process.

The “Roadblocks”

In all learning contexts, challenges and constraints occur that can impact upon the success of learning and teaching experiences. These challenges do not necessarily indicate a problem and may, in fact, result in positive outcomes according to the diverse learning contexts in which they occur. Challenges and constraints in the online environment can include:

1. The challenge of building a transformative learning community where learners are physically separated.
2. The challenge of maintaining a cost-effective and sustainable transformative learning environment.
3. The challenge of aligning a learning environment which subscribes to constructivist and transformative learning principles with a learning management system that reflects a traditional view of classroom-based teaching.
4. The tension between flexibility, and interactive and collaborative learning.
5. The need for organisational management to recognise the complexities of learning and teaching in online environments

1. Building a transformative learning community where learners are physically separated.

In the online environment, learners are not only physically separated but interact with each other through the use of text-based discussion boards, synchronous chats and email, without seeing or hearing each other, and mostly without the requirement to be online at the same time. Given the affective nature of forming and maintaining a sense of

community in an online environment, the lack of visual cues may place extra demands on both facilitators and learners (Rovai, 2002).

2. Designing a transformative learning environment that is cost effective and sustainable.

The fact that online education brings with it increased opportunities for interaction implies increased levels of participation on the parts of both the teacher and learner. This raises the issue of workloads, cost effectiveness, and sustainability. Highly interactive online discussion requires low teacher/learner ratios, creating a higher resourcing cost for the university. The University of Phoenix, which targets working adults, has a learning and teaching model that places great value on small class size, and stipulates that class participation is mandatory. Interaction is conducted asynchronously, through threaded discussions that place a high emphasis on learner participation and interaction. For online classes, the University recognises that facilitating class discussions requires a high level of faculty involvement, and classes are typically kept to about nine students per class. The university covers the additional faculty cost by charging more for online courses than campus courses. The course completion rate is 97% and graduation rate is 65% (De Alva & Slobodzain, 2001). Hence the tension exists between cost effectiveness and quality online learning experiences.

3. The constraints of commercially-produced online learning management systems.

Template-driven learning management systems can constrain, rather than support the application of constructivist and transformative learning principles. Learning environments established in such management systems often are reduced to little more than electronic bulletin boards where resources are displayed in a *static* format for learners to “navigate” around in a passive, linear manner. Such learning management systems need to be viewed as “resource bases” with the majority of the active construction occurring within the communication tools, where dynamic discourse and active knowledge construction is promoted.

4. The tension between flexibility, and interactive and collaborative learning.

Learners often initially choose to study online because of the belief that it offers a flexible, “in your own time, in your own place, at your own pace” opportunity to engage in learning experiences. However, the facilities afforded by online environments include communication technologies which, by their very nature, encourage interactive and collaborative learning opportunities. The promise of “flexibility” and the recognised impact of interactivity and collaboration on deep learning, results in a tension in how best to exploit the online environment.

5. Recognition of the complexities of online learning and teaching by organisational management.

A challenge faced by many educators is the need for management to understand the changes required to accommodate contemporary educational practices. In an NCVER report (2003a), it was noted,

. . . how teachers work when teaching online is very different from their delivery of programs purely in the classroom. Many teachers are now working in new and often unfamiliar ways which, in turn, may not be understood by both middle and senior management in their organisation. (p. 6)

This need for management to recognise the complexities of providing a sound online learning environment was acknowledged by participants in this study:

. . . management just needs a more concrete idea of what elearning entails... (P05)

My one single source of frustration would be the lack of acknowledgement that this constitutes part of our "official" duties as lecturers . . . (P06)

Many staff development programs are directed at the teachers involved in learning and teaching online. However, as noted in an NCVER (2003b) report,

. . . non-teaching staff also need to take part in professional development to enable them to understand and support the institute’s learning and teaching directions.
(p. 8)

5.3.2 Implications for Educators

In Chapter 1, it was noted that central to professional development for educators is Cranton's (1996) tenet that *educators are learners*. The point was made that we, as educators, are also adult learners. Thus, in order to create and facilitate transformative learning opportunities we, who are educators and adult learners, must be prepared to critically explore our own values, beliefs, and assumptions (Cranton, 1994; King, 2003a). This means, according to Taylor (1998, p. 59) having "a deep awareness of . . . practice, making explicit . . . underlying assumptions about learning and teaching, developing a critically reflective practice, networking and dialoguing with other educators, and taking an active role in professional development". The significance of maintaining reflective journals, conducting dialogue with others, and actively reflecting on practice emerged from the study. This applies equally to the educators, as it does to their learners. It has become evident from this study that two key factors form the focus of sound professional development experiences for educators working in online environments:

1. the people – the human element, and
2. the activities – the actions.

This moves the emphasis of learning away from *what* we learn to *who* we learn from, and with, and *how* we learn.

Essential features of sound online practice are to include dialogue structured into the course, active learner involvement and collaboration, support and feedback, and learner control of key activities (Coomey & Stephenson, 2001). Learning should be situated through the provision of authentic, meaningful activities, and timely feedback. Critical reflective practice must be central to the learning process, and interactive, collaborative learning opportunities must be provided. In terms of strategies, the stages of Mezirow's (1991) transformative learning process can provide guidance in designing the learning experience:

1. Provide opportunities for disorienting dilemmas to occur (focus questions/ critical incidents/ series of problems).
2. Encourage learners to relate to their own experiences.
3. Provide opportunities for critical reflection.

4. Ensure rational discourse can occur between participants. Bring in other “experts” from the field.
5. Ensure closure/solution/position is reached (new ways of interpreting experience, or confirmation of existing ways), before moving on to the next event.

The ideal conditions proposed for implementing the framework focus on the human element - promoting a sense of safety, and openness in the learning environment, and the necessity for all participants to be trusting, empathetic, caring, authentic, sincere, and demonstrating a high degree of integrity. Instructional methods that support a learner-centred approach that promotes student autonomy, participation, and collaboration are important. Activities that encourage the exploration of alternative personal perspectives, problem-posing, critical reflection, and personal self-disclosure ensure that discussing and working through emotions and feelings occurs before critical reflection. The learning situation should be democratic, open, rational, and have access to all available information (Taylor, 1998).

Proceeding from studies of theory, to practice can be “backwards” for many people. With adult learners, it is wise to build on experience in order to scaffold into theoretical aspects of a discipline. Thus the provision of discipline-specific exemplars is critical to the learning process. Courses focused around “disorienting dilemmas” and around learners’ experience/existing ways of knowing, or starting with the familiar, rather than the theoretical, are more likely to suit the adult learning process. Cranton (1996) provides sound advice for adult educators when she notes that,

No one theory of adult learning informs all educators. No one model describes educator practice. No one paradigm underlies adult education research. No one philosophical perspective determines the goals and responsibilities of adult education. (p. 5)

What can face-to-face teachers learn from participating in an online environment? The removal of one sense (sight) can heighten other senses e.g., an awareness of emotions, active listening, and taking time to reflect. Sound facilitation in an online environment calls for good needs analysis (e.g., students’ prior knowledge/skills, conditions of learning), and sound design of active learning opportunities through meaningful and engaging activities. Participation in such activities often heightens the awareness of

traditional educators who then become more educationally responsive in their own learning and teaching contexts.

What of technologies that can automate responses to learners, or provide intelligent “agents” who can “look over the student’s shoulder” as they progress through a course? Automated response systems have their place in the electronic world and are useful devices for providing answers to often-asked, administrative questions. However, being able to predict what learners want and need at any particular time in the learning process is extremely difficult. As Laurillard (2004, ¶ 23) notes, “it’s a difficulty that intelligent tutoring systems ran into, of being able to codify and formalize our understanding of the learning process to such an extent that you can actually make meaningful intrusions or interruptions in their learning process”. In challenging the economic rationalist approach to education which provides support for the automation of educational experiences, Raschke (2003) notes that, although education may function in many ways like a business, the “pure profit motive will always remain incompatible with the social aims of effective education” (p. 23). He makes the point that because digital learning is client-centred and learner-driven, it can “never really become an instrument of corporate regimentation”. He is critical of what he refers to as the “digital industrialists” – those who have “a kind of sci-fi, or Star Trekian, picture...of inherently smart systems of technology that are ubiquitous and provide automatic guidance for fallible denizens of cyberspace”. Davis and Botkin (1994, as cited in Raschke, p. 85) consider this is nothing more than an attempt to “automate the past”. The idea of the teacherless classroom flies in the face of what is seen as the value provided by digital technology – “the opening of a universe of endless interactivity” – to the “age of transaction” or “transactivity” (pp. 55-8) with a focus on human interaction, as compared to the information age which suggests a passive encounter.

The concept of “digital natives” and “digital immigrants” proposed by Prensky (2001) cannot be ignored. Prensky (2001) highlights the differences between a generation that has grown up with digital technologies (referred to as “digital natives”) and those who grew up before digital technologies (“digital immigrants”). He agrees that natives and immigrants share many ways of learning and employ some of the same online tools to learn e.g., discussion forums. However, he adds that the “natives” expand on these tools

“through links to sharing, selling, downloading, blogging, and other communities, leav[ing] the online academics far behind in this area” (Prensky, 2003, ¶ 8). Educators need to know their learners, explore and use the technologies that learners are using, and accommodate the new abilities, skills and preferences of the digital natives which he believes are, to a large extent, “misunderstood and ignored by the previous generation of educators” (Prensky, 2003, ¶ 1). Educators and learners need to be encouraged to be open minded and willing to consider new perspectives, to be willing to share thoughts with others, share resources, share findings, and share experiences. Unfortunately, this sense of sharing tends not to be supported in an environment that rewards individual success and encourages persons to compete for funds, and academic recognition in the form of promotion, salary increases, and professional respect.

5.3.3 Implications for Institutions

The implementation of effective online environments can cause cultural and administrative upheaval within an institution (Reushle & McDonald, 2000). Limerick, Cunnington, and Crowther (1998) believe that the secret of organisational success, in general, is in the liberation of individuals, existing in a climate of constant improvement and constant change, where “participants themselves . . . must set the rules - and who can renegotiate them when appropriate” (p. 14). The words that appear to epitomise this new world order include autonomy, empowerment, networking, interdependence, decentralisation, negotiation, and flexibility, requiring a new mindset which must embrace “individualism, collaboration and innovation” (p. 22).

These statements support implications that can be extrapolated from this study in terms of educational institutions preparing to implement a transformative approach to professional development for online educators. They include:

1. Online education is now a mainstream part of the daily work of many educational institutions, and is not an added extra. Online education is “no longer peripheral or supplementary . . . it has become an integrate part of . . . society” (Harasim, 2000, Conclusion, ¶ 1). The pedagogical principles proposed in this report need an organisational commitment to be supported with resources, including incentive funding

and professional development opportunities. An NCVER (2003a) report noted that “budgets, workloads and outcomes reporting are still framed in terms of student contact hours, which bear little relation to the way in which online teaching and learning takes place . . . if online teaching is successful it is despite the system not because of it” (p. 9). This is supported by observations made by participants in the study:

Institutions need more ‘e-learning-friendly’ policies, recognition of online developmental efforts, and a greater understanding of the skills and time required to enable and foster meaningful online facilitation. (COF01).

I think management just need a more concrete idea of what elearning entails . . .
(P05)

My one single source of frustration would be the lack of acknowledgement that this constitutes part of our “official” duties as lecturers. (P06)

[There is a need for] greater and more personal involvement of top management.
(Anonymous)

Management do consider elearning as just a new buzz word and not really understand what goes into its preparations and how to sustain that. (Anonymous)

2. Organisational administrative systems need to support communities of learners, and communities of practice. The systems must not drive, or restrict, the online pedagogical needs and requirements. This, however, does not suggest that administrative imperatives e.g., enrolment procedures, learner progression, and assessment requirements, are to be ignored, which acknowledges the reality of working within an educational institution. As Bertrand Russell (1949, p. 67) aptly observed, “a healthy and progressive society requires both central control and individual and group initiative: without control there is anarchy, and without initiative there is stagnation”. However, where administrative conventions impose constraints which may impact on effective and creative online design (e.g., imposing a system for design that restricts and constrains innovative online pedagogy and

dictates one way of “doing”, restricting the number of assessment items allowed; limiting the amount of time students can access the internet; or restricting the amount of time allowed for teachers to work with students), it could be said that it is an educator’s responsibility to challenge those conventions. Again, Russell (1949) offered insightful comment when he suggested that

people do not always remember that politics, economics, and social organization generally, belong in the realm of means, not ends. Our political and social thinking is prone to what may be called the ‘administrator’s fallacy’ . . . the habit of looking upon a society as a systematic whole . . . a sort that is thought good if it is pleasant to contemplate as a model of order, a planned organism with parts neatly dovetailed into each other. But a society does not . . . exist to satisfy an external survey, but to bring a good life to the individuals who compose it. It is in the individuals, not in the whole, that ultimate value is to be sought. A good society is a means to a good life for those who compose it, not something having a separate kind of excellence on its own account. (p. 87)

In order to develop a supportive, innovative, online learning environment, teachers need the tools and time to create meaningful materials and activities. This requires a high level “of institutional commitment not only to the infrastructure of online programs, but to faculty . . . development” (Porter, 2004, p. 12).

3. Many educational institutions promote concepts like choice, flexibility, continuity, and inclusivity through terms such as lifelong learning, connected global citizens, and transnational education. Organisational philosophy, and pedagogical principles should be aligned in order to reflect these concepts in practice, and not allow them to remain as rhetorical motherhood statements. At a course level, a participant in the study highlights this anomaly:

It is such a pity that lessons are designed for “E” learning, discussion groups to foster “E” socializing, “E” activities to motivate students on curriculum matters but at the end, we sit for a paper based exam . . . (P06)

It is apparent that only through the synergy of university (organisational) commitment and individual commitment can real change take place, an opinion shared by Pelliccione (2001).

5.4 The Journey Continues - The Möbius Strip and the Potential for Future Research

Research studies tend to create as many questions as answers. In the case of online education, many pedagogical questions and issues that have been around for a long time have been returned to the surface, yet again. As suggested in Chapter 2, the principles of online education defined in this study support the view that “good teaching is good teaching” (Ragan, 1998) because the researcher believes that there are enduring premises about good teaching which transcend all learning-teaching approaches and contexts. Despite these principles being recognised and celebrated as hallmarks of quality learning experiences, the rhetoric is often not operationalised. I have compared this re-occurring situation to that of a *Möbius strip*. The Möbius strip was invented by August Ferdinand Möbius, a German mathematician. It is the simplest geometric shape and is a continuous, *one-sided* structure which has only one surface and only one edge.



Figure 5.2. The Möbius strip.

In this case, the metaphor that illustrates this educational conundrum is that of a journey which never ends – in fact, a journey which appears to have no end, but also no beginning, and which is retraced periodically. As with all eras of educational development, the tension continues between idealism and pragmatism, academic autonomy and economic, political and administrative rationalism, openness and control.

However, the focus on online education has brought with it a renewed scrutiny of sound pedagogical practices and the researcher has been able to identify several areas for

further study. Although this study aims to articulate a “generic” model for the provision of transformative approaches to professional development for online educators in tertiary institutions, just how “generalisable” these principles will be is not evident. Future research will be focused on how this generic model might be applied to other contexts not considered in this study, both within USQ, and in other educational arenas such as:

1. Other discipline/content areas.
2. Other educational sectors e.g., compulsory education (school) contexts.
3. Culturally diverse groups of learners, and homogenous groups of learners.

In addition, the initial exploration of transformative learning and its effectiveness and appropriateness for online learning environments will be extended. The opportunities in this contemporary era for comparative studies between different cultures, genders, and ages, and how individuals make meaning in transformative learning environments are exciting areas to consider. Another interesting question is, “Is this approach to online education more in tune with certain types of learners e.g., learners in postgraduate contexts?” The real test in this research study will be to explore how much the participants in the study are still using the strategies they have identified in, for example, twelve months’ time.

The emerging methodology of design-based research (The Design-Based Research Collective, 2003) has come to my attention since designing this study, and might well be considered for future studies. The method is being promoted as one that is developed by and for educational research and could be used to bridge the gap between research and practice in educational systems. The “intertwining [of] design and research is especially important for establishing collaborative contexts, or activities and cultural structures that support collaboration leading to learning” (Hoadley, 2002, p. 1). The method bears a strong resemblance to action research but is considered by its proponents to be more aligned to research in educational contexts that focuses on the design, construction, implementation, and adoption of a teaching/learning intervention. According to Anderson (2004, p. 1), design-based research is proving to be “an effective educational research tool with . . . potential to aid in the development, and assessment of innovations in education such as e-learning”.

5.5 Planning the Next Trip – A Navigator’s Epilogue

Action research can expose new lines of inquiry and as a researcher, decisions need to be made in terms of which ones to pursue deeply (O’Rourke, 2003). Although I made a decision to remain focused on the experiences of participants in the Singapore polytechnic, ultimately the conclusions I have drawn cannot be considered without reference to subsequent work I have done in 2004 with current cohorts of learners. In retrospect, it would have enriched this study to have included interviews with learners from the accredited courses I have taught in 2004, at the very least to contrast motivations, intentions and world views with those of the teachers from the Singapore polytechnic. As mentioned in Chapter, 4, I have made mention, in this report, of some of the feedback from learners in my 2004 postgraduate courses, but only to report statements that individual participants indicated I could use in writing up this study.

USQ, in reviewing its core values and beliefs, and in recognising the inherent importance and value of educational practices that are inclusive and diverse, has stated its vision to be Australia’s leading *transnational* educator. According to that commitment, transnational at USQ (2005),

. . . encompasses the notion of an organisation that operates in a number of locations - as at home locally as it is internationally - and one that rejoices in the diversity of its staff and students. (¶ 1)

This vision can be promoted and supported through electronic networks and transformative online pedagogy. Harasim (2000) has made the observation that there has been a paradigm shift in attitudes towards online education that will “alter global civilization as educators and learners worldwide adopt and adapt networked collaborative learning” (p. 42). The purpose of education stretches far beyond the acquisition of abilities and skills. Giroux (1988, p. 195) notes that teachers should be concerned with “empowering students so they can read the world critically”. King (2003a, p.88) notes that transformative learning achieves so much more than gaining content knowledge – it “can reach the core of the mind, soul, and being”. The *UNESCO Task Force on Education for the Twenty-first Century* website has been established to further debate and

reflect on the ideas expressed in *Learning: the Treasure Within*, the 1996 report to UNESCO of the International Commission on Education for the Twenty-first Century. This report is promoted as “a powerful plea for viewing education in a broader context”. The introduction to the report *Education: The Necessary Utopia* (Delors, 2004) states the following:

In confronting the many challenges that the future holds in store, humankind sees in education an indispensable asset in its attempt to attain the ideals of peace, freedom and social justice . . . education has a fundamental role to play in personal and social development. The Commission does not see education as a miracle cure or a magic formula opening the door to a world in which all ideals will be attained, but as one of the principal means available to foster a deeper and more harmonious form of human development and thereby to reduce poverty, exclusion, ignorance, oppression and war. (§ 1)

This holistic view of the global influence of education is shared by Brookfield (1995b) who observed:

We teach to change the world. The hope that undergirds our efforts to help students learn is that doing this will help them act towards each other, and to their environment, with compassion, understanding and fairness. But our attempts to increase the amount of love and justice in the world are never simple, never ambiguous. What we think are democratic, respectful ways of treating people can be experienced by them as oppressive and constraining. One of the hardest things teachers learn is that the sincerity of their intentions does not guarantee the purity of their practice. The cultural, psychological and political complexities of learning, and the ways in which power complicates all human relationships (including those between students and teachers) means that teaching can never be innocent. (§ 1)

Support for online education does not imply the end of other approaches to learning and teaching, nor does it suggest that face-to-face learning and “place-bound interactions” should be abolished. The online environment signifies “parallel and alternative forms of human interaction and discourse” (Anderson & Kanuka, 2003, p. 7). These parallel forms are not essentially better, or worse, than pre-web forms of interaction

and education. However, network-enhanced interaction can fulfil some pragmatic human needs at certain points in time by providing access, convenience, flexibility, utility, speed, and cost-effectiveness. More importantly, this study provides evidence that the online environment can support effective transformative learning experiences in particular contexts and for certain purposes, such as professional development in higher education settings. Education is a powerful tool in the global educational environment and the Internet has enabled a new era in human collective activity. A note from a student (PS11) supports this idea:

I have learnt a tremendous amount from this course. When I began, I had no theory or philosophy that guided my teaching practice. By the time I had completed it – I found myself advising a delegation of Iraqi academics . . . on why they should consider moving Iraq into the 21st century and ‘go flexible’. Following my explanation of the pros and cons of on-line learning, they asked for a demonstration of my (new) on-line postgraduate unit on Middle East Politics, i.e. the unit I designed as a part of my final ID Project for this course. They were suitably impressed - I'm hoping what I have learnt will spread to the troubled Middle East and have a positive impact on Iraqi reconstruction!

For an educator, this remark sits at the pinnacle of an educator's sense of professional (and personal) satisfaction and joy. Much has been written about the transitions from the industrial society to the information society and on to the knowledge society. However, my belief is that we are now entering another, more advanced, societal phase – that of the *wisdom* society. In the wisdom society, education facilitates tolerance for alternative values and holds diversity in the highest regard. The focus on knowledge (which, according to Socrates, is only *perception*) does not extend or challenge society enough. Learning is the process for acquiring new knowledge – wisdom is the “ethical and judicious use of that knowledge” (Botkin, 2001, as cited in Miller & Manish, 2001). The questions of ethics, values and social responsibility are critical to learning – learning is not value-neutral. In fact, learning is value-laden, particularly when terms such as knowledge, relevance and voice are changed to *personal* knowledge, *personal* relevance and *personal* voice (van Halen-Faber, 1997). As educators, we need to focus on

developing a society that can appreciate multiple perspectives, multiple values and multiple belief systems, and can generate multiple solutions to complex problems. Adult learning should involve far more than elaborating upon the ways we already make sense of the world. Learning can primarily contribute to “new ways of seeing and understanding our experiences . . . [because] . . . the self is intimately involved in the process of adult learning”. Our role as educators remains of vital importance because in order to nurture transformative learning, we must, as Dirkx (1998, p. 9) observes, “understand the self of the learner in context”.

I relish the sense of incompleteness. I can only live, it seems to me, with a conscious sense of possibility, of what might be . . .
Greene, 1998, p. 256

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Appendices

Throughout the appendices, coded identifiers have been used to indicate from which participant data have been gathered:

P	Participant
COF	Co-Facilitator
PS	Post-Study participant
F	Facilitator

Appendix A

Data Collection (Design 2)

This appendix contains the documentation used in the collection of data for this study. It includes:

- Appendix A1 Letter: Consent of Participants
 - Appendix A2 Letter: Consent of Teachers
 - Appendix A3 Email Follow-up
 - Appendix A4 Interview Questions (Design 2)
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Appendix A1

Letter: Consent of Participants

Date

Dear participants

I am writing to invite you to participate in a research study. I am carrying out the study to address the professional development needs of adult educators in online learning contexts. Your participation in this study may involve receiving one or two emails from me and responding to an online questionnaire. This would involve approximately one hour of your time to reply. Focus group activity conducted in your institution with selected participants will involve approximately another hour of your time. Several participants will also be asked to participate in an online “interview” which will occur in the secure environment of the Blackboard Learning Management System. The synchronous chat facility will be used to conduct the “interview” which will be entirely text-based. This will involve approximately a half hour of your time. Participation will be on a voluntarily basis. Questions posed in the research will aim to have you reflect on the course, and on your learning experiences during the course. I hope you will feel you are able to support my ongoing evaluation and research.

I would also like to seek your permission to use the data generated in the course. The online environment provides rich and useful data through the dialogue, which is archived e.g., the postings to the discussion forums and synchronous chat sessions, and email responses. These sources provide information about the way students have participated and responded to the course.

Learning and teaching online is a relatively new field. Although it may be true that certain teaching/learning theories, principles and practices apply at all levels (school to tertiary) and contexts, it is clear that we still have much to learn about learning and teaching online. In order to ensure that our online courses reflect current and sound theory and principles underlying online learning and teaching, it is important that we conduct such research.

I must make it clear that anonymity of all participants will be preserved at all times if any papers or reports are published in the public arena. Any information collected will be given coded identities, and your name will not be used once the original data has been collected, coded and analysed. The USQ Human Research Ethics Committee has strict guidelines for the way such data is collected, recorded and stored, and staff are closely monitored to ensure these guidelines are followed. When the research is completed, I will provide access to any research papers/reports to your institution and to any individual who expresses an interest.

As previously mentioned, the goal of this research is to ensure high quality experiences for learners so your participation will be greatly appreciated. If you agree to participate in the project, please respond by email, indicating that you agree to participate in the

research project. Either indicate your consent in the section at the end of this letter or, alternatively, just hit 'reply email' and put 'agree to participate' in the header.

If you agree, then wish to withdraw from the project, you are free to do so. You are also free to refuse to participate, with no negative impact on your involvement in your course of study. If you have a concern regarding the implementation of the project, you should contact The Secretary, Human Research Ethics Committee, USQ, or telephone +61 7 46312956.

If you require any further clarification on this research study, please contact me by email at reushle@usq.edu.au

Shirley Reushle

I agree/disagree to participate in the research project – please circle your choice, and insert your name and the date.

Name.....

Date.....

Appendix A2

Letter: Consent of Teachers

Date

Dear Participant

RE: PARTICIPATION IN RESEARCH STUDY

I am writing to invite you to participate in a research study which I am carrying out as part of my Doctor of Education requirements. The study will aim to address the professional development needs of adult educators in online learning contexts. Your participation in this study may involve receiving one or two emails from me and responding to an online questionnaire. This would involve approximately one hour of your time to reply. Several participants will be asked to participate in an online “interview” which will occur in the secure environment of the Blackboard Learning Management System. The synchronous chat facility will be used to conduct the “interview” which will be entirely text-based. This will involve approximately a half hour of your time. Focus group activity may also be conducted with selected participants and this will involve approximately another hour of your time. Participation will be on a voluntarily basis. Questions posed in the research will aim to have you reflect on the course provided to the polytechnic in Singapore. I hope you will feel you are able to support my ongoing evaluation and research.

I would also like to seek your permission to use the data generated in the course in which you participated. The online environment provides rich and useful data through the dialogue, which is archived.

Learning and teaching online is a relatively new field. Although it may be true that certain teaching/learning theories, principles and practices apply at all levels (school to tertiary) and contexts, it is clear that we still have much to learn about learning and teaching online. In order to ensure that our online courses reflect current and sound theory and principles underlying online learning and teaching, it is important that we conduct such research.

I must make it clear that anonymity of all participants will be preserved at all times if any papers or reports are published in the public arena. Any information collected will be given coded identities, and your name will not be used once the original data has been collected, coded and analysed. The USQ Human Research Ethics Committee has strict guidelines for the way such data is collected, recorded and stored, and staff are closely monitored to ensure these guidelines are followed. When the research is completed, I will provide access to any research papers/reports.

As previously mentioned, the goal of this study is to ensure high quality experiences for future learners, so your participation will be greatly appreciated. If you agree to participate in the project, please respond by email. Either indicate your consent in the

section at the end of this letter or, alternatively, just hit 'reply email' and put 'agree to participate' in the header.

If you agree, then wish to withdraw from the project, you are free to do so. You are also free to refuse to participate. If you have a concern regarding the implementation of the project, you should contact The Secretary, Human Research Ethics Committee, University of Southern Queensland, or telephone +61 7 46312956.

If you require any further clarification on this research study, please contact me by email at reushle@usq.edu.au

Yours sincerely,
Shirley Reushle

I agree/disagree to participate in the research project – please circle your choice, and insert your name and the date.

Name.....

Date.....

Appendix A3

Email Follow-up

Hello

Recently I sent you an email asking if you would be willing to participate in an evaluation of the course you have completed with USQ. For this evaluation to be successful, I need to have the support of the majority of the class. However, so far I have only heard from half of the class.

As I said in my first email, the goal of the study is to ensure high quality experiences for future learners, so your participation will be greatly appreciated. The aim is to improve the professional development needs of adult educators in online learning contexts. Your participation in this study may involve:

- receiving one or two emails from me; and
- responding to an online questionnaire.

Several participants may be asked to participate in either an online “interview” or a focus group. This activity would involve approximately a half hour of your time. The questions will have you reflect on the course and on your learning experiences.

I also need your permission to use the data generated in the course (discussion forums, synchronous chat sessions, and email responses). If I do not hear from you, I cannot access that data. As I detailed in my first email, your anonymity will be preserved at all times if any papers or reports are published in the public arena. When the research is completed, I will provide you with access to any research papers/reports.

As previously mentioned, if you agree to participate in the project, please respond by email. You can just hit ‘reply email’ and put ‘agree to participate’ in the header. I hope to hear from you very soon.

Regards
Shirley Reushle

Appendix A4

Interview Questions (Design 2)

Stage 1: DISLOCATION/DISORIENTING DILEMMA

S1.1. Why were you “sceptical” about the value of synchronous chat? What expectations did you have of virtual chat before participating in the course?

S1.2. Can you identify an event or incident during the USQ course that led you to change your opinion about anything to do with online learning and teaching? If so, briefly describe. How did it make you feel?

S1.3. What occurred during the USQ course to make you see the potential of chat to be “unique” and “exciting”?

S1.4. You mentioned that your previous experience of synchronous chat had been more “systematic and fruitful” than in the USQ course. Please explain why this is so.

S1.5. What are the main purposes of assessment and evaluation in online environments?

S1.5a. I noticed that one issue that sparked your reaction during the USQ course was that of “assessment” (I remember the Co-For chat and your reaction to another’s interpretation of “assessment”). Also, in one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? What should the main purposes of assessment in online environments be, do you think, and are there any barriers in the NP environment to achieving this?

S1.6. In one of the chats, M mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? Can you suggest any alternatives?

S1.7. In your comments during the course, you mention your resistance to e-learning and then later you say that you could see “some bright light” – can you please elaborate? How did this make you feel?

S1.8. Why were you so sure, initially, that you did not need the synchronous chat feature with your students?

S1.9. During the USQ course, you mentioned that those who are task oriented and appreciate a lot of structure are not suited to learning in a chat room environment. What is/was it that made you think this?

S1.10. Describe your perception of online learning and teaching at the beginning of the USQ course.

S1.11. You also mentioned in one of the forums that the typical mindset of most of your students is, "if it isn't graded, I am not involved". Do you still have this opinion? You also mentioned the difficulty of getting students to participate in forums. How might you overcome this mindset?

Stage 2: DECONSTRUCTION/QUESTIONS & ISSUES THAT NEED TO BE ADDRESSED

S2.1. Were there any “surprises” resulting from this recent online learning experience with USQ? If so, please elaborate. Did you find that other colleagues at the polytechnic experienced similar surprises? If so, how do you think they reacted?

S2.2. You mention in one of the discussion forums that you are “beginning to see a new light” in the use of virtual chat. You say that we need to “pin down” how and when to use it meaningfully. What further thoughts have you had re knowing “how and when to use” chat?

S2.3. Are there any barriers to implementing your philosophy of teaching in an online environment? If so, what are they and what are the effects of those barriers.

S2.4. What did you find most difficult (or what do you think your peers find most difficult) about learning online with USQ? Explain this. Can this difficulty be overcome? If so, how?

S2.5. Do you think e-learning is different to face-to-face learning and teaching? If so, in what ways?

S2.6. Does online learning change the roles and responsibilities of the teachers and the learners (as compared to face-to-face)? Please elaborate.

S2.7. In one chat session, you referred to Glen as the “recognized instructor”. What are the characteristics of a good teacher, do you think?

S2.8. Is it a legitimate belief that some of your colleagues at NP fear that the online environment will enable students to reveal a teacher’s “shortcomings”? What evidence is there of this?

S2.9. How would you define a “motivated” learner? What are the characteristics of “motivation”? Do you believe that online learning is more suited to “motivated” students? Why or why not?

S2.10. You mentioned that if the level of discussion is not what you expect because it's either too high or too low, you would tend to contribute less. Why were you unable to complete the USQ course?

**Stage 3: RECONSTRUCTION, REGENERATION, REDISCOVERY/
IDENTIFICATION OF SOURCES TO ADDRESS QUESTIONS/ISSUES**

S3.1. Do you think the USQ course has assisted your preparation for the online environment? If so, how? If not, why not?

S3.2. Has the USQ course had any impact on your personal approach to learning and teaching, either online or in other modes? If so, how?

S3.3. Has your perception of e-learning changed at all since your involvement in the USQ course? If so, how? If not, please elaborate.

S3.3a. Has your opinion of virtual chats changed in any way since participating in the USQ course? Please elaborate.

S3.4. Do you think that the online environment provides opportunities for your learning and teaching philosophy to be more easily put into practice? How, or in what ways?

S3.5. What additional skills and knowledge do you feel you need in order to use the online environment more effectively? How might you gain these?

S3.6. What could be done to improve the USQ course, e.g. more dialogue? More discussion? More resources?

S3.7. How successful (or otherwise) was the use of Co-Fors in the USQ course? Can you suggest other ways of exploring the peer learning partnership role adopted by the Co-Facilitators?

S3.8. Do you think anything, in the polytechnic context, needs to be changed or improved in order to implement successful online learning and teaching? If so, please elaborate.

S3.9. You mentioned that Singapore students are more likely to “open up using computer rather than mouth”. How might you use this to your advantage in your teaching?

S3.10. You mention that in the e-environment, students are more resourceful. Has your approach to, or opinion of, learners changed as a result of doing the USQ course? If so, how?

S3.11. You asked during the course “is active participation a key indicator of effective learning?” and whether “forced participation/contribution” would get passive learners to open up or would it work the other way round and intimidate them. What further thoughts have you had about this?

S3.12. If applicable, what would be one of your biggest frustrations in promoting online learning and teaching at NP? How have you attempted to address these frustrations? Successes? Failures?

S3.12a. How might this change be better managed in the polytechnic context?

S3.13. You suggested that use of “guest speakers” might be useful and would “appeal” to students. Why would this be so?

Appendix B

Reports and Proposals

This appendix contains reports and proposals referred to in the study. These include:

- Appendix B1 Pre-Planning: Design 1 - 2002
- Appendix B2 Orientation Workshop Survey (Design 1)
- Appendix B3 Orientation Workshop Review by Researcher (Design 1) (F01)
- Appendix B4 Final Session of PD01 *Design and Facilitation of e-Learning*
(Design 1) (F02)
- Appendix B5 Online Evaluation Feedback (Design 1)
- Appendix B6 Focus Group Evaluation Outcomes of PD01 *Design and Facilitation of eLearning* (Design 1)
- Appendix B7 Review Meeting Following Teleconference - Evaluation Outcomes of
PD01 *Design and Facilitation of e-Learning* (Design 1)
- Appendix B8 Recommendations for Future Developments of PD01 *Design and Facilitation of e-Learning* (Design 1)
- Appendix B9 Proposal for Design 2
- Appendix B10 Standard Web-based Questionnaire Responses (Design 2)
- Appendix B11 Unsolicited Feedback (Design 2)

F01 = Facilitator 1 (Researcher/Teacher/Participant Observer)
F02 = Facilitator 2 (Teacher)

Appendix B1

Pre-Planning: Design 1 - 2002

Question 1: *Objectives in providing this professional development opportunity:*

- a) *What specific requirements will participants in the course need to meet at the end of the program of study?*
- b) *What competencies should they gain?*
- c) *What products will they produce?*

Response: A structured training programme will be designed to equip participants with the relevant skills. This will cover 3 areas of competency:

- Design & Development of e-learning courseware
- Delivery & Facilitation of e-learning activities/events
- Assessment in e-learning

The training programme will have the following attributes:

- Project-based i.e., as part of the training deliverable participants will work on an actual e-learning courseware (eg., a learning module as part of a “blended” approach to their existing classroom delivery)
- Online and integrated with face-to-face learning events. This is necessary for participants to experience what their students are expected to go through themselves on their e-learning courseware
- Collaborative i.e., discussions (synchronous and asynchronous) amongst participants to build on mutual sharing and learning – that will need to extend beyond the training programme itself
- Consultative i.e., the e-learning trainer will be involved in giving specific one-to-one coaching and be available for consultation by the participants on their specific project work
- The training delivery should adopt the use of the same Course Management System (CMS) which the polytechnic uses i.e., Blackboard.
- Certification with advance credit standing leading towards a formal post-graduate Masters in Education will value add to the programme.

Question 2: *What level of web design should participants in this course display at the end of the program? (It is important to note that USQ does not expect that participants will be able to develop the skills required to create multimedia learning objects)*

Participants should be able to design and develop an online learning course using existing knowledge of web authoring. The course will be assembled and facilitated using Blackboard as the CMS. The design/facilitation plan should be instructional sound i.e., will promote effective learning amongst participants’ targeted students. It will also complement any classroom based learning activities.

Question 3: *Should the training assume a “how to do” approach or do you expect participants to have an understanding of theoretical underpinnings of online design and delivery?*

A balance of both is expected. Flexibility in approach is desired depending on participants' existing knowledge and inclinations. However, the final deliverable (of an effective online learning courseware) is expected from all participants.

Question 4: *What support will be available to course participants at the polytechnic:*

- a) Technical?
- b) Educational?

Relevant staff from the Teaching & Learning Centre will be able to provide technical assistance to the participants to ensure that they are able to access their online learning + build their online courseware. USQ will advise what specific technical help is necessary from the polytechnic to ensure that the training is effective and the learning outcomes are achievable.

Question 5: *What online delivery is currently used at the polytechnic?*

- a) *Are there any existing online materials?*
- b) *If yes, are these to be a model of what is required?*
- c) *What are the pre-existing expectations of online delivery within the institution?*

The quantity and quality of online material are very varied. Participants themselves will come with varied experience. There is currently no model/quality framework for online learning resources. The polytechnic has only just acquired Blackboard as its campus-wide e-learning platform. Previously, some staff have worked on using Lotus LearningSpace and internally-build e-learning platforms. In addition, the institution has only recently acquired campus license for staff to use Macromedia products including Dreamweaver/Course Builder. Most if not all participants are familiar with MS products.

Question 6: *How many hours a week will participants be able to commit to this course over the 15 week teaching period.*

Minimally, participants are expected to commit 5 hours/week over the entire training period.

Question 7: *What assessment, in addition to project submissions, do you want the participants to undergo? It is assumed that mentoring will be standard offering in the learning activities.*

We stand advised by USQ on the appropriate forms of assessment to ensure that the learning outcomes are met.

Appendix B2

Orientation Workshop Survey (Design 1 - 2002)

Response Count: 14 (of possible 31)

Summary Created On: 30/05/2002

Question 1

The workshop met my expectations

Possible replies:	Results:
Strongly Agree	2
Agree	9
Undecided	2
Disagree	1
Strongly Disagree	0

Comments:

By Student 1 - Answer Chosen -> AGREE - no comment

By Student 2 - Answer Chosen -> STRONGLY AGREE - It clarifies what we have to do for the next 15 weeks.

By Student 3 - Answer Chosen -> AGREE - No Comment

By Student 4 - Answer Chosen -> AGREE - No Comment

By Student 5 - Answer Chosen -> AGREE - Actually, didn't really know what to expect!

By Student 6 - Answer Chosen -> DISAGREE - In my opinion, the two-day face-to-face session is not necessary becous what she went thru can be communicated thru on-line medium.

By Student 7 - Answer Chosen -> AGREE - It was helpful to meet Shirley and clarify some expectations, particularly the administration of the course. Besides the orientation, I was looking forward to a more concrete overview of the 15 weeks programme e.g. a summary of each module to motivate, excite and prepare the group for the online training.

By Student 8 - Answer Chosen -> AGREE - No Comment

Question 2

The trainer/facilitator was effective

Possible replies:	Results:
Strongly Agree	6
Agree	6
Undecided	2
Disagree	0
Strongly Disagree	0

By Student 1 - Answer Chosen -> STRONGLY AGREE - No comment
 By Student 2 - Answer Chosen -> STRONGLY AGREE - We now have a better idea of the trainers that we will be communicating with for the duration of the course.
 By Student 3 - Answer Chosen -> AGREE - No Comment
 By Student 4 - Answer Chosen -> AGREE - No Comment
 By Student 5 - Answer Chosen -> AGREE - Very nice person - warm and caring... :-)
 By Student 6 - Answer Chosen -> UNDECIDED - No Comment
 By Student 7 - Answer Chosen -> STRONGLY AGREE - Shirley was inspiring in her ability to interact. Some rapport and relationship has been established.
 By Student 8 - Answer Chosen -> AGREE - No Comment
 By Student 9 - Answer Chosen -> STRONGLY AGREE - An excellent facilitator
 By Student 10 - Answer Chosen -> UNDECIDED - Will have to wait to answer this question. Shirley is a warm person with lots of experience and I'm sure we'll learn a lot from her and the rest.

Question 3	
Such face-to-face sessions to kick start the online training programme is necessary	
Possible replies:	Results:
Strongly Agree	3
Agree	5
Undecided	4
Disagree	2
Strongly Disagree	0

By Student 1 - Answer Chosen -> UNDECIDED - No Comment
 By Student 1 - Answer Chosen -> AGREE - It helps as we are able to iron out various issues immediately with the trainer. Also we get to meet all the other School IDs.
 By Student 1 - Answer Chosen -> UNDECIDED - No Comment
 By Student 1 - Answer Chosen -> AGREE - No Comment
 By Student 1 - Answer Chosen -> AGREE - It probably should not be, but I think it helped to break the ice with the participants and helped all to orientate to what is going on. Probably only 1 day would have done it, though.
 By Student 1 - Answer Chosen -> STRONGLY AGREE - Indeed! The live video, audio and interesting interaction through formal and informal discussions was extremely beneficial.
 By Student 1 - Answer Chosen -> AGREE - No Comment
 By Student 1 - Answer Chosen -> UNDECIDED - While certainly desirable they are not necessarily essential
 By Student 1 - Answer Chosen -> DISAGREE - Don't think we need to spend such a long time. Perhaps, we could perhaps have a video-conferenced introduction session with the trainers overseas and a short ice-breaker type activity here for us. It was a nice-to-have to see the trainer in person, but not totally needed I think.

Question 4: Any further suggestions/comments?	
Possible replies: Comment only	Results: 14
<p>By Student 1 - No Comment</p> <p>By Student 2 - A gathering for all the participants half way through the course for face-to-face exchange of ideas would be useful.</p> <p>By Student 3 - No Comment</p> <p>By Student 4 - No Comment</p> <p>By Student 5 - No Comment</p> <p>By Student 6 - No Comment</p> <p>By Student 7 - Since this is a customized course, I would expect it to customize to our context. But the course is an adaptation of their courses for mature students. To design to meet the needs of our customer (students), we must know our customer. From the sharing of some colleagues, we can see that our students are not receptive towards on-line learning. But I do not know specifically why although I can make some comments from my observations.</p> <p>By Student 8 - No Comment</p> <p>By Student 9 - No Comment</p> <p>By Student 10 - Half-day F2F and half-day online interaction format for orientation would have been useful i.e. rather than having 1-1/2 days of training, perhaps it could have been 2 or 3 half-day sessions? Of course, subject to 101 constraints! In any case, thank you for co-ordinating. It is much appreciated :+).</p> <p>By Student 11 - e-Learning requires an intellectual infrastructure that is not easily established. It requires clear understanding, scholarship and proper experience at multi organizational levels.</p> <p>By Student 12 - No Comment</p> <p>By Student 13 - No Comment</p> <p>By Student 14 - It was interesting to note how very quiet the participants were in the first session, and how 'chirpy' they were by the next morning. I think the trainer/facilitator has achieved her objectives in setting expectations right and making participants think more positively about learning and teaching online.</p>	

Appendix B3

Orientation Workshop Review by Researcher (Design 1) (F01)

Concerns expressed about the course (by participants)

- Many of participants are taking leave (1-2 weeks at a time) till end of June – how to keep up

Try to stick to 15 week program;

All interactions will be in discussion forum so permanent record (including priority readings);

Refer to Terry Mayes and vicarious learning ideas;

If no access while away, print off module and readings before you leave – content more self-paced than most online courses – work through individually

- Slow response rate of server

Has been reported to NE and action requested

- Number of readings

Each module leader will indicate which are priority one readings; more general etc. – mostly, though, this is covered in content of course.

- Times showing for each posting

Time is GMT.

What has been done by end of orientation workshop?

- Introductory activities – ‘social presence’;
- Aims and objectives of course; expectations of participants and group leaders;
- Participants posted intro message
- Divided into 4 groups and assigned a group leader (USQ) – group pages established – **leaders need to establish own presence; outline expectations (of them and of us)**
- Commenced module 1 Flexible Learning – Peter facilitating discussion forums

What needs to be done?

- Set up FAQ discussion forum
- Add to shared resources

Observations (by researcher)

- Some of the group believe some of their students aren't motivated
- Believe many of their students won't participate in online forums unless the incentive is assessment-linked
- Concerned about web allowing plagiarism
- Have some of the participants been "coerced" into doing this project?
- The polytechnic appears to be facing many of the challenges USQ has already faced in terms of going online e.g. some Schools have allocated to the participants several hours a week to participate in this course; others have 1 hour; others have none. This is causing some concern amongst the participants.
- The intention is, if this course is successful, to put another 30-odd people through the course.
- The polytechnic is mainly PC based – few Macs.

Appendix B4 – Review Meeting Following Teleconference - Evaluation Outcomes of PD01 *Design and Facilitation of e-Learning and USQ Response (Design 1)*

1 August 2002

No .	Feedback from the polytechnic	Suggestions from the polytechnic	USQ Response	Action - Report
<i>Study Materials</i>				
1	Workload too heavy-going. Too many readings.	Work priorities? Time-off? To reduce demands of course?	Focus learners on one key reading per section, if possible	
2	Too academic. Insufficient application of theory to practice. Do not see relevance to immediate needs. Some see need for, nonetheless, basic principles to be understood. Want practical examples of, for example, constructivist principles	To pitch at Graduate Dip level instead of Post Grad? Also since interest in further post-grad studies is limited, not necessary to keep to existing academic rigour? Need for more concrete, discipline-specific examples to ground understanding of instructional principles/concepts/ideas?	Reduce academic rigour. Focus on practical completion of development of project Discipline specific examples?	Complete list of proposals so we can identify who is doing what, from what discipline (ALL TEACHERS) CONTACT ALL NON-PARTICIPATING STUDENTS (ALL TEACHERS)
3	Focus seems to be on design and implementation of a fully online approach - incongruent with the polytechnic's hybrid/blended (face-to-	Need to address this need for staff to design courseware which integrates face-to-face and online modes rather than focus purely on online learning.	USQ to make links more explicit between procedures/principles and how they relate to blended approaches	Provide more challenging stimulus questions (ALL TEACHERS)

	face + online) approach.			
4	Little connection between learning and project work (thus far)	<p>Need for specific instructions to relate learning (Modules 1-3) to project work?</p> <p>Need connections between project work and content covered</p> <p>Need participants to take ownership of their own projects</p>	<p>Each teacher to return to own group areas, provide summary/synthesis of points, make links explicit between content covered to date</p> <p>Can this be done on a more regular basis?</p> <p>Get them onto developing their projects</p>	ALL TEACHERS TO ACTION IMMEDIATELY
Discussion				
5	Instances when staff confused where they should post their thoughts – within group discussion or main discussion? Also confusing for staff who came back later to read postings.		<p>Personal email to all participants – Shirley to construct but to be sent out to own group members clarifying this</p> <p>Also Announcement to advise what is happening</p>	SHIRLEY TO CONSTRUCT & FORWARD TO TEACHERS FOR INPUT – ALL TO SEND OUT ON MONDAY SHIRLEY TO PUT UP ON FRIDAY
Study Approach				
6	Online experience very useful. Has helped staff to know what they ought to look out for when	Important element to retain. Also to exploit to help others learn from positive experiences.		

	implementing elearning themselves. Real applications to current project implementations needed – practical outcomes			
7	For those who have stayed away for a while, difficult to play “catch-up”.		Catch up individuals by making individual contact – each teacher to do this – Shirley will draft example communication	SUSPEND ALL ACADEMIC CONTENT AFTER JERRY FINISHES HIS SECTION – FOCUS ON GETTING PROJECTS UP TO SPEED (ALL TEACHERS)
<i>Timing/Duration</i>				
8	Start time – opinions vary. (Most) acknowledged that there is no ideal time. Some expressed need to have training during term time rather than cross into vacation period.		Will address next offer.	
9	Duration. Existing length of programme probably needed to suit expected academic rigour?	Re-pitch to Grad Dip level should result in shorter course? Revise to include only key readings.	For next offer. See points above	

Others				
10	F2F Orientation – very positive feedback.	To retain. Critical for relationship building at start of programme.	Will be included in planning for next offer	
11	Suggestion to keep reading resources open for a longer while after completion of training – as reference source for participants as they continue to work thru their courseware design.		This can be done. Shirley to look into creating another website with resources	
12	Next offer of course Feb03 – April 03		Will be included in planning for next offer	
13	More collaboration with TLC staff at the polytechnic – team teaching arrangement		Will attempt some form of collaboration for this offer – ideas?? Will be included in planning for next offer	Suggest virtual chat between institutions

PROPOSED NEXT RUN OF PROGRAMME

Some ideas for further discussion

1. Some key critical elements:
 - a. Online learning experience
 - b. Project-based
 - c. Blended/hybrid approach i.e. Online + F2F

2. Pitch at lower (academic) level eg. Grad Dip/Cert instead of current Post-Grad/Masters
 - a. Shorter course eg. 8 weeks
 - b. Include only key readings
 3. Tighter integration between online readings/discussion with project work
 4. Greater focus on practical applications of concepts through exemplars (discipline-specific)
 5. Need for strategy to help participants to keep pace + catch-up when required
 6. TLC/SchoolID staff to play co-facilitation role? Eg. Online discussions + Face-to-face (sharing positive learning)
 7. Start/end date: early Feb 03 – April 03.
 8. Implementation on Bb ver 5.0? Reliability?
-

Appendix B5 – Final Session of PD01 *Design and Facilitation of e-Learning (Design 1) (F02)*

1. Demonstration/discussion of three programs

3 students presented programs they had developed as a result of their involvement in the program. I was most impressed with their work (Mathematics, Logistics, Business) They demonstrated their programs online and raised several issues for discussion - participation of students in online discussion, place of online components in a mixed mode course, promotion of 'learner centredness' and some problems associated with the Blackboard environment (viz navigation problems). I have no hesitation in saying that the programs I saw had tremendous potential and they are making full use of multi-media in the design of their programs. We should realise that the context in which they design and develop their courses is very different to the context in which we design our courses. They use online approaches as an adjunct to 'face to face' and their students are not limited by things like 'bandwidth'. They are able to utilise the very latest developments in multi-media and see 'text-only' courses as 'boring' and 'second rate'. They want ideas that will make full use of the technology. However, they also realise that they need support and resources to include multi-media in their programs - they can't do it all by themselves.

2. Discussion of issues related to course

(a) Strengths of the course

The most valuable part of the course seemed to be the fact that they were put in a position where they 'experienced' what it was like to be an online learner. This was a most valuable experience and they seemed to learn much from this.

Many mentioned the quality of the readings - while they were critical of the dominance of text, they were impressed with what they learnt from several of the readings. In fact TLC has developed a website for 'learning and teaching' and there is a location on this site for readings to be rated-several of our course readings get the 'five star' treatment. They were also appreciative of the 'flexibility' offered but realise this has its downside as things can 'drift a little' if there are few deadlines.

They found the 'face to face' orientation run by Shirley to be extremely useful and said this helped immensely in preparing them for the course. They would like to see this retained in future courses.

(b) Weaknesses of the course

All participants at the session indicated they wanted a more practical course. What we have provided is too theoretical although they realise the place of theory. Because they have other demands on their time they want us to provide more of the 'how' and less of the 'why'. Related to this is a request for more 'exemplars' so that they can more readily relate the theory with the practice. I did say that this is difficult in their case as there are many subject areas and providing exemplars for every situation is virtually impossible. Nevertheless we should strive for 'generic exemplars' and provide more opportunities for them to 'share' what they are doing.

The course should also acknowledge that the context in which they work is not 'totally online'. They are using online approaches as an adjunct to face to face. However, the majority also acknowledge that this does not necessarily mean that online approaches are just an enhancement (an 'add-on') - it is clear, however, that some do see it this way - the administration want us to use technology in our teaching so we'll include a bit of online to satisfy them. Most want to use it as a means to promote a greater degree of self-directed learning (learner-centred approaches). They want the course to acknowledge the way they will be using technology-totally online approaches are not part of their context.

They also find it difficult to relate the course material to the 'project task'. Some suggested we should begin the course by outlining the nature of the task and then 'feed in' the course material as it's needed-could this be an appeal for more 'problem-based' learning? I did say that this is difficult where learners have quite different contexts and operate on quite different knowledge structures- it almost demands a 'one on one' approach and we simply don't have the resources to do this. What we could do is to ensure that numbers doing the course are 'capped' and the students are 'grouped' so that those working in similar subject areas are working together. However, this arrangement has a downside because students lose contact with more diverse approaches and are not encouraged to 'think outside the square'. Something for us to think about!

They also found posting of messages to the site to be confusing. The use of the discussion board was unclear particularly where different forums were used for different team members. This probably has something to do with the way we individually use the board. This problem was confounded when we used the Group Pages for the different groups. We probably need to spend a little more time discussing this together. Another issue is the 'slow download speed'-not sure why this happens as they seem to have the very best gear and the networks they use seem very sophisticated. NE could look into this as it affects things like access to readings, unpacking attachments and accessing chat.

3. Useful suggestions

They suggested that some 'polytechnic staff' might be used as course tutors. The material I saw from people like Student 1 and Student 2 would suggest this would be relatively easy to put in place and would have a huge impact on some who have limited teaching experience and are less familiar with basic ideas on learning and teaching.

It was also suggested that we try to build into the course regular 'meetings' between the teaching team at this end and the students-this could take the form of 'videoconferences', 'teleconferences' or 'chat sessions'. It was felt this would help keep the momentum going and deal quickly with issues as they arose.

While they want a more practical course it was argued that it should focus on 'course design' and it should introduce them to some fairly basic models of instructional design. If a problem-based learning approach were adopted then the development of their project should follow a design approach which followed a sequence which all could follow. I know we might have some disagreement on this but this was a common plea.

4. General Comments

Although the list of issues discussed suggests a fairly negative response, this was far from the case. Generally they were appreciative of what we provided and seemed genuinely satisfied with what they got out of it. It was useful and productive dialogue. However, we do have some work to do to produce a course which will provide the knowledge and skills they are after.

Appendix B6 – Online Evaluation Feedback (Design 1)

What have you learnt from the course?

Distance learning approach - e.g., how to set students' expectations, give relevant info and 'helplines', add thinking/discussion activities at various points of a module.

Key research findings in instructional analysis, design, development, implementation and evaluation.

Good teaching is good teaching, regardless of modes of instruction!

ADDIE instructional design model

Constructivist approach which is ideal for my Lifeskill module

Awareness of e-learning delivery

The importance of a "sense of group"

The importance of timely feedback

The importance and effectiveness of discussion forums

All the participants found our sessions with Shirley very helpful. This could be one of the 'must have' for any future courses.

It's been a fruitful experience. So, hopefully, one day all of us could meet face-to-face.

How difficult it is to teaching and learn online

How difficult it is to be motivated to get things going

How difficult it is to interact with others online

What do you wish you had learnt from the course?

Blended learning approach - e.g., what and how much to put in different modes of learning (e.g., online versus f2f).

Online synchronous learning and class management.

Situated learning approach

Formal F2F lecture from you guys on what is great ID

Useful guidelines on problem-based learning which is very popular in one Polytechnic

Some useful tips on what I should do to prepare a well structured, effective module.

Hmm.. nothing really springs to mind!

One of the items in the wish list for this course is to be able to lay my hand on some form of 'Best Practice' samples specifically in the engineering field.

Best practices around the world, or disastrous in online learning mode

Trend in the use of educational technology and in instructional design

Design and develop a real life project

Appendix B7 – Focus Group Evaluation Outcomes of PD01 *Design and Facilitation of e-Learning (Design 1)*

No.	Feedback/Comment	Response
<i>Study Material</i>		
1	Workload too heavy-going. Too many readings.	Work priorities? Time-off? To reduce demands of course?
2	Too academic. Insufficient application of theory to practice. Do not see relevance to immediate needs. Some see need for, nonetheless, basic principles to be understood.	To pitch at Graduate Dip level instead of Post Grad? Also since interest in further post-grad studies is limited, not necessary to keep to existing academic rigour? Need for more concrete, discipline-specific examples to ground understanding of instructional principles/concepts/ideas?
3	Focus seems to be on design and implementation of a fully online approach - incongruent with the polytechnic's hybrid/blended (face-to-face + online) approach.	Need to address this need for staff to design courseware which integrates face-to-face and online modes rather than focus purely on online learning.
4	Little connection between learning and project work (thus far)	Need for specific instructions to relate learning (Modules 1-3) to project work?
<i>Discussion</i>		
5	Instances when staff confused where they should post their thoughts – within group discussion or main discussion? Also confusing for staff who came back later to read postings.	
<i>Study Approach</i>		
6	Online experience very useful. Has helped staff to know what they ought to look out for when implementing elearning themselves. Real applications to current project implementations quoted.	Important element to retain. Also to exploit to help others learn from positive experiences.

7	For those who have stayed away for a while, difficult to play “catch-up”.	
<i>Timing/Duration</i>		
8	Start time – opinions vary. (Most) acknowledged that there is no ideal time. Some expressed need to have training during term time rather than cross into vacation period.	
9	Duration. Existing length of programme probably needed to suit expected academic rigour?	Re-pitch to Grad Dip level should result in shorter course? Revise to include only key readings.
<i>Others</i>		
10	F2F Orientation – very positive feedback.	To retain. Critical for relationship building at start of programme.
11	Suggestion to keep reading resources open for a longer while after completion of training – as reference source for participants as they continue to work thru their courseware design.	

Appendix B8 – Recommendations for Future Development of PD01 *Design and Facilitation of e-Learning (Design 1)*

Administrative:

- The polytechnic participants have been allocated 4 hrs/wk study time
- Course to run for no more than 10 weeks
- Course to commence at same time as USQ's semester 1 2003 (3 March) and conclude 9 May at the latest.
- Similar number in cohort as first offer – 25-30 participants
- Need for strategy to help participants to keep pace + catch-up when required

Pedagogical:

- Course to have a professional development focus rather than articulating into a Masters program; use only key readings
- Tighter integration between online readings/discussion with project work - greater focus on practical applications of concepts through exemplars (discipline-specific)
- Course needs to be more practical, less academic. Suggest a more problem-based, project-based approach
- Use of “champions”/mentors (selected from first offer) to support new cohort on the ground
- Blended/hybrid approach. Commence the offer with f2f workshops (perhaps 2 full days, or 3 days) which includes a framework for scoping of intended project. At completion of workshop, following to be achieved:
 - Introductory activities
 - Technical/administrative checks in terms of understanding the layout of course, technical aspects working, etc.
 - Intended project scoped and ready to start.
 - Work with champions/mentors (participants from Design 1?) to develop a collaborative support network for new participants (the polytechnic/USQ partnership). USQ to support the polytechnic initiative for developing a “community of practice”. Use also of online discussions; f2f (sharing of experiences, etc.)
- Course **may** be precursor to course conducted by Gilly Salmon focusing on e-moderation and e-activities.

Technical:

- Explore slow downloads – are .pdf files too large? Consider making all .pdfs as optically read rather than scanned to reduce file sizes OR provide readings to TP who will make hard copies for participants
- Request of NE that BB v5 be used, not CI4 as BB5 is used at the polytechnic (BB5 is the version that caused the probs first offer – however, had not been thoroughly tested prior to release). NE has agreed to trial BB5. Trial groups from USQ and the polytechnic to participate in thorough testing.

Appendix B9 – Proposal for Design 2

PD01 *Design and Facilitation of e-Learning* – A professional development course for teachers in post-compulsory education sectors

A. Description of the Proposed Course: PD01 *Design and Facilitation of e-Learning*

Length of Course: 10 weeks; average of 4 hours of participant effort expected per week (next offer to be 17 March 2003 – 23 May 2003).

Approximate number of participants per cohort: 25-30

Number of USQ teaching staff: 2

This professional development course will utilise online delivery with a focus on learning through application in negotiated, authentic workplace projects, to have clients achieve the following outcomes:

1. Gain knowledge and skills in online teaching by experiencing the online environment as a learner in a group of professional colleagues; and
2. Gain knowledge and skills in the conceptualization, instructional design, development (including instructional and assessment strategies), delivery and evaluation of an online course or online materials to supplement face-to-face teaching.

The course will have a professional development focus and is not part of a USQ-accredited course or program. The course will have a problem-based, project-based approach. It is designed and facilitated with a tight integration between interactive online activities, key professional readings, active online discussion forums and the client's negotiated work-based projects. Where possible, the practical application of theories and concepts developed in the readings and discussion forums will be demonstrated through the use of exemplars drawn from post-compulsory contexts.

A number of “champions”/mentors (selected from first offer of the polytechnic participants) will support the new cohort “on site”;

A blended/hybrid approach to delivery will be used. The offer will commence with 3 days of face-to-face workshops. The workshops will aim to provide:

- Introductory activities
- Technical/administrative checks in terms of ensuring understanding of the layout of course, technical aspects working, etc.
- Assistance in “scoping” each intended work-based project (based on a framework proposed in advance by USQ) in preparation for the commencement of the course proper.
- Work with champions/mentors (SchoolIDs, TLC staff) to develop a collaborative support network and implementation plan for new participants (Singapore polytechnic/USQ partnership). In this way, USQ will support the polytechnic initiative for developing a “community of practice”.

B. Agreed Responsibilities

Responsibilities of USQ

USQ will be responsible for:

- enrolling the polytechnic participants;
- collection of fees for enrolled participants;
- providing online course materials to all participants. USQ will not be responsible for providing any printed materials or Library materials to any participant. The polytechnic may choose to make printed copies of reading materials and distribute to participants;
- meeting the costs associated with the introductory workshop visit by USQ personnel to the polytechnic, Singapore (including airfares and other travel expenses, accommodation, meals, learning materials);
- ongoing online interaction amongst clients and USQ faculty through discussion groups and email facilities (2 USQ teachers);
- ongoing support for supervision of, and prompt feedback on, clients' project work.

Please note: This will equate to approximately 4 hours contact time provided by two USQ teaching staff per week.

Responsibilities of the Polytechnic

The polytechnic will be responsible for:

- providing mentoring support for the participants at the polytechnic, at the expense of the polytechnic;
- ensuring mentors and participants are supported appropriately to enable them to achieve maximum benefit from the course;
- providing (and covering all associated costs) a videoconference link with USQ at the completion of the course to perform a “wrap-up” session;
- such other matters as may be agreed in writing between the parties from time to time.

Role of the polytechnic mentor:

- provision of local contextual information;
- provision of suitable workplace examples;

- stimulate on-site discussion amongst the polytechnic participants;
- provision of some online and face-to-face forum activity including sharing of ideas, previous experiences, etc.;
- support in pacing of the program;
- model a “blended” approach to delivery of learning experiences.

Responsibilities of the Polytechnic Participants

It is assumed that the polytechnic participants will:

- maintain a sustained focus (over a period of 10 weeks) on developing the polytechnic/USQ “community of practice” through collegial activity, and shared professional discussion.
- go beyond the information given and locate other supplementary materials as necessary to participate in discussion forums and to complete their projects;
- participate in collaborative learning activities (i.e. introductory workshop activities, online discussion forums, face-to-face forums (with mentors and other course participants); final videoconference “wrap-up” session);
- share information and insights with colleagues;
- analyse and synthesise relevant theoretical knowledge;
- engage in critical/reflective thinking in relation to professional practices and to a lesser extent, theoretical knowledge;
- produce, at the end of the 10-week period, a “product” or work towards a “product” that can be presented at a culminating “launch” session.

C. Copyright

Copyright in all material produced by USQ is vested in USQ and no reproduction nor authorisation of reproduction of any of the material shall be undertaken by the polytechnic, any enrolled participant or any other person whatsoever without the written permission of USQ.

The polytechnic shall not alter the materials provided by USQ or use it for any purpose for which those materials are provided.

USQ agrees to indemnify and to keep the polytechnic indemnified against any prosecution or claims or actions whatsoever relating to copyright in materials produced and supplied by USQ.

All project materials developed by the polytechnic participants will be governed by relevant polytechnic institutional copyright policy.

D. Other

In the event of any major global political event occurring which may endanger lives, USQ reserves the right to postpone this arrangement until political stability returns.

Appendix B10 – Report of Standard Web-based Questionnaire Responses (Design 2)

What did you find were the most helpful/effective aspects of this course?

1. The fact that we can access anytime anywhere is great. Also, having a Co-facilitator was helpful.
2. Instructional Materials and the Tutors' Comments and Suggestions.

What did you find were the least helpful/effective aspects of this course?

1. The readings were mostly helpful but seemed redundant in some cases. Also, there are still too many readings I feel.
2. Every aspect is helpful, though time constraints can become a pressure

What improvements would you suggest to the Online Teaching Materials for this course?

1. Less readings, practical examples maybe even some case studies?
2. Timing of "virtual chat sessions" may be inconvenient for some participants, especially when they have late afternoon lectures..

What other improvements would you suggest for the course?

1. Have the students here meet up to discuss projects, personally I am much more motivated through interaction with people rather than the web. Perhaps it's just personal preference.
2. Mentors are very helpful.

Please feel free to make any other comments, particularly in relation to your ratings, on this questionnaire. For example - why you have chosen "excellent" or "poor" in the multiple choice section.

1. I'm afraid my biggest complaint is regarding the readings. Some very long and complex articles which tend to leave me struggling just to get through it.
2. I find this course very enriching. I particularly appreciate the quick comments and feedback from both Shirley and Glen on my assignments and queries. I have a very good experiential understanding of about e-learning and e-ID.

Appendix B11 – Unsolicited Feedback (Design 2)

I must say that I enjoyed going through the course and benefited a lot.

Thank you for your guidance and advice throughout the whole course. I really appreciate it.

Thank you very much to both of you. I have certainly learned a lot from this course and am now more confident of future course design for e-learning.

Thank you for your patience and perseverance in getting us to participate actively in the course.

Thanks so much for your help and guidance in this programme. Take care and see you on the next run.

Really want to thank both of you for your patience and guidance in leading us through the course. Although it has not been easy (the lack of f2f), I want to applaud the tremendous efforts and enthusiasm both of you have put in helping, coaching, nudging and motivating us. I hope to be able to emulate yourselves in the conduct of my own module in the e-component aspects. Take care and hope to see you again f2f....Once again thank you very much.

Thank you all for the assistance in the course, I learnt a lot about e-learning.

Thank you for the course. I enjoyed it very much.

Thank you for your guidance and patience.

Appendix C

Other Documentation

This appendix contains other documentation referred to in the study. This includes:

- Appendix C1 Contact Summary (Design 2)
- Appendix C2 Contact Summary (Post-Study Activity, 2004)
- Appendix C3 Document Summary
- Appendix C4 Discipline Areas – Design 1
- Appendix C5 Discipline Areas – Design 2

Appendix C1 – Contact Summary (Design 2)

This document recorded information associated with each participant in the study. The document also recorded memoranda and information of importance which was noted as events arose.

Coded identifiers have been used in this report to protect the identities of all participants in the study:

P = Participant
COF = Co-Facilitator

Title	Identifier (Name)		CODE	Permission to use data	Comments
Mr	Participant	12	P12	YES	
Mr	Participant	16	P16	YES	
Ms	Participant	15	P15	YES	
Mr	Participant	2	P02	YES	
Mr	Participant	11	P11	YES	
Mr	Participant	5	P05	YES	
Ms				NO	
Mr				NO	
Mr					Did not participate
Mr					No response
Mr	Participant	10	P10	YES	Synchronous interview might be a bit tricky
Mr				NO	
Ms	Participant	3	P03	YES	
Ms					No response
Mr					No response
Ms	Participant	1	P01	YES	
Mr	Participant	6	P06	YES	
Mr					No response
Mr					No response
Mr	Participant				No response
Ms	Participant				Did not participate (SARS crisis)
Mr	Participant				Did not participate
Ms	Participant	7	P07	YES	
Ms	Participant	13	P13	YES to using existing data but	May not be able to relate to questions as I don't teach
Ms	Participant	14	P14	YES to using existing data but	Cannot commit to the interviews – too busy
Mr	Participant	4	P04	YES	Would like access to final reports
Mr	Co-Facilitator	1	COF01	YES	

Mr	Co-Facilitator	2	COF02	YES	
Ms	Co-Facilitator	3	COF03	YES	
Mr	Co-Facilitator	4	COF04	YES	
Mr	Co-Facilitator	5	COF05	YES	
Ms	Co-Facilitator	6			No response
Mr	Co-Facilitator	7	COF07	YES	Did not participate in interview
Ms	Co-Facilitator	8			Has left

Appendix C2 – Contact Summary (Post-Study Activity, 2004)

This document recorded information associated with participant from post-study activity in 2004. The document also recorded memoranda and information of importance which was noted as events arose.

Coded identifiers have been used in this report to protect the identities of all participants in the study:

PS = Post-Study

Title	Identifier (Name)		CODE	Which course?	Permission to use data	Notes
Mr	Post-Study	1	PS01	A	YES	
Ms	Post-Study	2	PS02	B	YES	
Ms	Post-Study	3	PS03	B	YES	
Ms	Post-Study	4	PS04	B	YES	
Mr	Post-Study	5	PS05	A	YES	
Ms	Post-Study	6	PS06	A	YES	
Ms	Post-Study	7	PS07	A	YES	
Ms	Post-Study	8	PS08	A	YES	
Ms	Post-Study	9	PS09	C	YES	
Ms	Post-Study	10	PS10	B	YES	

Appendix C3 – Document Summary (Design 2)

This form was used to maintain a concise record of all documents of relevance to the study e.g., transcripts of discussion forums, synchronous chat sessions, email correspondence, etc. This form also recorded notes about each document.

Document	Identifier
Self-reflective journals	1a 1b 1c
Critical incident forums	2a 2b 2c
Synchronous chats	3a 3b 3c
Standard web-based questionnaire	4
Semi-structured, in-depth interviews	5
Focus group outcomes	7
Unsolicited feedback from participants	8
Introductory discussion forum	9
Feedback on Orientation Workshop	10

Appendix C4 – Discipline Areas (Design 1)

School

Business & Accountancy
Film & Media Studies
Information & Communications Technology
Interdisciplinary Studies
Life Sciences & Chemical Technology
Quality Management & Engineering
Electronic & Computer Engineering
Building & Environment
Electrical Engineering
Maths, Science & Computing
Mechanical Engineering
Marine & Offshore Technology
Teaching & Learning Centre

Appendix C5 – Discipline Areas (Design 2)

School

Business & Accountancy

Film & Media Studies

Information & Communications Technology

Interdisciplinary Studies

Quality Management Engineering

Electronics & Computing Engineering

Building Engineering

Electrical Engineering

Maths, Science & Computing

Mechanical Engineering

Marine & Offshore Technologies

International Student Centre

Planning Unit/ADPAP

Teaching & Learning Centre

Appendix D

Raw Data

This appendix contains examples of the raw data collected via course facilities, questionnaires and interviews. This includes:

Appendix D1	Researcher's Reflective Journal (Design 2) (F01)
Appendix D2	Responses to Interview Questions (Design 2)
Appendix D3	Sample of Interview Transcript Conducted as Synchronous Chat (Design 2)
Appendix D4	Application of Framework to Analyse Data (Design 2)

F01 = Facilitator 1 (Researcher/Teacher/Participant Observer)

Appendix D1 – Researcher’s Reflective Journal (Design 2)

SHIRLEY REUSHLE				
WEEK	REFLECTION	RefNo.	PLAN/ACTION	OBSERVATIONS/QUOTES
Orientation Workshops 12-14 March 2003	<p>Flew into Singapore Tues, 11 March. Workshops Wed, Thurs, Fri – went well. Established rapport with participants, shared understanding of some terminology, etc., outlined requirements of course, established working relationship with Co-Facilitators.</p> <p>Problems that must be resolved before any future offers include: Speed of access for participants to technology (offer on BB5 very slow until I contacted NE and impressed upon them the gravity of the situation); Passwords must be distributed to participants prior to my leaving Aust – participants did not have passwords for access when I arrived</p> <p>Still facing requests for immediate gratification – show us the bells and whistles, give me examples of good courses, etc. Some participants not interested in the “whys” – just want quick fix (hows). Need to delve into deeper issues, but find happy medium and keep everyone moving along.</p> <p>Met with Co-Facilitators (decision to use Peer learning Relationship model rather than “Mentor” model) – 8 Co-Fors – allocate to groups (attach to own Schools, if possible)</p>	Intro forum	<p>Retain F2F workshops in future offers of program.</p> <p>Ensure the technology is working efficiently prior to visit</p> <p>Divide participants up with Co-Facilitators</p>	<p>F2F workshops essential, particularly with overseas groups: (“I was sceptical about benefits of online learning before our 2-day workshop with Shirley-now I am beginning to appreciate it a little better” – Intro, Student 1) (“2 day f2f course very informative” – Intro, Student 2) (“I’m resistant to e-learning before I attended the 2day course with Shirley. My main concern were motivation and information management. After the course, I see some bright light” – Intro, Student 3) (“Very enlightening 2days” – Intro, Student 4) (“This course is very insightful – enlightens me on how higher learning objectives can be achieved through technology – thanks to Shirley for that” – Intro, Student 5)</p> <p>“all participants found our sessions with Shirley very helpful. This could be one of the must have for any future courses” (Student 6, email)</p> <p>“SchIDs found the critical</p>

				elements exercise during Orientation very useful" (Student 7)
Week 1 17-21 March 2003	<p>Sent intro email to all participants on 14 March – group email facility did not work.</p> <p>16/3 – GP posted first Announcement.</p> <p>Returned Aust. Mon, 17 Mar. Course commenced. RE-sent Intro email outlining Expectations (of participants and facilitators), intention to hold a number of Virtual Chat sessions, requirements of Project (end of week 2 – overall aims, learning outcomes for students, and process outcomes (what participants need to do)</p> <p>18/3 – SR posted Announcement – associated weeks with dates</p> <p>19/3 – Announcement 4 – important to maintain and extend "social presence" established in workshops; stress imp. of no right or wrong answers;</p>	<p>Email 1</p> <p>Ann. 2</p> <p>Ann. 3</p> <p>Ann. 4</p>	<p>All features of software must work prior to commencement of course.</p> <p>Must make sure we include weeks and assoc. dates with future offers</p>	
Week 2 24-28 Mar	<p>26 March – Synchronous Chat 1 – 11 participants + GP + SR. GP and SR located in wrong chat room because of tech probs – Singapore pointing at a different server to USQ.</p> <p>Announcement posted – "Week 2" – advice re Virtual Chat</p> <p>Announcement posted – "For Virtual Chat Sessions" – outlining protocols and netiquette for chats</p> <p>Announcement posted – Post-virtual chat; pre-Week 3. Planning another chat session; what of the future of Group Pages – are they useful for this group of participants? May only use them if "groups" decide to develop group projects.</p>	<p>Ann.</p> <p>Ann.</p> <p>Ann.</p>	<p>Ensure the technology is working efficiently prior to conducting future chats</p> <p>Participants enjoyed the experience, even if a bit ad hoc and disorganized Another chat planned for 3 April</p>	

	<p>Contact with Co-Facilitators – sharing concerns about: What is holding participants back from participating (no time? Other priorities? What else?) How might the Co-Fors encourage participation? How do we know they are accessing resources/content?</p> <p>28 March – attended Etienne Wenger workshop on Communities of Practice, Sydney</p> <p>30 Mar Sent email to all participants – Reaffirm Task 1; Reaffirm use of “Community of Practice”; confirming not using group pages</p>	Email	<p>Some suggestions: GP & SR to email all participants – then CoFors to contact their teams Are the participants reading the discussion forums and Announcements? Be more explicit with tasks – what and by when.</p> <p>Prioritise readings more</p> <p>Encourage participants to share quick learning points – read and then share 3 things you have learnt.</p> <p>Set up Tips and Hints forum (eg how to use the discussion forums more effectively)</p> <p>Advice to participants– get in there, lose inhibitions, trust one another, toss some ideas around about e-learning</p>	<p>“Would be better to have “to do” and “by when” tasks” (anonym. suggestion by participant) Participants “overwhelmed” by readings “Less readings” “Some readings very long and complex articles which leave me struggling to get through” “The readings are mostly helpful but redundant in some cases”. “Still too many readings” “Even the summaries are quite intimidating”</p>
Week 3 31 Mar-4 April	<p>Sent email to CoFors outlining requirements but had to postpone much of planned activity due to SARS outbreak.</p> <p>POSTPONED DUE TO SARS OUTBREAK IN SINGAPORE – NP closed 2 April.</p>			
Week 4 7-11 April	<p>POSTPONED DUE TO SARS OUTBREAK IN SINGAPORE</p>			
Week 3 14-18 April	<p>Recommended course – revised timeline to accommodate polytechnic closure of 2 weeks due to SARS. Announcement posted – Week 3 (31 March-4 April) – concern about lack of participation in discussion</p>		<p>Want participants to do more than read information and take it in – want them to draw on experiences as learner to</p>	<p>15-20% of participants actively posting – why is this? * some are “vicarious” learners? some finding the content new and</p>

	forums Establish “Critical Incident 1 – Participation” to discuss issues of participation -commenced Mar 31 in discussion forum area – came out of discussion with Co-Fors and Synchronous Chat 1.	Crit Incident 2a	enable them to “situate” or “authenticate” their learning. Idea for them to experience “with us” not as a result of us doing something “to them” Review Critical Incident – Participation transcript – why are the participants not participating?	complex – feeling overwhelmed and intimidated? Some finding it difficult to keep pace with “current” content – content + discussion forums, etc. Excellent statements in Critical Incident on participation - see transcripts
Week 4 21-25 April	2 groups to complete task by 24 April.			
Week 5 28 Apr-2 May	Announcement posted – 2 groups had task to complete – requested a member of each group summarise group pages postings and post responses to the main discussion area – did not happen. Trying to organize another chat session.		Why did this not occur? How can we ensure activities are completed – more active role of CoFors??	
Week 6 5-9 May	REMINDER AGAIN OF REVISED TIMELINES DUE TO SARS May 7 - Synchronous chat 2 (postponed from May 1 as public holiday in Singapore) – 16 participants + GP + SR Created a “Critical Incident 2 – Chat”	3b		“you are the recognized instructor, not me” (Student 8)
Week 7 12-16 May	Announcement posted (“Week 7 – 12-16 May) – Creating your own educational web environment. Reminded to check Critical Incident 2 on Chat; tasks for module 4 – evaluation of a website according to critical elements. Private email sent 15/5/03 to all participants restating timelines and content to be covered; proposed chat for 21 May – assigning of small tasks to some intended attendees; information about videoconference wrap-up session		Poor response again to this activity – why? How to make course more interactive?	
Week 8 19-23 May	Module 5: Assessing and Evaluating			“Put the project in the spotlight”;

	<p>May 19 – Co-Fors Synchronous Chat 1 – focus on project as best way forward; timing issues (issue of relevance as some teachers don't even know what they will be teaching next semester); provide key questions for final project requirements; keep to essentials only</p> <p>May 21 – Synchronous Chat 3 – 19 participants + GP + SR. ASSIGNED tasks to selected participants. Interesting comments about students – see transcripts.</p> <p>Set up Critical Incident 3 – Use of Technology at NP – no significant further comments made</p> <p>Updated Project Progress file</p>	<p>3e</p> <p>3c</p>	<p>need to have everyone submit something as final deliverable before awarded Certificate of Completion – status report & sample of development on website</p> <p>Perhaps build part of future course around series of scenarios (critical incidents??)/problems/cases??</p>	<p>CoFor noted that “if participants know they have to “present” then likely to “motivate” them to prepare” – should some form of required “assessment” be made a more formal part of the design??</p> <p>“Singapore students more likely open up using computer rather than mouth”</p> <p>“It is difficult to motivate students in the polytechnic to chat constructively, unless you give them some carrots”</p> <p>“or sticks”</p>
Week 9 26-30 May	Email to all participants outlining details of final chat and also videoconference wrap-up session.			
Week 10 2-6 June	<p>June 4 – Synchronous Chat 4 – 13 participants + GP + SR</p> <p>Requests coming in for extensions – considering some but for short period</p>	3d		
Week 11 9-13 June	<p>June 10 – Videoconference wrap-up session – went very well. 3 participants presented.</p> <p>Remind participants to complete Course Evaluation.</p>			
Week 12 16-20 June	Projects still being placed in MeL; sending feedback to participants; viewing courses; compiling list of participants for Certificates of Completion.			<p>“Thank you for your guidance and advice.” (Student 10, email)</p> <p>“I have certainly learnt a lot and now more confident of course design” (Student 11, email)</p> <p>“I enjoyed going through the course and benefited a lot” (Student 12, email)</p> <p>“Thank you for your guidance and comments” (Student 13, email)</p>

Appendix D2 – Participant and Co-Facilitator Responses to Interview Questions (Design 2)

	COF01	COF02	COF04
S1.1. Why were you “sceptical” about the value of synchronous chat? What expectations did you have of virtual chat before participating in this latest offer of the course?	<p>You'll have the jot my memory on when I mentioned that I was sceptical about the usefulness of synch chats Shirley... it might have been right after an initial session chat which I participated in...</p> <p>If so... that feeling would have been formed as a result of my experience during the 1st chat session. It was frustrating to see comments flying all over the place during the chat... very little focus... very little control by the convener/moderator... people were coming in at different times... a lot of time I felt “wasted” on getting acclimatized with the “new” (to most, if not all) environment.. people were fiddling with the features eg. doodling on whiteboard. So... was “sceptical” whether participants benefited from the session... a few had expressed their frustrations to me...</p> <p>But I have since then (after a few more chat sessions and plenty of reflections) felt more “positive” about the environment... need to be used judiciously. There are specific and unique attractions and benefits (affordances?) associated with this channel of communication.</p> <p><i>What might the “special and unique attractions and benefits” of virtual chat be? What might chat allow you to do that you have not been able to do before?</i></p>		
S1.2. Can you identify an event or incident during the USQ course that led you to change your opinion about anything to do with online learning and teaching? If so, briefly describe. How did it make you feel?	<p>Yes... (1) one is the online synchronous chat facility. After the experience of the online chat event + subsequent discussions on the asynchronous group discussion forum – which allowed me to reflect on the experience and articulate my own feelings... since then I have been more inclined to promote the use of this facility... eg. for specially organized sessions where external “experts” are invited to join in the normal class discussion on specific issues.</p> <p>Another... (2) the discussions we had (together with other CoFers and Glen)... on ways to encourage participation in online forums... I think we had come up with several ideas on how to structure the discussion forums/threads better + reduce the group page discussions?</p> <p>But the essence of the learning for me in this instance, is the importance of user interface and the need to constantly consider the experience from learner's perspective.</p>	<p>Nothing in particular comes to mind. It was more of the whole experience leading me to a deeper appreciation of the potential of on-line learning.</p> <p><i>What is the potential? What might it allow you to do that you have not been able to do before?</i></p>	<p>... I was running an online course with Gilly Salmon's group on 'emoderating' at the same time as the USQ course was running ... there was a huge difference in the level of engagement of the participants ... it made me look very carefully at the design and facilitation differences</p> <p><i>What did you discover about the design and facilitation differences?</i></p>
S1.3. What occurred during the USQ course to make you see the potential of chat to be “unique” and “exciting”?	<p>The personal experience of going thru' a chat session. And subsequent reflection and discussion about the experience.</p> <p>During my reflections, it had been constantly in the back of my mind how our students (young people) are simply hooked on to this environment. There must surely be something “unique and special” about this to keep them at it for so often and for so long. As teachers we need to “go with the flow”, their flow so to speak.</p> <p><i>And how might we capitalize on this?</i></p>		

<p>S1.5a. I noticed that one issue that sparked your reaction during the USQ course was that of "assessment" (I remember the Co-For chat and your reaction to another's interpretation of "assessment"). Also, in one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? What should the main purposes of assessment in online environments be, do you think, and are there any barriers in the NP environment to achieving this?</p>			<p>all assessment is about whether the learning outcomes have been achieved ... whether on or offline the course design and assessment activities must be aligned ... many barriers are there for something that should be so clear and simple</p> <p>too much of the assessment done here is for recall and that's called learning</p>
<p>S1.6. In one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? Can you suggest any alternatives?</p>	<p><i>D6. In one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? Can you suggest any alternatives?</i></p>	<p><i>D6. In one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? Can you suggest any alternatives?</i></p>	
<p>S2.1. Were there any "surprises" resulting from this recent online learning experience with USQ? If so, please elaborate. Did you find that other colleagues at the polytechnic experienced similar surprises? If so, how do you think they reacted?</p>	<p>Yes... some staff whom I didn't think would demonstrate good evidences of good design in their eLearning courseware. They had not been particularly active in the discussions... but what they have done (after the course) had demonstrated elements of good practice.</p> <p>On other colleagues experiencing similar surprises... don't know.</p> <p><i>What does this result suggest to you?</i></p>	<p>I guess I was surprised that some staff did not participate at all. But then again, I guess they were conscripted against their will and maybe did not even want to learn anything about it.</p> <p><i>Would allowing a purely voluntary participation be the answer, do you think? If not, how might this situation be</i></p>	

		<i>improved for future staff development in this area?</i>	
S2.2. You mention in one of the discussion forums that you are "beginning to see a new light" in the use of virtual chat. You say that we need to "pin down" how and when to use it meaningfully. What further thoughts have you had re knowing "how and when to use" chat?	In general, need to use this... 1. judiciously, ie. be clear of learning outcomes and know if this is right tool to achieve the outcomes and perhaps in combination with other strategies... also, don't use it for its novelty sake alone. 2. with clear guidelines or "rules of engagement" for students/users to understand and adhere to. ie. like any learning environment, need to "manage" the process. In this regard too... expectations need to be clearly set out for best results. 3. some idea of contingency plans in mind. What if it fails – before session, during session... what if someone oversteps the rules?		
S2.3. Are there any barriers to implementing your philosophy of teaching in an online environment? If so, what are they and what are the effects of those barriers.	Wow... this is a tough one Shirley. Where do I start? Show me an environment where there are no "barriers"? This is going to be something "off the cuff". I see... 1. Internal, individual self-imposed barriers eg. teacher mindsets 2. Externally-imposed barriers eg. existing policies, infrastructure etc. First one... teacher resistance to try... comes in many forms... eg. "can't be done, have been done before and didn't work, won't work, no time, what's the point..." "you get my drift... The effect? No try, no gain..." Secondly... some examples which have been in place but perhaps based pretty much on premise of F2F classroom teaching, lectures, teachers as source of information... eg. need to mark attendance, managing teachers based on contact hours, student evaluations based on F2F delivery... The effect? Why try? Too much "pain". <i>How do you address some of these barriers? What is a positive way forward?</i>	No barriers – e-Learning just gives different opportunities for students to learn. It allows for learner-centred learning and social constructivist learning, possibly more so than in the 'conventional' setting. <i>How would you define "learner-centred learning? And how does e-learning allow learner-centred learning?</i>	<i>Are there any barriers to implementing your philosophy of teaching in an online environment? If so, what are they and what are the effects of those barriers.</i>
S2.4. What did you find most difficult (or what do you think your peers find most difficult) about learning online with USQ? Explain this. Can this difficulty be overcome? If so, how?	Too much reading to do... our NP teachers are not in the habit of reading academic papers especially those related to teaching and learning. They are also not used to learning asynchronously and remotely ... most if not all their training experience has been face-to-face. The motivation to keep the momentum going after the initial f2f orientation is still a major challenge... in the midst of all other more "urgent" tasks which they are faced with. Difficulties can be further reduced certainly. Some possibilities: 1. Choose right candidates 2. Set clearer expectations especially of task to be done, consequences of non-action, time commitment etc. 3. Greater and more personal involvement of top management eg. School/Division directors – all through the course + pre- and post-	For most of my colleagues the volume of reading was the biggest barrier, especially early in the course. It may be better to leave the academic papers out of the first sessions until participants have established more social and learning bonds.	her [Gilly Salmon's] 5 stage model seems to work very well and the course is highly structured and 'chunked' into easily digested pieces with clearly spelt out small focused activities. But I think the key is the recognition of the socio-cultural side of learning. <i>Please explain what you mean by the "recognition of the socio-cultural side of learning"?</i>

	<p>4. Better design of course – more interactive, more practical examples, less reading... or reading (theory) tied more to specific individual tasks...</p> <p>5. More time? ☺</p>		<p>when we walk into a classroom for the first time it takes time to get to know everyone and comfortable with exchanging ideas and working together ... this is can be facilitate by appropriate activities ... when we go online there's often a tendency to put 'stuff' up and say 'go in there and do ...', without any real support or time to develop the skills to be comfortable and effective online ... I think it needs to be built into the design of the course</p>
S2.5. Do you think e-learning is different to face-to-face learning and teaching? If so, in what ways?		<p>The single biggest difference from my point of view is the lack of immediacy which comes from body language and other cues. In maths especially, if a problem is sorted out immediately then a student has more chance of moving on. So it is harder to give encouragement and a sense of self-confidence when on-line.</p>	<p><i>Do you think e-learning is different to face-to-face learning and teaching? If so, in what ways?</i></p>
S2.6. Does online learning change the roles and responsibilities of the teachers and the learners (as compared to face-to-face)? Please elaborate.		<p>X Probably not that much. Already a lot of peer-to-peer help goes on but is not that visible to the lecturer – on-line just brings it out in the open more. Students feel that their circle of peer helpers is expanded in on-line mode.</p>	
S2.8. Is it a legitimate belief that some of your colleagues at NP fear that the online environment will enable students to reveal a teacher's "shortcomings"? What evidence is there of this?		<p>X Don't know really. Those that are confident with new approaches are already doing it – those who are not confident are doing the bare minimum, so it does not really threaten them as much. I suspect a lot do not have a concept of what it can do so don't know where/how to proceed.</p> <p><i>What other strategies could be used to address this (a lot</i></p>	

		<i>not having a concept of what it can do)?</i>	
S2.9. How would you define a “motivated” learner? What are the characteristics of “motivation”? Do you believe that online learning is more suited to “motivated” students? Why or why not?			... someone who's interested and engaged in the work and reflects critically on what they do ... the young are more comfortable with the technology than we'll ever be. I personally believe it's about the design and facilitation of the activities whether on or off line. I've seen students one lecturer finds unmotivated, very engaged with another type of activity. Students have changed, often lecturers haven't ... this is not say that there are some students who are disinterested no matter what you do but no where near as many as thought
S3.1. Do you think the USQ course has assisted your preparation for the online environment? If so, how? If not, why not?	Yes. Firstly in capacity as project leader from NP side, then as participant in run#1 of course, then also as co-facilitator in run#2 of course. <i>Can you elaborate on this?</i>	Yes – the theoretical background has been good as were the discussions about teaching/learning in an on-line environment. <i>How have you used this in your own course preparation? Give a couple of practical examples.</i>	
S3.2. Has the USQ course had any impact on your personal approach to learning and teaching, either online or in other modes? If so, how?	Yes... in design of online courseware and activities as well as facilitation of the online activities. What to avoid eg. too much text, consideration of cognitive load... how to enhance eg. use of examples, meaningful graphics, concept maps <i>How has your facilitation role changed? What have you learnt?</i>	Probably the most impact was from the experience itself – that is, being an on-line student . As all formalized learning experiences do, it makes you more sympathetic to the needs and frustrations of learners. Also, it was good to ‘revisit’ some of the educational theory – especially now that I am doing staff training. <i>How might you use this knowledge and experience in staff training? Give a couple</i>	yes but not anything in particular ... overall the readings and the discussion with peers ... the two key things that have been re-enforced for me are 1. material and activities need to be designed carefully for the audience, 2. we learn most effectively working collaboratively <i>How do you intend using this reinforced knowledge?</i>

		<i>of practical examples.</i>	
S3.3. Has your perception of e-learning changed at all since your involvement in the USQ course? If so, how? If not, please elaborate.	Yes... more convinced of value of good design and facilitation of meaningful activities using discussion forums , both live chats and asynchronous discussions... in enabling learning thru' this online mode.	Yes. The other experiences I had with on-line learning were pretty awful delivery processes with zero interaction. The whole business of discussion boards as a medium for social constructivism was an eye-opener. <i>In what ways was it an "eye-opener"? Please elaborate.</i>	
S3.3a. Has your opinion of virtual chats changed in any way since participating in the USQ course? Please elaborate.		Hmmm... the Blackboard chat system is not so hot. There is always the uncertainty of who is doing what and some wait time that is usually disorientating. I did not even try to do a chat session with my own students – seemed to me that the benefits did not outweigh the hassles. I'm thinking now that MSN may be a better thing to use.	
S3.4. Do you think that the online environment provides opportunities for your learning and teaching philosophy to be more easily put into practice? How, or in what ways?	Yes... greater need for good design, greater need for good needs analysis (eg. student prior knowledge/skills, conditions of learning), new competency skills related to online facilitation, greater need to design active learning opportunities (thru' meaningful and engaging activities/assignments)... as compared to f2f modes of instruction... where instructor has greater flexibility to make quick changes/adaptations during the instructor-student f2f interactions. What has become most critical is need to design to enable constructivist learning and collaborative learning approaches. <i>How does this knowledge apply to the NP context, do you think?</i>		
S3.5. What additional skills and knowledge do you feel you need in order to use the online environment more effectively? How might you gain these?	Online facilitation skills using discussion forums – have attended training with Gilly Salmon's group. Technical skills to create interactive learning components. Keeping abreast with available software tools and applications to introduce to students to use – for them to construct and represent their own learning. <i>Do you feel suitably prepared as an online facilitator after completing Salmon's course? If not, what other skills and knowledge do you need?</i>	I want to do more thinking about how to do technical modules (like engineering) on-line. The whole issue of symbols and maths notation is a problem and holds back development in this area.	<i>What additional skills and knowledge do you feel you need in order to use the online environment more effectively? How might you gain these?</i>
S3.6. What could be done to improve the USQ course, e.g. more	A redesign to meet learner needs which have become more evident thru' the previous 2 runs. Also, in some ways the learner needs are changing.	In a nutshell, the resources need to be re-thought.	it depends on the 'audience' ... I think the course was good for highly motivated independent

dialogue? More discussion? More resources?	<i>How are the needs changing? What pre-planning would be required to assess those needs?</i>	Early in the course should be more discussion and very little reading. Middle of the course should be readings which are accessible (I mean like magazine-style, non-academic readings). Then finally more academic readings could be used towards the end.	learners and this is what's required for all post graduate work ... it's not so much about the dialogue but the type of dialogue, what has worked in the two Salmon courses (2nd currently running) has been the gradual move of activities through socialisation ... information exchange... knowledge construction and the type of facilitation by her moderators. The co-facilitating model we used helps ... I guess the real test is if an effective 'community of learning' can be formed
S3.7. How successful (or otherwise) was the use of Co-Fors in the USQ course? Can you suggest other ways of exploring the peer learning partnership role adopted by the Co-Facilitators?	In some ways... especially in that thru' this form of "official" appointment of role, there is greater shared ownership. Could have been more useful if more had more time to be more engaged... but I see this as an on-going process... <i>What planning is required to enable "more time"?</i>	It was okay but the real danger was that the Cofors and instructors were often just talking among ourselves (not entirely true but looked like this often). Good concept, but didn't work so well with this group of participants. <i>Why not? What strategies might enable more active participation?</i>	what has worked in the two Salmon courses (2nd currently running) has been the gradual move of activities through socialisation ... information exchange... knowledge construction and the type of facilitation by her moderators. The co-facilitating model we used helps ... I guess the real test is if an effective 'community of learning' can be formed
S3.8. Do you think anything, in the polytechnic context, needs to be changed or improved in order to implement successful online learning and teaching? If so, please elaborate.	Yes... plenty of opportunities for improvement. Eg. more "elearning friendly" policies, recognition of online developmental efforts, greater understanding of skills and time required to enable + foster more meaningful online facilitation... <i>What needs to be done to enable some of these things to occur?</i>	There needs to be more of a clear direction about how much and what will be done on-line. Currently, it is up to the module leader whether he does anything or not (beyond the required minimum of posting syllabus and staff info in Bb, I mean). There is nothing that you can do about this, of course – but the institutional implications of time allowance and clear direction are common themes , I imagine.	
S3.9. You mentioned that Singapore students are more likely to "open		I already encouraged use of Discussion Board from the beginning of semester and I	

up using computer rather than mouth". How might you use this to your advantage in your teaching?		guess it could have had more emphasis. <i>What strategies might you use to place more emphasis on this?</i>	
S3.12. If applicable, what would be one of your biggest frustrations in promoting online learning and teaching at NP? How have you attempted to address these frustrations? Successes? Failures?			big question ... the biggest problems are change management and older staffs' reluctance to even consider other options to the methods they've used for many years , to their mind successfully ... they blame the current problems on unmotivated students ... successes have only come through finding individuals who still have some energy and interest in new possibilities and conducting pilots with them and if and when they're successful there is possibility of expansion. But this takes a long time and there are many underlying issues
S3.12a. How might this change be better managed in the polytechnic context?			you ask very difficult questions :) ... if there was a simple answer we'd do it, there isn't ... the forces operating are extremely complex and they go very deep ... ideally it needs to be an informed synergy between 'top down' and 'bottom up' initiatives with appropriate staff development across the board and staff who are not overworked and tired of ongoing new 'initiatives' that are implemented without any real understanding ... how honest can I safely be? :)

These are direct comments from participants in the USQ course. Please provide your personal reaction to the comments.

	COF01	COF02
PR1. The course could have been done in a more efficient manner.	Yes... much like in everything else in life. Need to get down to specifics as well as possible solutions	?? I guess this means the participant did not learn things as quickly as (s)he expected. Perhaps with the various changes suggested above, this perception would change.
PR2. There should be more discussions and illustrations of best practice in e-learning in the course.	Yes... totally agree on use of greater real-life examples (including student responses). More discussions... well, there were plenty of opportunities for learners to discuss thru' the online forums but thought this was not well used... agree that with more discussions, the learning would be much richer.	This is not easy to do. We have the same problem here where we are trying to showcase best practice. But there are issues with login access and privacy issues as well as the usual sensitivity issues. So we have resorted to screenshots of parts of the module.
PR3. Some teachers believe that if there are questions asked by students, then it implies that the teacher has not done the teaching job properly.	How does this comment relate to this USQ course? Or is this a mere statement of what the writer feels about his teaching experience in general?	Such teachers need replacing! This is exactly what we want students to do! [I was doing some training in question techniques yesterday. Participants did not believe that the average number of questions asked in a high school classroom is around 40 per hour. It is much lower here.]
PR4. Becoming a better teacher may mean questioning our practice and perhaps changing our beliefs and assumptions about education.	Yes... agree whole-heartedly	That's for sure. Can't agree more
PR5. Use four words to describe your experience in the USQ course (e.g. difficult, painful, enlightening, etc.).	Useful, hard work, relevant, more can be done!	As a student: interesting, challenging, time heavy, reading-heavy As a Co-Fer: disappointing (lack of response), frustrating, difficult (to know when to comment and when to leave well alone), enlightening (to see who participated and when) How might this difficulty be addressed in future?

	P04	P05	P06
S1.2. Can you identify an event or incident during the USQ course that led you to change your opinion about anything to do with online learning and teaching? If so, briefly describe. How did it make you feel?	i can't think of a specific event, but...i think my view on online teaching became more positive ...it could be due to seeing how much USQ has been doing in that area. i used to be a little more sceptical. going thru the usq programme, i'm not quite a convert, but i'm more positive. i think an effective course is possible, but tough Is it worth pursuing? If tough, how might you address this? Where might you go for assistance?	I can't recollect any event that change my ideas about elearning	I initially thought that it would I was expecting to play a more moderator sort of role . I guess I failed to inculcate a sense of community of learners . I still ended up being the source of their information providence. Discussion board was still primarily directed to me . Are you referring here to your own course? If so, what might you do to encourage the development of a community of learners, or where

			<i>might you go for assistance? Give a couple of practical examples.</i>
S1.5. What are the main purposes of assessment and evaluation in online environments?		<p>For next semester I plan to incorporate certain portion of the elearning part to be part of their assessment as well</p> <p>I have looked through one module which is done by my colleague she has heavy usage of the forum with her students and it seems that her students are actively participating because it is part of their assessment</p> <p><i>How do you plan to assess participation? Have you referred to any other resources (besides your colleague) for ideas? Where else might you find support?</i></p>	<p>As an institute of higher learning, assessment should be more wide encompassing to include a wider scope of assessment</p> <p>I believe exploiting the advantages of doing things online, we may consider assessing based on quantity and quality of planned online activities</p> <p>Back to my response about the main purposes of online assessment, I believe, in all assessments, besides the summative need to ascertain a learner's level of competence in having acquired the planned syllabus, there is this ever important element of a formative assessment to know that thew know what needs to be known in a way that they can learn to eventually know</p> <p>I guess in the learning process, whether F2F or otherwise, student's ability and desire (translated from their motivation) to want to reap the most from their own processes forms the key consideration factor</p> <p><i>How might you contribute to this motivation?</i></p>
S1.6. In one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? Can you suggest any alternatives?	<p>the main fear of doing exams online is the security issue... but as someone who believes that exams should carry a minimal weight, the incentive to cheat would be less..... i'm not against paper-based exams, but i think too much emphasis is placed on them</p> <p>i think discussions should be part of the assessment. i strongly believe in the value of discussion. vicarious learning is a poor excuse... but for those who really cant contribute to discussions, other alternatives</p>		

	<p>might be needed. i can't over-emphasise the learning value of a good discussion.</p> <p>Why is vicarious learning "a poor excuse"? Do you not agree with Mayes' view of the value of vicarious learning? What other alternatives are you thinking of?</p>		
S1.10. Describe your perception of online learning and teaching at the beginning of the USQ course.		<p>Before doing this course my perception of e-learning – it allows for flexible individual learning; accessing materials at own leisure</p> <p>What I am hoping to get out of this course is to find other ways to make contents that are more interactive and supports collaborative learning.</p> <p>Did the USQ course meet your expectations in terms of finding other ways to make content that is more interactive and supports collaborative learning?</p>	
S1.11. You also mentioned in one of the forums that the typical mindset of most of your students is, "if it isn't graded, I am not involved". Do you still have this opinion? You also mentioned the difficulty of getting students to participate in forums. How might you overcome this mindset			<p>I have actually made Blackboard posting a compulsory (graded) activity for all my students</p> <p>I told them that they will not be graded on the quality of their postings initially, but just to develop a habit of constantly being involved in a community of learners through discussion forums that are very focus on my week to week topics</p> <p>To give an artificial notion of a timeframe, I named my discussion boards Week 1 Discussion, Week 2 Discussion, Week 3 Discussion, and so forth</p> <p>What success have you had in making the BB postings compulsory? What other thoughts</p>

			<i>have you had in this area?</i>
S2.4. What did you find most difficult (or what do you think your peers find most difficult) about learning online with USQ? Explain this. Can this difficulty be overcome? If so, how?	<p>frankly it turned out a little worse than i predicted.</p> <p>i think it's obvious that most participants found the readings too much/tough. i won't comment much more on that....</p> <p>i would think the discussions could be improved.....</p> <p>maybe the facilitators could more actively encourage critical discussions?</p> <p>the culture here may have made it tough for someone to comment negatively on someone of a higher rank.</p> <p>i think stepping back would be ideal if the discussions are forthcoming, but given our situation, the obvious presence might be needed, at least initially</p> <p>also, i think participants had no idea what they were to expect. many of them have a poor grounding in english- they just cant handle even the easier readings...</p> <p>perhaps challenging the ideas put forth in a reading could be considered 'critical'...</p> <p>perhaps it would have helped if participants could be selected more carefully.</p> <p>for critically commenting on an article, that could be due to a general lack of critical thinking, not so much a fear of commenting on a higher rank</p> <p>Shirley Reushle > How might the participants be selected? What criteria might be used, do you think?</p> <p>there should be some interest/enthusiasm. purely voluntary, and they have to know what to expect (readings, discussions, etc)</p> <p>of course that is somewhat ideal</p>	<p>I think it is finding the time to read the materials there were so much materials that we have to read and it is difficult to find the time especially for me during last semester I was not given the time off for doing this course.</p> <p>I think that it would be better if there were more examples or case study approaches that can give us something to look at or perhaps more concrete examples that we can analyze and work through as an exercise?</p>	<p>My reservations with online learning lies with the authenticity during assessment (assuming exam bas ed)</p> <p>If an institution confers degrees to people whom they cannot verify that they are, I have my reservations ... again, this leads us back to what constitutes credibility in assessment</p> <p><i>What are the solutions, do you think?</i></p>

S2.5. Do you think e-learning is different to face-to-face learning and teaching? If so, in what ways?	<p>certainly different. there's less spontaneous communication... (i'll have to give it some thought) less motivation...so it requires more self-motivation and discipline...also, many subtle cues are lost online.</p> <p><i>What do you mean when you say there is "less motivation" in e-learning?</i></p>	<p>I think that with online-learning, I need to be able to encourage my students to feel safe to discuss, to talk, to share their ideas and opinions. Just as I was studying then, discussing things with my friends, I need to make them feel secure that these groups of students can benefit from their ideas and from the discussions.</p> <p>The one thing that I feel is different with online learning as I have experienced so far, I feel more secure here to talk and share opinions. I can read the posting of others and it allows me time to reflect on what has been said and get a clearer view of what has been said. Learning from each other I find is easier in the online mode as long as the community of learners are willing to share and have the same attitude of wanting to learn from others as well.</p> <p><i>How might you use these to your advantage with your own learners? Give a couple of practical examples.</i></p>	<p>With F2F teaching and learning, there is a deeper sense of "being", of students being under your charge</p> <p>online activities, it seems this moral obligation is somewhat diluted</p>
S2.6. Does online learning change the roles and responsibilities of the teachers and the learners (as compared to face-to-face)? Please elaborate.			<p>For me, I inform my students that eLearning, or F2F lecture, this is merely a mode of content delivery. Skill mastery and knowledge is still the ultimate goal</p> <p><i>Are these your only goals?</i></p>
S2.9. How would you define a "motivated" learner? What are the characteristics of "motivation"? Do you believe that online learning is more suited "motivated" students? Why or why not?	<p>motivation, in some respects is relative. i may be motivated to do some thing but not another. eg. i may participate in forums, but not motivated to read articles. of course an absolutely motivated student would be one who does everything that is expected of him/her, and more.</p>	<p>Someone who is motivated is more suitable to this kind of learning." "What strategy to get not so motivated students to participate?"</p> <p><i>You mentioned during the course that someone who is motivated is more suitable to this kind of</i></p>	

	<p>i believe that less motivated students may still have a chance, if the online course can be designed to be motivating.</p> <p><i>What do you need to do to achieve this?</i></p>	learning – why is this so?	
S2.10. You mentioned that if the level of discussion is not what you expect because it's either too high or too low, you would tend to contribute less. Why were you unable to complete the USQ course?	i didn't do the 'assignment' as i'm not really teaching....		
S3.1. Do you think the USQ course has assisted your preparation for the online environment? If so, how? If not, why not?	<p>the level of discussion is poor in my opinion. lack of critical thinking...there's a general fear of 'criticizing' (culture?)...there's too much 'vicarious learning'. maybe you could say i did my assignment vicariously?</p> <p>... yes it was poor in the course. there were bad ideas floating around, but unchallenged. after a while, i get tired of being the only one challenging them.</p> <p>the idea of the red/green timeline/progress indicator once you log in is good to me. slight motivation there...</p> <p>i can't remember any specific bad idea, but i remember criticising the article 'good teaching is good teaching'. i asserted that the title had nothing to do with the article. no one said anything.</p> <p>i was expecting to see some comments on something 'controversial' like that, but nothing.</p>		
S3.2. Has the USQ course had any impact on your personal approach to learning and teaching, either online or in other modes? If so, how?	<p>i can't say that it had much impact. after the face-to-face sessions where we were told what to expect, i pretty much could predict how things would turn out (people not reading articles, etc)</p> <p><i>Can you suggest a better approach once the f2f sessions are over?</i></p>	<p>The module that I am teaching right now is still very much face to face, we do have some elearning component in which we do ask the students to do some exercises online</p> <p>we encourage them to post comments or questions in the forums however so far we find the students to have not participated as much as</p>	Very ashamedly, as an IT lecturer, I was initially very sceptical. I owe it to USQ to have successfully remove this scepticism

		we hoped for.	
GS3.3. Has your perception of e-learning changed at all since your involvement in the USQ course? If so, how? If not, please elaborate.		<p>I think the perception for me has changed as during the course, I realise that the use of the forum to discuss topics and ideas has helped to be able to instill the sharing of knowledge with each other and ideas.</p> <p>Collaborative learning is very much something that do happens in elearning if we are able to get the participants to actively participate.</p> <p>However I still do enjoy the flexibility in elearning as something that I can learn in my own time as well so that aspect is still there.</p>	<p>in all honesty, I am somewhat at a dilemma. On one hand, I am very convinced that eLearning (whether through distant learning or otherwise) is a new paradigm towards teaching and learning for the future.</p> <p>On the other hand, when selecting a post grad course for myself, I have this internal tendency to shun non F2F conducted courses.</p> <p>I guess I share my student's sentiments of after the novelty, learning or the perceive notion of an assurance of an improved opportunity of learning is best achieved when I am able to get in touch (F2F) with a domain expert</p> <p><i>How might you achieve the same outcome online?</i></p>
S3.3a. Has your opinion of virtual chats changed in any way since participating in the USQ course? Please elaborate.	hasnt changed. i've done chats before which were bad, and i've done good ones.		<p>I have actually cancelled a class on a pilot test and conducted the lesson via chat sessions</p> <p>The eventual outcome was rather disappointing but I will be trying it out again</p> <p>I guess the student's maturity level is a main issue. To others it might have been traumatic</p> <p><i>How might you prepare for a future session with your students?</i></p>
S3.5. What additional skills and knowledge do you feel you need in order to use the online environment more effectively? How might you gain these?	<p>it's hard for me to comment on this, since my background is largely in IT. but i can try..... give me a minute to think...</p> <p>it also depends on whether it's chat or discussion. good typing speed is important in chats.</p> <p>i'd say general computer/web-savvy would be useful. how to gain this, i</p>	<p>I would say additional skills would be how to be a moderator ? How to probe and get participations from the students ?</p> <p>Shirley Reushle > Where might you gain these skills?</p> <p>I think it comes from experience I think as we conduct more of the online</p>	<p>I am constantly keen to find out "how else" things could be done through eLearning</p> <p>In all my haste, I have spared little (honestly it is no time) time to refer to what others have done.</p> <p>Shirley Reushle > Would you use the TLC staff to support you??</p>

	<p>really have no idea. having taught many colleagues at NP, most not from the IT generation, i find that those who can't form a good mental model of IT stuff have problems all the time.. some creativity would be helpful in devising interesting ways to teach online, since it's still a relatively new area. but creativity lessons are notorious in having their effectiveness limited to the location they were conducted in</p>	<p>Now at NP there are lunch time seminar which is just a 45 minutes Mel studio that talks about other aspects of using certain components in Blackboard</p> <p>I am particularly interested in the idea of Problem based learning. To reflect back to the days when I was a student studying at Uni. I find myself particularly bored listening to lectures after about half an hour. At that time I find that as long as the lecturer had provided me with the lecture notes, it would be easier for me to read the materials provided and discuss it with my friends if there are anything that I need to make clear. I also like to try out and experiment by myself, as I was studying computer science, the code and algorithms will make more sense to me as I play with them, trying different things and if there are any problems with it, try to solve it myself and in the process I feel that I learn a lot from that.</p>	<p>Max Lam > Being rather tech savvy, I have been doing all my developments myself. I consider the development process also part of my own learning process</p> <p><i>You can cover the technological side of development – what about the pedagogical? Where might you go for more support it that area?</i></p>
<p>S3.6. What could be done to improve the USQ course, e.g. more dialogue? More discussion? More resources?</p>		<p>I think that it would be better if there were more examples or case study approaches that can give us something to look at or perhaps more concrete examples that we can analyze and work through as an exercise ?</p> <p>Definitely more time for us to participate in....more discussion perhaps and maybe we could have a mock up session where one of the participants will act as the facilitator ? for the forum More relevant exercises as well</p> <p><i>Please provide a couple of practical examples of “more relevant exercises”?</i></p>	<p>As for the USQ course, I guess there should be a few areas of focus</p> <p>It should initially start with the technicality - using BB, configuration, BB techniques, Web and Internet technologies ...</p> <p>And then move on to pedagogy, rationale of eLearning and collaboration via electronic means</p> <p>And eventually culminating to a full scale eLearning implementation project</p> <p>... or an academically inclined thesis paper</p> <p>Shirley Reushle > OK, NP should precede any further such courses with an "orientation" to the environment course??</p>

			Actually NP did, but most lecturers are so busy ... also, this course should have been run longer and preferably full-time
S3.7. How successful (or otherwise) was the use of Co-Fors in the USQ course? Can you suggest other ways of exploring the peer learning partnership role adopted by the Co-Facilitators?	<p>the co-fer idea was a good one, but only very few contributed and was helpful.....</p> <p>the cofer could help to encourage more critical thinking. 'if a peer can do it, maybe i can too'</p> <p>Shirley Reushle > What incentives might be used to improve this situation? that's a tough question... did they volunteer to do it?</p> <p>i'm not sure about incentive, but they could be told explicitly to be critical...</p> <p>some of them looked like they volunteered, but not all.</p> <p>Shirley Reushle > Would them being "critical" cause friction between the cofers and their colleagues, do you think?</p> <p>i really don't know. might be good to put it up front to everyone that they being critical is intentional, and everyone is encouraged to be critical. that might help..</p>	<p>I think the co facilitators was very successful.</p> <p>They were very helpful in participating in the forums as they were more experienced they had done it before</p>	<p>With apologies, I do not personally think that their presence had any impact or bearing to my new found faith in eLearning If any, their impact is negligible</p> <p>Shirley Reushle > Could the idea be exploited in other ways so it might impact more, do you think?</p> <p>By getting Co-Fers to "mentor" on a one-to-few group tutorial kind of basis with expected deliverables ... might help ?</p> <p>Shirley Reushle > How might the institution "reward" those Co-Fers to encourage them to take a more active role, do you think?</p> <p>Probably by recognising that co-fers is a full time job, just like instructional designers ... as long as such activities are done as a "part-time" basis, you can never get the type of dedication required to pull it through ... these are just in my own opinion of course ...</p>
S3.8. Do you think anything, in the polytechnic context, needs to be changed or improved in order to implement successful online learning and teaching? If so, please elaborate.	<p>of course. there's so much to be changed, i wouldnt know where to start.</p> <p>from the system to the individual teacher</p> <p>all levels. we're not ready</p> <p>Shirley Reushle > OK, can you be a little more specific - "we're not ready" - why??</p> <p>it's hard to be specific when there's so much. mindsets need to be changed for a start. not many people see online t&l positively... why rock the boat?</p> <p>like you say, there's a lot of rhetoric</p>	<p>In terms of infrastructure we are ready for elearning</p> <p>We also have a community of practice within the polytechnic that we can get help and share ideas with</p> <p>I think management just need a more concrete idea of what elearning entails</p> <p>What needs to be changed is that currently there are allocation of 20 hours that the lecturer needs to fulfil as part of their duty Conducting elearning should also be taken into account as part of the hours used to fulfil that Other...I am not sure how true is this</p> <p>but I have the feeling that in the polytechnic we are expected to guide</p>	

		<p>the students sort of baby sit them we are treated like the fountain of knowledge and I think that is expected, the traditional way of teaching what I want to see more is student independence</p> <p>I think it is something that is expected by the students as well as during secondary school they are spoon fed by teachers and would not do anything unless the teacher tells them to.</p> <p>Using online environment....</p> <p>I would want to do a more of knowledge based approach where I give them problems that they have to solve and with that they would have to find the solution together with knowledge needed to solve the problems online and also encourage them to solve the problems by sharing ideas and discussing about it</p>	
<p>S3.12. If applicable, what would be one of your biggest frustrations in promoting online learning and teaching at NP? How have you attempted to address these frustrations? Successes? Failures?</p>	<p>there's still a long way to go for most people. now we use blackboard, and there's some pressure in putting content online, so many dump in their powerpoint slides or word documents. what i'm doing for these is to show them various tools to help them put proper html notes online, at the same time educating them that putting a doc file is not good usability etc.</p> <p>so that's helping little by little for the unconvinced. they have to do it, but i'm saying, since you have to do it, why not do it a little better?</p> <p>for the slightly more advanced, i've been teaching tools like flash. i don't teach them how to use flash, but i teach them how to do this or that in flash. so it's goal-oriented rather than tool oriented..</p>	<p>Well, actually for our department, Film and Media Studies, we have been quite successful in promoting the use of e-learning as part of the component for a module.</p> <p>However one frustration is that we are not given extra time for that, as you know it do take quite a lot of time to prepare materials for online purposes as well as being able to participate in the online discussion. replying to postings and basically just moderating the forum.</p> <p>institution was not recognising that being involved in online learning was part of the "workload" and that they were not being acknowledged for the work they were doing.</p> <p>We are expected to create materials for e-learning but they are considered to be the same with the normal materials we are</p>	<p>My one single source of frustration would be the lack of acknowledgement that this constitutes part of our "official" duties as lecturers</p> <p>I have chosen to ignore the issue and focus on the problem of getting students to benefit through eLearning, to successfully deliver content matter within the stipulated timeframe</p> <p>I would wish that eLearning activities conducted by Lecturers to constitute part of "appraisal"-able activity</p> <p>My only problem is how this could be measured and compared, say from one lecturer (who maybe not devoting any time to) to another (who may be spending a lot of time</p>

		<p>doing for our face to face classes</p> <p>I think as it was mentioned during the course, management do consider elearning as just a new buzz word and not really understand what goes into its preparations and how to sustain that</p>	<p>on)</p> <p>I guess before we can zoom down to measurement and comparison, the basic definition of what constitutes "having been involved in elearning" must be well defined.</p>
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These are direct comments from participants in the USQ course. Please provide your personal reaction to the comments.

	P04	P05	P06
PR5. Use four words to describe your experience in the USQ course (e.g. difficult, painful, enlightening, etc.).	<p>interesting....</p> <p>slightly frustrating (i think you felt that?) i said interesting not so much because i felt the material was interesting,</p> <p>but it was interesting to go thru it and see how others deal with the course. watching online behaviour was interesting</p> <p>different people had their own peculiarities... some contributed to discussions, but they were largely out of touch...</p> <p>but generally there was some inhibitions (already mentioned)... i had a better understanding of some colleagues...</p> <p>out of touch with the discussion. they were just posting their own ideas... they had their own ideas, and the forum was just for airing what they thought, not so much to discuss.</p> <p>it would be good to develop that habit or 'culture'. how many participate in forums on their own? the blackboard's forum interface wasnt helpful either.</p> <p>things are changing here, but i think the top management needs to be involved. they dont know what's wrong. (maybe they do, but they're helpless?)</p> <p>there are a lot of free forums lying around which are better in my</p>	<p>Interesting, thought provoking, can be a bit painful as well - timing - if there can be more time - I think it also happens during the Sars crisis - that's why it was a bit difficult for me to concentrate more on it. maybe the course could have lasted longer ?</p>	<p>Enlightening, enriching, enjoyable, But not fully satisfied (need more that is)</p> <p>Can I check with you how I may proceed from here ... as in having involved myself in eLearning, what would be a natural next step ?</p> <p>How do I go on to "evangelise" elearning ? Any conference available this year end at USQ about elearning ?</p> <p>Is there any other follow up activities that you might like me to get involved ?</p>

	opinion. although you cant have discussions that go into many threads (they are totally linear), but the ease of use i feel would outweigh the advantages offered by a forum with threads (like blackboards)		
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	P01
S1.2. Can you identify an event or incident during the USQ course that led you to change your opinion about anything to do with online learning and teaching? If so, briefly describe. How did it make you feel?	No specific event but that the experience in going thru the course makes me realise that online teaching and learning are very time consuming processes.
S1.6. In one of the chats, Max mentioned that although NP is adopting e-learning, paper-based exams are still being used. What are your thoughts on this? Can you suggest any alternatives?	Our main biz is still F2F. Also there is problem of cheating/ impersonation if exams are not done F2F
S1.8. Why were you so sure, initially, that you did not need the synchronous chat feature with your students?	I have ample F2F time with students
S1.9. During the USQ course, you mentioned that those who are task oriented and appreciate a lot of structure are not suited to learning in a chat room environment. What is/was it that made you think this?	In my 2 experiences of chatting, I find there is a lot of interruption from the members and the instructor was hardly able to focus the group on the topic. It was good socializing though.
S1.10. Describe your perception of online learning and teaching at the beginning of the USQ course.	Exciting, a growing trend and need.
S2.1. Were there any "surprises" resulting from this recent online learning experience with USQ? If so, please elaborate. Did you find that other colleagues at the polytechnic experienced similar surprises? If so, how do you think they reacted?	I did not expect Discussion is so much a part of eLearning . I was looking forward to learning more multimedia tools. Anyway I grew more convinced of the usefulness of Discussion.
S2.3. Are there any barriers to implementing your philosophy of teaching in an online environment? If so, what are they and what are the effects of those barriers.	Students' language problem. Difficulty in expressing their thoughts in writing.
S2.4. What did you find most difficult (or what do you think your peers find most difficult) about learning online with USQ? Explain this. Can this difficulty be overcome? If so, how?	Time consuming.
S2.5. Do you think e-learning is different to face-to-face learning and teaching? If so, in what ways?	Yes, so much more time needed in preparation.
S2.6. Does online learning change the roles and responsibilities of the teachers and the learners (as compared to face-to-face)? Please elaborate.	Learner need to be very motivated and responsible to login and learn.
S2.9. How would you define a "motivated" learner? What are the characteristics	One that is self-driven to improve, does not need the trainer to "push" him. Yes online

of "motivation"? Do you believe that online learning is more suited "motivated" students? Why or why not?	learners must be motivated.
S3.1. Do you think the USQ course has assisted your preparation for the online environment? If so, how? If not, why not?	It learn that I should write in a way that invites students to think.
S3.2. Has the USQ course had any impact on your personal approach to learning and teaching, either online or in other modes? If so, how?	It learn that to be more encouraging and give positive strokes.
S3.3. Has your perception of e-learning changed at all since your involvement in the USQ course? If so, how? If not, please elaborate.	Yes, more persevering to incorporate it in my teaching.
S3.3a. Has your opinion of virtual chats changed in any way since participating in the USQ course? Please elaborate.	Yes, I was excited abt it but now I wouldn't want to try it because it is hard to achieve the teaching objectives.
S3.4. Do you think that the online environment provides opportunities for your learning and teaching philosophy to be more easily put into practice? How, or in what ways?	Communication with students is more efficient now.
S3.5. What additional skills and knowledge do you feel you need in order to use the online environment more effectively? How might you gain these?	Not sure.
S3.6. What could be done to improve the USQ course, e.g. more dialogue? More discussion? More resources?	Incorporate Technology skills like multimedia development
S3.7. How successful (or otherwise) was the use of Co-Fors in the USQ course? Can you suggest other ways of exploring the peer learning partnership role adopted by the Co-Facilitators?	Good. Mine provided technical guidance which was helpful.
S3.8. Do you think anything, in the polytechnic context, needs to be changed or improved in order to implement successful online learning and teaching? If so, please elaborate.	Time for online teaching need to be generously allocated in the staff schedule. Perhaps also employ full time developers to do the site for big modules
S3.13. You suggested that use of "guest speakers" might be useful and would "appeal" to students. Why would this be so?	They provide expertise and industrial knowledge relevant to students careers.

These are direct comments from participants in the USQ course. Please provide your personal reaction to the comments.

	P01
PR1. The course could have been done in a more efficient manner.	Yes, too much emphasis on Discussion board I think.
PR2. There should be more discussions and illustrations of best practice in e-learning in the course.	Yes, we are interested in what works and what is practical and has been done by others.
PR5. Use four words to describe your experience in the USQ course (e.g. difficult, painful, enlightening, etc.).	Enlightening, time-consuming, interesting, tiring

Appendix D3 – Sample of Interview Transcript Conducted as a Synchronous Chat (Design 2)

Researcher has entered. [06:33:00 AM]

P05 has entered. [06:56:26 AM]

Researcher > Hi!

P05 > Hi.

Researcher > This "interview" will consist of some pre-prepared questions (general) and hopefully explore some of the issues you raise in more detail. If you cannot see where some of my questions are heading, please comment. I do have an "agenda", and am trying to follow a "framework" so hopefully things will not be too confusing.

P05 > Ok I understand

Researcher > If you have no questions at this stage, let's get started then. Here's a fairly general question. If applicable, what would be one of your biggest frustrations in promoting online learning and teaching at NP? How have you attempted to address these frustrations? Successes? Failures?

P05 > Well, actually for our department, we have been quite successful in promoting the use of e-learning as part of the component for a module.

Researcher > Fantastic - would you mind elaborating just a little on what has occurred?

P05 > However, it does take quite a lot of time to prepare materials for online purposes.

Researcher > Prior to this course, you noted that your perception of e-learning was very much an individual activity ("flexible individual learning; accessing materials at own leisure"). Now you have completed the USQ course, has your perception of e-learning changed at all? If so, how? If not, please elaborate.

P05 > I think the perception for me has changed

Researcher > Yes?

P05 > As during the course, I realise that the use of the forum to discuss topics and ideas has helped to be able to instill the sharing of knowledge with each other and ideas.

P05 > collaborative learning is very much something that do happens in elearning if we are able to get the participants to actively participate.

Researcher > Have you found that this has impacted on the way you teach online and how you interact with your learners and the strategies you are using with your learners? If so, please elaborate.

P05 > The module that I am teaching right now is still very much face to face, we do have some elearning component in which we do ask the students to do some exercises online

Researcher > And how is that going?

P05 > we encourage students post comments or questions in the forums however so far we find the students to have not participated as much as we hoped for.

P05 > For next semester I plan to incorporate certain portion of the elearning part to be part of their assessment as well

P05 > I have looked through one module which is done by my colleague

P05 > she has heavy usage of the forum with her students

P05 > and it seems that her students are actively participating because it is part of their assessment

Researcher > OK - this is an interesting observation. Also, what additional skills and knowledge do you feel you need in order to use the online environment more effectively and maybe increase this participation in other ways? How might you gain these? What about your learners??

P05 > I would say additional skills would be how to be a moderator? How to probe and get participations from the students ?

Researcher > Where might you gain these skills?

P05 > I think it comes from experience

P05 > I think as we conduct more of the online

Researcher > I would suggest that maybe there have been other courses you might be able to tap into? And certainly sharing ideas with colleagues, professional reading, etc.

P05 > Yes that as well, now at NP there are lunch time seminar

P05 > which is just a 45 minutes Mel studio that talks about other aspects of using certain components in Blackboard

Researcher > Great, I am pleased to hear that their continues to be a focus on a "community of learners" at NP - we find this sharing of ideas and expertise the most effective way of moving forward at USQ.

Researcher > Can you identify an event or incident during the USQ course that led you to change your opinion about anything to do with online learning and teaching? If so, briefly describe. How did it make you feel?

P05 > I can't recollect any event that change my ideas about elearning

Researcher > What did you find most difficult (or what do you think your peers find most difficult) about learning online with USQ? Explain this. Can this difficulty be overcome? If so, how?

P05 > I think it is finding the time to read the materials

Researcher > How could this difficulty be addressed in future offers, do you think?

P05 > there were so much materials that we have to read and it is difficult to find the time especially for me during last semester I was not given the time off for doing this course.

P05 > I think that it would be better if there were more examples or case study approaches that can give us

P05 > something to look at or perhaps more concrete examples that we can analyze and work through as an exercise?

Researcher > Yes, the idea of more practical examples in an excellent one and we will certainly address that. So perhaps we can also pop back to the management question, what does management need to do to support polytechnic teachers?

P05 > In terms of infrastructure we are ready for elearning

P05 > we also have a community of practice within the polytechnic that we can get help and share ideas with

Researcher > And in terms of other areas?

P05 > I think management just need a more concrete idea of what elearning entails

Researcher > How successful (or otherwise) was the use of Co-Fors in the USQ course? Can you suggest other ways of exploring the peer learning partnership role adopted by the Co-Facilitators?

P05 > I think the co facilitators was very successful.

Researcher > In what ways?

P05 > They were very helpful in participating in the forums

Researcher > Is this learning model worth exploring further, do you think?

P05 > as they were more experienced they had done it before

Researcher > Do you think anything, in the polytechnic context, needs to be changed or improved in order to implement successful online learning and teaching?

P05 > What needs to be changed is that currently there are allocation of 20 hours that the lecturer needs to fulfil as part of their duty

Researcher > yes.....?

P05 > Conducting elearning should also be taken into account as part of the hours used to fulfil that. We are also treated like the fountain of knowledge and I think that is expected, the traditional way of teaching

P05 > what I want to see more is student independence

P05 > I think it is something that is expected by the students as well

Researcher > How might you achieve this using the online environment, do you think?

P05 > I would want to do a more of knowledge based approach where I give them problems that they have to solve and with that they would have to find the solution together with knowledge needed to solve the problems online and also encourage them to solve the problems by sharing ideas and discussing about it

Researcher > This is great. Time is getting away but if you have any other thoughts on this, please email them to me. Can you use four words to describe your experience in the USQ course (e.g. difficult, painful, enlightening, etc.)

P05 > Interesting,

P05 > thought provoking

P05 > can be a bit painful as well

Researcher > Yes, in what ways.....

P05 > timing

P05 > if there can be more time

P05 > I think it also happens during the SARS crisis - that's why it was a bit difficult for me to concentrate more on it.

P05 > maybe the course could have lasted longer?

Researcher > OK, that was most unfortunate (SARS) - interesting comment re more time - will keep that in mind. Just to wrap this session up - Apart from the suggestions you have made already, any other thoughts on what else could be done to improve the USQ course, e.g. more dialogue? More discussion? More resources?

P05 > Definitely more time for us to participate in....more discussion perhaps and maybe we could have a mock up session where one of the participants will act as the facilitator ?

P05 > More relevant exercises as well

Researcher > OK, thanks for these thoughts - all great suggestions. I will send you the transcript in the next day or so - if you wish to add any further comments, please do using the tracking facility. Otherwise, if it is OK and represents all you wish to say, just let me know via email.

Thanks again for all your thoughts, has been a great session. Any other comments?

P05 > thank you so much, great to have talked to you again

Researcher has left. [08:01:08 AM]

P05 has left. [08:01:30 AM]

Appendix D4 – Application of Framework to Analyse Data (Design 2)

CO-FACILITATORS (n = 5)

Reushle (2004)	COF01	COF02	COF03	COF04	COF05
<p>The dilemma</p> <p>uncertainty suspicion fear discomfort ambiguity</p> <p>Then self-examination:</p> <p>examined my practice questioned my beliefs</p>	<p>I started off a little sceptical about the value of online synchr chats. ... that feeling formed as a result of my experience during the 1st chat session. It was frustrating to see comments flying all over the place during the chat... very little focus... very little control by the convener/moderator... people were coming in at different times... a lot of time I felt "wasted" on getting acclimatized with the "new" (to most, if not all) environment.. people were fiddling with the features eg. doodling on whiteboard. So... was "sceptical" whether participants benefited from the session... a few had expressed their frustrations to me...</p>		<p>I've attended virtual classes where the instructor fields questions participants type while he was presenting and addressing a specific issue. Found it more systematic and fruitful...</p> <p>you are the recognized instructor, not me...</p> <p>it's strange how things don't get chaotic in a f2f class, but it tends to do so in a virtual chat</p> <p>if purpose of chat is social, chaos and irrelevance are good. If the purpose is to answer queries, maybe questions got to come in first before the instructors and learners get into the session</p>	<p>... the biggest problems are change management and older staffs' reluctance to even consider other options to the methods they've used for many years, to their mind successfully ... they blame the current problems on unmotivated students ... successes have only come through finding individuals who still have some energy and interest in new possibilities and conducting pilots with them and if and when they're successful there is possibility of expansion. But this takes a long time and there are many underlying issues</p>	<p>most lecturers (especially those from engineering courses) feel quite uncomfortable with Problem based learning</p> <p>concern about the weak/un-motivated students when we are considering using problem-based learning (PBL).</p> <p>need more concrete examples to show the advantages of using PBL (especially in our Electronic Engineering Context).</p>
<p>Exploration of issues and posing of questions:</p> <p>Struggle Shared discomfort Testing Critical self-assessment Exploring options for new ways of acting and doing</p> <p>Then:</p>	<p>But after these few sessions, I'm beginning to see new light! There is something unique and exciting about this medium... if we can pin this down we can then begin to know how and when to use it meaningfully.</p> <p>What could online chats offer which is so unique? Is there something more to this beyond the "novelty" element</p>	<p>Singapore students will more likely open up using computer rather than mouth.</p> <p>surprised that some staff did not participate at all. But then again, I guess they were conscripted against their will and maybe did not even want to learn anything about it.</p>	<p>If the instructor set the pace, the participants followed.</p> <p>It need not be a lecture, but a series of dialogs between the instructor and different students.</p> <p>Hmmm...assessment. Does this mean scoring points?</p>	<p>too much of the assessment done here is for recall and that's called learning</p> <p>her [Gilly Salmon's] 5 stage model seems to work very well and the course is highly structured and 'chunked' into easily digested pieces with clearly spelt out small focused activities. But I</p>	<p>the weaker students could be motivated by PBL. - they seem to want to know why their lecturers want them to learn certain theory and skills. This group of students may be not so interested to go for their further studies but they are keen to know how they can apply the knowledge and skills once they join the workforce.</p>

Decision reconstruction	<p>espc for first-timers (like myself)?</p> <p>what mindsets participants in online chats shld have to minimise "frustrations" espc. for those who come in with clear "task-oriented" intents. So... if we want to have an uninterrupted dialogue, better to go to a quite cafe somewhere. In a pub/party, one needs to loosen up quite a bit. Enjoy the small talk, enjoy the bantering... never mind the interruptions or as termed by Angelina/Chris "multi multi-threaded" conversations.</p> <p>Writing may demand greater/thought/reflection on part of student?</p> <p>My personal experience with online discussions has been that</p> <ol style="list-style-type: none"> 1. If I share and others don't, I eventually stop sharing, and 2. If I come in with a fixed (and closed) opinion of something, I tend to look ONLY for and at responses which are similar to mine. <p>Coleman commented: "the current generation Y-ers tend to have short attention spans and want instant gratification."</p> <p>Thanks for bringing this up Coleman. I think this is a commonly held perception of our NP students, no? Perhaps informed by what we</p>			<p>think the key is the recognition of the socio-cultural side of learning.</p> <p><i>Please explain what you mean by the "recognition of the socio-cultural side of learning"?</i></p> <p>when we walk into a classroom for the first time it takes time to get to know everyone and comfortable with exchanging ideas and working together ... this is can be facilitate by appropriate activities ... when we go online there's often a tendency to put 'stuff' up and say 'go in there and do ...', without any real support or time to develop the skills to be comfortable and effective online ... I think it needs to be built into the design of the course</p>	<p>One of the good point of the discussion forum - it is a channel for the students to let us know what they don't know, or their anxiety over certain contents.</p> <p>Not all my colleagues feel comfortable with this mode of feedback, one of their concern is that some colleagues may think that if there are questions asked by the students in the forum, then it implies that the lecturer has not done the teaching job properly.</p> <p>This is one of the issue I hope I could help my colleagues to overcome this "fear".</p> <p>If we could avoid this competition culture of ranking, then the culture of collaboration will be meaningful</p> <p>have to be careful about this expectation of fast response. One of my concerns about the online discussion forum is, we do not want students to use it to get quick answers from the lecturers without doing some thinking on their part. If this is the way the students want us to give answer fast because of the 7/24 nature of e-learning, then we may run into a spoon-feeding learning mode.</p>
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	<p>see today in computer-gaming + IRC/SMS culture? High visual impact, immediate response.</p> <p>I wonder if we, as teachers, do them injustice if we "label" them as such. And thus believe that they are incapable of sitting back, reflecting on their understandings, and engaging in, what Garrison describes as, "critical discourse for purpose of going beyond information exchange"?</p>				
<p>Identification of sources to help answer the questions: Perspective shift or change Plan course of action Confirmation Generation Implementation Acquiring of new knowledge or skills Development of competence, understanding and confidence Assume new role</p>	See section below	See section below		<p>overall the readings and the discussion with peers ... the two key things that have been re-enforced for me are 1. material and activities need to be designed carefully for the audience, 2. we learn most effectively working collaboratively</p>	"Curiosity only kills cat, not kid".
	COF01				
<p>Identification of sources to help answer the questions: Perspective shift or change Plan course of action • Confirmation Generation Implementation Acquiring of new knowledge or skills</p>	<p>after having gone thru' this experience and the discussions here, I think there is a time and place for online chats But I have since then (after a few more chat sessions and plenty of reflections) felt more "positive" about the environment... need to be used judiciously. There are specific and unique attractions and benefits (affordances?) associated with this channel of communication. After the experience of the online chat event + subsequent discussions on the asynchronous group discussion forum – which allowed me to reflect on the experience and articulate my own feelings... since then I have been more inclined to promote the use of this facility... eg. for specially organized sessions where external "experts" are invited to join in the normal class discussion on specific issues. the discussions we had (together with other CoFers and Glen)... on ways to encourage participation in online forums... I think we had come up with several ideas on how to structure the discussion forums/threads better + reduce the group page discussions? But the essence of the learning for me in this instance, is the importance of user interface and the need to constantly consider the experience from learner's perspective. What occurred during the USQ course to make you see the potential of chat to be "unique" and "exciting"?</p>				

<p>Development of competence, understanding and confidence Assume new role</p>	<p>The personal experience of going thru' a chat session. And subsequent reflection and discussion about the experience. During my reflections, it had been constantly in the back of my mind how our students (young people) are simply hooked on to this environment. There must surely be something "unique and special" about this to keep them at it for so often and for so long. As teachers we need to "go with the flow", their flow so to speak.</p> <p>Any surprises? some staff whom I didn't think would demonstrate good evidences of good design in their eLearning courseware. They had not been particularly active in the discussions... but what they have done (after the course) had demonstrated elements of good practice.</p> <p>How and when to use chat?</p> <ol style="list-style-type: none"> 4. judiciously, ie. be clear of learning outcomes and know if this is right tool to achieve the outcomes and perhaps in combination with other strategies... also, don't use it for its novelty sake alone. 5. with clear guidelines or "rules of engagement" for students/users to understand and adhere to. ie. like any learning environment, need to "manage" the process. In this regard too... expectations need to be clearly set out for best results. <p>some idea of contingency plans in mind. What if it fails – before session, during session... what if someone oversteps the rules?</p> <p>Barriers in online?</p> <ol style="list-style-type: none"> 3. Internal, individual self-imposed barriers eg. teacher mindsets 4. Externally-imposed barriers eg. existing policies, infrastructure etc. <p>First one... teacher resistance to try... comes in many forms... eg. "can't be done, have been done before and didn't work, won't work, no time, what's the point... " you get my drift... The effect? No try, no gain...</p> <p>Secondly... some examples which have been in place but perhaps based pretty much on premise of F2F classroom teaching, lectures, teachers as source of information... eg. need to mark attendance, managing teachers based on contact hours, student evaluations based on F2F delivery...</p> <p>The effect? Why try? Too much "pain".</p> <p>IMPACTS ON PERSONAL APPROACH TO TEACHING</p> <p>Yes... in design of online courseware and activities as well as facilitation of the online activities.</p> <p>What to avoid eg. too much text, consideration of cognitive load... how to enhance eg. use of examples, meaningful graphics, concept maps ... more convinced of value of good design and facilitation of meaningful activities using discussion forums, both live chats and asynchronous discussions... in enabling learning thru' this online mode.</p> <p>Yes... greater need for good design, greater need for good needs analysis (eg. student prior knowledge/skills, conditions of learning), new competency skills related to online facilitation, greater need to design active learning opportunities (thru' meaningful and engaging activities/assignments)... as compared to f2f modes of instruction... where instructor has greater flexibility to make quick changes/adaptations during the instructor-student f2f interactions.</p> <p>What has become most critical is need to design to enable constructivist learning and collaborative learning approaches.</p> <p>WHAT SKILLS NEEDED?</p> <p>Online facilitation skills using discussion forums</p> <p>Technical skills to create interactive learning components.</p> <p>Keeping abreast with available software tools and applications to introduce to students to use – for them to construct and represent their own learning.</p> <p>CHANGES NEEDED IN YOUR INSTITUTION?</p> <p>more "elearning friendly" policies, recognition of online developmental efforts, greater understanding of skills and time required to enable + foster more meaningful online facilitation...</p>
	<p>COF02</p>
<p>Identification of sources to help answer the questions: Perspective shift or change Plan course of action</p>	<p>I vote for having Chat available in Bb 6!</p> <p>Things I have learnt: sense of "group"; importance of timely feedback; importance and effectiveness of discussion forums</p> <p>The other experiences I had with on-line learning were pretty awful delivery processes with zero interaction. The whole business of discussion boards as a medium for social constructivism was an eye-opener.</p> <p>the whole experience leading me to a deeper appreciation of the potential of on-line learning.</p> <p>e-Learning just gives different opportunities for students to learn. It allows for learner-centred learning and social constructivist learning, possibly more</p>

Confirmation Generation Implementation Acquiring of new knowledge or skills Development of competence, understanding and confidence Assume new role	so than in the 'conventional' setting. Already a lot of peer-to-peer help goes on but is not that visible to the lecturer – on-line just brings it out in the open more. Students feel that their circle of peer helpers is expanded in on-line mode. The single biggest lack of immediacy which comes from body language and other cues. In maths especially, if a problem is sorted out immediately then a student has more chance of moving on. harder to give encouragement and a sense of self-confidence when on-line. the most impact was from the experience itself – that is, being an on-line student . As all formalized learning experiences do, it makes you more sympathetic to the needs and frustrations of learners. Also, it was good to 'revisit' some of the educational theory – especially now that I am doing staff training. SKILLS NEEDED I want to do more thinking about how to do technical modules (like engineering) on-line. The whole issue of symbols and maths notation is a problem and holds back development in this area.
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PARTICIPANTS (n = 10)

Reushle (2004)	P04	P05	P06	P03	P01
The dilemma uncertainty suspicion fear discomfort ambiguity Then self-examination : examined my practice questioned my beliefs		Before doing this course my perception of e-learning – it allows for flexible individual learning; accessing materials at own leisure X I can't recollect any event that change my ideas about elearning	The typical mindset of most of my students, "if it isn't graded, I am not involved". I was expecting to play a more moderator sort of role. I guess I failed to inculcate a sense of community of learners. I still ended up being the source of their information providence. Discussion board was still primarily directed to me. Very ashamedly, as an IT lecturer, I was initially very sceptical in all honesty, I am somewhat at a dilemma. On one hand, I am very convinced that eLearning (whether through distant learning or otherwise) is a new paradigm towards teaching and learning for the future. On the other hand, when	I'm resistant to e-learning before I attended the 2day course with Shirley. My main concern were motivation and information management.	do not think I need synchronous feature with my students. with students and staff packed timetables, possible chat times will probably be after office hours For those who are 'task-oriented' and appreciate a 'lot of structure' the chat room is not for them. Our main biz is still F2F. Also there is problem of cheating/ impersonation if exams are not done F2F experience in going thru the course makes me realise that online teaching and learning are very time consuming processes. I have ample F2F time with students In my 2 experiences of chatting, I find there is a lot of interruption from the members and the instructor was hardly able

			<p>selecting a post grad course for myself, I have this internal tendency to shun non F2F conducted courses.</p> <p>I guess I share my student's sentiments of after the novelty, learning or the perceive notion of an assurance of an improved opportunity of learning is best achieved when I am able to get in touch (F2F) with a domain expert</p> <p>My one single source of frustration would be the lack of acknowledgement that this constitutes part of our "official" duties as lecturers</p>		<p>to focus the group on the topic. It was good socializing though.</p> <p>Students language problem. Difficulty in expressing their thoughts in writing.</p> <p>so much more time needed in preparation.</p> <p>Learner need to be very motivated and responsible to login and learn.</p>
<p>Exploration of issues and posing of questions:</p> <p>Struggle Shared discomfort Testing Critical self-assessment Exploring options for new ways of acting and doing</p> <p>Then:</p> <p>decision reconstruction</p>	<p>how get less-than-ideal students (i don't even want to call them 'learners') to become motivated learners</p> <p>if i share and nobody gives feedback or comments, i'll eventually stop.</p> <p>4a. if i don't like negative feedback, and i get too much of it, i'll contribute less.</p> <p>4b. if i want honest feedback, and i only get positive ones because others are afraid of offending me, i'll contribute less.</p> <p>5. if the level of discussion is not what i expect because it's either too high or too low, i'll contribute less.</p> <p>6. interface/usability issue: if the forum is slow/hard-to-navigate/buggy, i will access</p>	<p>Someone who is motivated is more suitable to this kind of learning."</p> <p>"What strategy to get not so motivated students to participate?"</p> <p>I would say additional skills would be how to be a moderator ? How to probe and get participations from the students ?</p> <p>Now at NP there are lunch time seminar which is just a 45 minutes Mel studio that talks about other aspects of using certain components in Blackboard I am particularly interested in the idea of Problem based learning. To reflect back to the days when I was</p>	<p>It is such a pity that lessons are designed for "E" learning, discussion groups to foster "E" socializing, "E" activities to motivate students on curriculum matters but at the end, we sit for a paper based exam *phew*!</p> <p>ever important element of a formative assessment to know that the know what needs to be known in a way that they can learn to eventually know</p> <p>I have actually made Blackboard posting a compulsory (graded) activity for all my students</p> <p>I told them that they will</p>	<p>Discussion forum is only a tool to help the students to learn. The student'll go in automatically once they get addicted to it.</p> <p>After the course, I see some bright light and hope to do something for my module</p> <p>Why have online discussions? To encourage my students to express themselves online. Especially for Asian students who are not used to voicing their problems in public.</p> <p>2. Online discussion with classmates will not only result in sharing of ideas, but will also create</p>	<p>Your idea of chats with guest speakers sounds very interesting. I think it will appeal to students.</p> <p>Perception of online teaching Exciting, a growing trend and need.</p> <p>did not expect Discussion is so much a part of eLearning . I was looking forward to learning more multimedia tools. Anyway I grew more convinced of the usefulness of Discussion.</p> <p>Virtual chat? was excited abt it but now I wouldn't want to try it because it is hard to</p>

	<p>(and thus contribute) less.</p> <p>USQ course turned out a little worse than i predicted. most participants found the readings too much/tough discussions could be improved..... facilitators could more actively encourage critical discussions?</p> <p>the culture here may have made it tough for someone to comment negatively on someone of a higher rank. i think stepping back would be ideal if the discussions are forthcoming, but given our situation, the obvious presence might be needed, at least initially participants had no idea what they were to expect. many of them have a poor grounding in english- they just cant handle even the easier readings... perhaps challenging the ideas put forth in a reading could be considered 'critical'... would have helped if participants could be selected more carefully. for critically commenting on an article, that could be due to a general lack of critical thinking, not so much a fear of commenting on a higher rank Shirley Reushle > How might the participants be selected? What criteria might be used, do you think? there should be some</p>	<p>a student studying at Uni. I find myself particularly bored listening to lectures after about half an hour. At that time I find that as long as the lecturer had provided me with the lecture notes, it would be easier for me to read the materials provided and discuss it with my friends if there are anything that I need to make clear. I also like to try out and experiment by myself, as I was studying computer science, the code and algorithms will make more sense to me as I play with them, trying different things and if there are any problems with it, try to solve it myself and in the process I feel that I learn a lot from that.</p>	<p>not be graded on the quality of their postings initially, but just to develop a habit of constantly being involved in a community of learners through discussion forums that are very focus on my week to week topics</p> <p>My reservations with online learning lies with the authenticity during assessment (assuming exam bas ed)</p> <p>If an institution confers degrees to people whom they cannot verify that they are, I have my reservations ... again, this leads us back to what constitutes credibility in assessment</p> <p>With F2F teaching and learning, there is a deeper sense of "being", of students being under your charge</p> <p>online activities, it seems this moral obligation is somewhat diluted</p> <p>For me, I inform my students that eLearning, or F2F lecture, this is merely a mode of content delivery. Skill mastery and knowledge is still the ultimate goal</p> <p>I have chosen to ignore the issue and focus on the problem of getting students</p>	<p>team spirit, harmony & trust among themselves.</p> <p>In order to use asynchronous communication to provides a 'great environment' to promote higher order thinking, develop independence in learners we need to motivate or to activate a "start" button of our learners. The problem is how? How we lead them? How you make sure that they are in the right track? How you keep track on us? Do you monitor our learning progress?</p> <p>I believe asynchronous communication could help motivated learner, but on the other hand how to deal with the unmotivated learner?</p>	<p>achieve the teaching objectives.</p>
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	<p>interest/enthusiasm. purely voluntary, and they have to know what to expect (readings, discussions, etc) of course that is somewhat ideal</p> <p>level of discussion is poor in my opinion. lack of critical thinking...there's a general fear of 'criticisizing' (culture?)... there's too much 'vicarious learning'. maybe you could say i did my assignment vicariously?</p> <p>discussion was poor in the course. there were bad ideas floating around, but unchallenged. after a while, i get tired of being the only one chanllenging them.</p> <p>mindsets need to be changed for a start. not many people see online t&l positively... why rock the boat? like you say, there's a lot of rhetoric</p> <p>'bells and whistles' (usually Flash), with the assumption that such features attract students' attention and thus somehow motivate them to learn. it can be tiring trying to convince those making such requests that these are not just time-consuming to produce, but have little educational value. i hate to say this, but some of those</p>		<p>to benefit through eLearning, to successfully deliver content matter within the stipulated timeframe</p> <p>I would wish that eLearning activities conducted by Lecturers to constitute part of "appraisal"-able activity</p> <p>My only problem is how this could be measured and compared, say from one lecturer (who maybe not devoting any time to) to another (who may be spending a lot of time on)</p> <p>I guess before we can zoom down to measurement and comparison, the basic definition of what constitutes "having been involved in elearning" must be well defined.</p>		
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	requests have come from those who have completed the previous run of this very course. when will people ever learn...				
<p>Identification of sources to help answer the questions:</p> <p>Perspective shift or change Plan course of action Confirmation Generation Implementation Acquiring of new knowledge or skills Development of competence, understanding and confidence Assume new role</p>	<p>in an online chat, the conversations can be logged</p> <p>...i think my view on online teaching became more positive...it could be due to seeing how much USQ has been doing in that area. i used to be a little more sceptical.</p> <p>going thru the usq programme, i'm not quite a convert, but i'm more positive. i think an effective course is possible, but tough</p> <p>the main fear of doing exams online is the security issue... but as someone who believes that exams should carry a minimal weight, the incentive to cheat would be less.....</p> <p>i'm not against paper-based exams, but i think too much emphasis is placed on them</p> <p>i think discussions should be part of the assessment. i strongly believe in the value of discussion.</p> <p>vicarious learning is a poor excuse... but for those who really cant contribute to discussions, other alternatives might be needed.</p>	<p>I need to be able to encourage my students to feel safe to discuss, to talk, to share their ideas and opinions. I need to make them feel secure that they can benefit from their ideas and from the discussions.</p> <p>I feel more secure here to talk and share opinions. I can read the posting of others and it allows me time to reflect on what has been said and get a clearer view of what has been said. Learning from each other I find is easier in the online mode as long as the community of learners are willing to share and have the same attitude of wanting to learn from others as well.</p> <p>For next semester I plan to incorporate certain portion of the elearning part to be part of their assessment as well</p> <p>I have looked through one module which is done by my colleague she has heavy usage of the forum with her students and it seems that her students are actively participating because it is part of their assessment</p> <p>I think the perception for me</p>	<p>. I owe it to USQ to have successfully remove this skepticism</p> <p>How do I go on to "evangelise" elearning ? Any conference available this year end at USQ about elearning ?</p> <p>Is there any other follow up activities that you might like me to get involved ?</p>	<p>I enjoyed virtual chat very much, I felt that it bring us closer -- It is social presence, a sense of belonging to the team. It is important especially for the full on-line course.</p> <p>I have actually cancelled a class on a pilot test and conducted the lesson via chat sessions</p> <p>The eventual outcome was rather disappointing but I will be trying it out again</p> <p>I guess the student's maturity level is a main issue. To others it might have been traumatic</p> <p>One very interesting thing I would like to share. I have students coming to me with the all the supplementary materials they get from the other web sites. It is very positive, students want to know more, students search for their own answers. With e-environment, students are more resourceful.</p>	<p>I learn that I should wrte in a way that invites students to think.</p> <p>I learn that to be more encouraging and give positive strokes.</p> <p>Yes, more persevering to incorporate it in my teaching.</p> <p>Communication with students is more efficient now.</p> <p>Time for online teaching need to be generously allocated in the staff schedule. Perhaps also employ full time developers to do the site for big modules</p> <p>Enlightening, time-consuming, interesting, tiring</p> <p>the challenge for me is how to enthuse the students to use the forums in such a way that benefits them in the module.</p>

	<p>i cant over-emphasise the learning value of a good discussion.</p> <p>Opinion of chats? hasnt changed. i've done chats before which were bad, and i've done good ones.</p> <p>since you have to do it, why not do it a little better?</p> <p>there must be some systemic changes in administrative policies before we can effectively go on to the next level of large-scale or full implementation. without such a change, facilitators simply would not have the time to handle the volume of discussion, leading to the degradation of the discussions, which would eventually break down the whole thing into a ineffective steady-state... i think this issue of motivation and incentive for the facilitator would have to be addressed sooner or later...</p> <p>current generation Y-ers tend to have short attention spans and want instant gratification. and i think this phenomenon would be more visible in 10 years. in the article, Beaudoin states that "much valid learning already takes place among self-directed students with little, if any, dependence on faculty." this statement</p>	<p>has changed as during the course, I realise that the use of the forum to discuss topics and ideas has helped to be able to instill the sharing of knowledge with each other and ideas.</p> <p>Collaborative learning is very much something that do happens in elearning if we are able to get the participants to actively participate.</p> <p>However I still do enjoy the flexibility in elearning as something that I can learn in my own time as well so that aspect is still there.</p> <p>We also have a community of practice within the polytechnic that we can get help and share ideas with I think management just need a more concrete idea of what elearning entails</p> <p>What needs to be changed is that currently there are allocation of 20 hours that the lecturer needs to fulfil as part of their duty Conducting elearning should also be taken into account as part of the hours used to fullfill that Other...I am not sure how true is this but I have the feeling that in the polytechnic we are expected to guide the students sort of baby sit them we are treated like the fountain of knowledge and I think that is expected, the traditional way of teaching</p>			
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	<p>about the 'self-directed students' may be valid now, but i have strong reservations about the assumption that such students would remain in similar or greater quantities.</p> <p>the article also mentions that "literature tells us that distance education students who evaluate their courses almost always express strong satisfaction for the personal attention and assistance they received from their faculty mentors."</p> <p>i am still waiting to see if this is true, at least for my case.</p>	<p>what I want to see more is student independence I think it is something that is expected by the students as well as during secondary school they are spoon fed by teachers and would not do anything unless the teacher tells them to.</p> <p>Using online environment.... I would want to do a more of knowledge based approach where I give them problems that they have to solve and with that they would have to find the solution together with knowledge needed to solve the problems online and also encourage them to solve the problems by sharing ideas and discussing about it</p>			
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Reushle (2004)	P02	P07	P12	P14	P15
<p>The dilemma</p> <p>uncertainty suspicion fear discomfort ambiguity</p> <p>Then self-examination:</p> <p>examined my practice questioned my beliefs</p>			<p>there should be a proper balance between the use of f-2-f and chat room in teaching.</p>		
<p>Exploration of issues and posing of questions:</p> <p>Struggle</p>	<p>Some Students" are those highly motivated students who put in efforts and times on their assignments. They are normally the brighter</p>	<p>Is active participation a key indicator of effective learning? A sizeable segment of any class would fall under the category of 'passive</p>	<p>participation must be comfortable for the students. need plenty of encouragement. provide the risk-free learning</p>	<p>get back to the basic tool of language communication for an effective e-learning environment.</p>	<p>I think it's difficult to motivate students in the polytechnic to chat constructively unless you give them some carrots.</p>

<p>Shared discomfort Testing Critical self-assessment Exploring options for new ways of acting and doing</p> <p>Then: decision reconstruction</p>	<p>students. How to help the weaker students? To perform Problem Based on the weak and unmotivated student is really very tough. I need to spend a lot of time to guide them and the worse is you also need to chase after the "IDLE" students. How to cope if we have a lot of weak & idle students in a class who only want to go away with a diploma?</p>	<p>learners'. It would be a great challenge to elicit participation from these passive learners.</p> <p>Will 'forced participation/contribution' get these 'passive learners' to open up or will it work the other way round and intimidate them?</p>	<p>environment for the students to express themselves freely without any prejudice, that they will not be embarrassed, that they will be complimented,</p> <p>participation without focus does not equate to learning,</p> <p>facilitate the participation process to move towards the learning of planned outcomes</p>	<p>The challenge for us is how to exercise the skills needed to persuade an introverted-passive learner to make his/her thoughts visible.</p> <p>When the learning environment in itself is a dichotomy, a balance in approaches is very needed. We have here the existence of lectures and tutorials in traditional classroom setting vis a vis e-learning environment. This is the reason for my interest in Lisa Kimball's "right balance" issue. I am hoping to find the "thread" to "stitch" traditional learning platform and the e-learning platform together into an integral unit</p>	
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<p>Identification of sources to help answer the questions:</p> <p>Perspective shift or change Plan course of action Confirmation Generation Implementation Acquiring of new knowledge or skills Development of competence, understanding and confidence Assume new role</p>		<p>This course is very insightful and enlightens me on how higher learning objectives can be achieved through technology.</p>	<p>My module is actually F2F, it will be conducted in a "pseudo" e-learning environment most of the time. I will try to make it as realistic as it can be by asking the students to post & response to the discussions using the Discussion Board. I will be the resource person to prompt, to raise more questions and to moderate the progress of the students. Though my ambition is to make my module as an e-core-learning module, with the constraint mentioned above, I will have to settle for less, i.e. enrichment instead of core for the time being.</p> <p>To compensate for the not-so-ideal-e-learning-environment, my plan is to conduct at least two sessions of full e-learning with my students, i.e. they will be attending the e-learning from home, library, while I sit in my office to conduct the tutorials with them.</p>		<p>I also realized that Virtual Chat is very useful when it's not possible to have F2F classes, like when the Poly was closed for 3 days last month.</p> <p>I think there is a gradual paradigm shift in the way we look at assessment methods in the polytechnic. Judgmental models of assessment are infiltrating into the era of scientific measurement models. What assessment models we adopt are, to a certain extent, decided by the module leader, following guidelines provided by the management. Personally, I think the judgmental approach is more relevant in assessing the course I'm teaching. We are training students at the Diploma level. We are training them to be relevant in the workplace. The bulk of our graduates join the workforce immediately after their studies here. As pointed out in the first reading, "in order to prepare entrants well for a profession or occupation, it is necessary to have a conceptual model that encompasses the best understanding of what is involved in the practice of the profession or occupation." Problem-based type of assessment</p>
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					<p>tend to integrate the different levels of knowledge, attitudes, technicals and skills that are necessary.</p> <p>Assessment instruments to measure retention of knowledge alone is not sufficient to measure competency in an area</p> <p>I also find it a challenge to change student mindset about assessments. The students who join the poly are used to the rigid and rigorous examstyle type of assessment. One exam, the GCE "O" level, seals their fate and determines whether their 10 years of education was fruitful. Students come with a fixed mindset on the way they are assessed. Usually they like questions that have a "black" or "white" answer, but frown on questions that require a "grey" answer. Changing that mindset can be an uphill task.</p>
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Appendix D5 – Transformation in Action (Post-Study)

Example 1: From Current Practice to Transformation – A Learning Journey (PS09)

Current practice and expectations on entry:

1. Reason for doing this course – it is a foundation course and must be done. I wanted to do the ‘flashy’ courses such as multimedia first, but considered that since this is called a foundation course for a reason. Have selected to do both foundation courses this semester.
2. My current knowledge. I have poorly developed pedagogical theory – something I have regarded as humbug for social science teachers; my personal theory is “if it works, do it”.
3. I know I’m a good teacher. I am compassionate, and need kids to enjoy my courses. I’m innovative and looking for better ways. But don’t ask me how my teaching works – it just does. I value myself as a resource; classrooms usually have me as central figure.
4. The flexible learning? I have a ‘foggy’ vision that this is the way of the future. I have a strong idea that I am not using it to its potential. I have an idea that the potential for maximising students’ learning lies in this direction. I know that kids are more receptive to technology than to chalk-‘n-talk. I have an idea that teaching and learning in this day and age is reaching a ‘crisis’ – I find the whole process so much harder, and kids a lot harder to engage than even five years ago. I am also sick of not having anywhere else to turn with kids that I am failing – maybe this is the right direction for them.

Module One: Introduction and Instructional Design – the struggle begins, chaos and uncertainty reign

Tony Bates is a non-event, and I get the old “why do we have to do this in staff-meetings” syndrome early. Is this course right for me? Week 2 Education Views has an article on the virtual schooling pilot study. Wow, it’s actually happening right under my nose. Read it, and suddenly issues discussed by Bates rear up, and I have to read him again a couple of times. I settle down to analyse the study again in light of my own ideas. A picture emerges which provides some direction at last. Lots more reading and I find that for the first time, I’m prepared to read and evaluate curriculum documentation, and what it has to offer. I pull out Ed Qld’s ICT’s paper (you know, the one the principal told us to read last year, that went in the permanent ‘filing cabinet’ unread), and other papers. I am now very eager to continue.

Campbell is interesting, very valid points, and I am re-thinking my static understanding of ‘pedagogy’ in light of ‘andragogy’, but I don’t like the gender focus at the end. It is an unnecessary distraction to an otherwise excellent paper.

Wilson is so unstructured; you’ve got to hunt for the pearls in his paper. There is lots of self-reflection, but very useful ideas about constructivism here.

In summary, all the papers have interesting ideas, but only Bates was concrete enough to provide an anchor for me at this stage, which I desperately need.

Module 2: The Analysis Phase – the struggle continues, but does it look suspiciously like surrender?

Concept mapping is a skill I use a lot in class – insist on students becoming competent. Have always told students that linking statements should be able to be put into map, but not actually done it, gee, it's harder and really makes you think. Result – I start applying concept mapping into more contexts in senior classes than as an introduction and summary of the unit.

Sternberg places a spotlight on students who appear to have 'the goods', but don't get there at the same time. I love this article. It makes me think of the problem with boys – the high achievers are generally all girls in Year 10, by Year 12 it changes to about 65 girls:35 boys, but by end of uni, boys outperform girls slightly. The journey is different for all of them, the destination is the same. I agree that performance at school is not any indication of effort or ability. Too often we say "Mary is not performing to potential" Who says?

In summary:

The whole idea of a structured analysis makes such sense; I wonder why it is not more formalised in schools. I will start to make more formal moves to understand more about my students. I take my Year 11's into the computer room, and talk about learning style – they do an online analysis of their learning style. Many of them are amazed at the truths that they discover ("I always wondered why I had to doto learn!"). A couple have a "so what!" attitude (well, why not!)

I read somewhere in the papers that everybody can learn everything. I talk to my Year 9's about it, how inappropriate in this context the usual Year 9 "I'm so dumb because I can't do it!" attitude is, and how positive thinking will serve them better.

Module 3: Design and Development – the reconciling is beginning, personal discovery RULZ

I Love this one. I've always been interested in constructivism, have done a couple of workshops and have tried it, but not in as structured a way – the labels are being created for what I have tried to do. I must learn to 'butt out' and leave the kids to direct their own learning. Reigeluth is great – again, gives me a framework for my own practice, and I can put labels on what my own practice is – I never knew that I was using his sequencing theories!

Jonassen excites me, as do Pitt and Clark. I am particularly excited about the collaborative and social learning, have had various half-successful forays into group work. I'm intrigued that no-one thinks quite like me in the forums, and yet no-one is wrong. Have ideas tumbling around for assignment now, everything points towards errors in judgement in thinking ordinary teachers can just step online and succeed.

I had a major breakthrough in Year 11 – concept mapping their (and mine) first really collaborative and constructivist exercise, students started mapping content (on board as a group, but within two comments, started using metacognitive skills in analysing the way

they had learned things, not the content. A mind-blaster for me. I am starting to refine my collaborative work, and can't wait to put them online. **New Practice** is creeping in.

I am a little depressed, the resistance to change at school is so strong, and I don't talk about this course at work because they think I'll put a hex on them. Thank goodness for the discussion forums – at least they are coming from the same place that I am.

The course is impacting on my teaching, I am far more conscious of the things I do, and am trying lots of new things, particularly collaborative learning.

Both courses are impacting on my family too – who would have thought my husband could cook? And take kids to ballet, and swimming, and talk concert makeup, and eisteddfod programmes, and concert costumes and brands of washing powder with women in supermarket aisles?

Module 4: Evaluation – New practice leads to Transformation

Finally, I am very comfortable, and proactive about what I am doing. My Design Reflection was not hypothetical, I am pretty determined to see this through into the new work programme – it is one opportunity for change. Jim wonders why I am not getting quicker at this, in fact I'm getting slower. 'Pat' answers don't seem to be enough anymore – the learning is more important.

My Evaluation Reflection is self-driven, I write the whole thing without referencing, and then have to return to the literature to reference it. I feel powerful, for this very reason, I submit it for assessment – it is mine, not a synthesis of the thoughts of others. I feel a great sense of ownership of my assignments too.

My Exit statement - Transformation:

Both courses are indeed foundation courses, rather than do the 'flashy' courses, I have decided to take this study to its logical conclusion and do 8601 next semester.

I have very clear ideas of what I do, and why I do it, and am able to plan strategies with a fair idea of the outcome before I implement it. My courses are now very structured, with conscious planning. I am more facilitator than teacher much of the time, and my group work is evolving.

I feel very secure about the instructional design process, and am implementing it more formally already, particularly needs analysis, and evaluation.

I know that the Evolution course worked because it was collaborative, and the cell biology did not because it was not learner-centred.

I have developed a "SOSE"ey sort of attitude to all those topics like learning theories, Ausubel, Gagne, Bloom, etc, and would now be good value in a staff meeting instead of being the dopey, bored one in the back corner of the staff forum

I am pushing for a change in assessment practice – this appears to be an area of major concern, that the assessment really does not reflect the philosophy of what we are teaching, but is like one of those ‘drinking bird’ toys, that dips into the water at intervals without staying immersed for long.

I like my course project enormously, and am really excited about putting it into practice. I have approached my HOD about having it written into the work programme currently underway. I keep planning on sticking to word limits for my assessment items, but once I have it down, something inside me prevents me from changing it. I think it is called ownership!

Plans for the next journey:

I still have enormous concerns about the attitudes of teachers, most concerned about new graduates, who still treat technology like it is ‘witchcraft’. Very annoyed at times with the standard teacher response to what I am doing: “gee isn’t it clever, I must learn to do some of it one day...but this isn’t real teaching”

I still have a lot of experimentation with constructivism and collaborative learning to do. I want to investigate problems and problem-solving, also working more closely to a real context. I am trying to develop the concept of studying ‘expert practice’, and have set up chat lines on Virtual Classroom with a couple of ex-students in other universities. I am frustrated with the lack of time – I wish I was younger!

*Example 2: Online Learning Experiences: Catalysts for Change
(PS03)(Summarised text)*

STAGE 1

. . . fell further and further behind and stopped logging on . . .

. . . deadly boring . . .

. . . out of my league . . .

. . . lost interest . . .

. . . disillusioned with work . . .

. . . no intention of ever returning to online education.

STAGE 2

. . . did not want it to beat me so recommenced my studies . . . I noticed a change.

. . . I was looking forward to a positive experience.

I have always tried to provide a context or analogy for my students and the concept of situated learning struck a deep chord.

I began to see how much I really learned from what others had to say both in formal and informal learning contexts.

I was initially skeptical . . .

This was the first course in which people had sent me personal emails and were so active in chat forums even setting up their own within our group . . . People were seeking interaction, personalization and support networks and it was working. Online learning was becoming interactive and less individualistic and isolated.

Over time I became fascinated with how enriched people doing chat seemed to be . . . a warm and friendly experience.

STAGE 3

In my log I have noted 27 significant critical incidents/learning experiences, although I doubt that this is a comprehensive list . . .

I now realize that whilst I had studied constructivist theory I had not really believed in it, seeing it more as an adjunct that (*sic*) a fundamental shift in mindset.

By observation people have been able to watch and assess the actions and reactions of our mentor. I was pleased by the honesty and inclusiveness expressed including occasional uncertainty and doubt – it provided a truly human approach and serves as a valuable role model.

. . . trust is a key issue.

. . . key watershed in my journey as it advocated focusing on ‘conversation’ in online learning rather than on presentation of ‘facts’.

Learning is not about where it happens but the quality of interaction.

Text based learning that was comfortable four years ago is now boring and irrelevant. Now I’m looking for more interaction and dialogue and involvement in my learning.

It seems that I am practicing something that I did not realize was constructivism.

. . . fact we live on a big round globe with 24 time zones. The frustrating aspects . . . disappear with time and experience.

. . . have I now arrived at my destination – no . . . I can now see how online education will continue to evolve and develop methodology and innovations of its own that satisfy the needs of learners and are truly socially contextualised.