Evaluation of a Mentored Teleconferencing Graduate Course in Psychosocial

Oncology Research:

Initiated at Four Canadian Universities

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Abstract

Evaluation of a Mentored Teleconferencing Graduate Course in Psychosocial

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This report summarizes the evaluation process and outcomes of a thirteen-week

McGill University mentored doctoral-level course, (NUR2 783) "Psychosocial Oncology

Research." This seminar-based initiative in Psychosocial Oncology Research Training -

PORT (Loiselle, Degner, Butler, Bottorff, 2003-2009, ST1-63285), is a core component

of the CIHR-ICR/NCIC Strategic Training in Health Research program. The purpose of

this study is to investigate the benefits of using, web-based learning environments and

their effects and students' reactions to using instructional technologies for learning.

This training course focused on evidence-based research developments in

psychosocial oncology – the study of personal, contextual, and social factors that affect

people's experience with cancer. The evidence base interventions were conferred

through weekly seminars mediated through a videoconferencing medium broadcast

within four Canadian Universities, a two-day face-to-face workshop and a computer-

mediated communication system, WebCT.

Data was collected through questionnaires and surveys, interviews and observations. Results showed the trainees had acquired effective learning strategies prior to the course, experience with computer based technologies especially an asynchronous medium such as electronic mail and learned best when the acquisition of knowledge was meaningful. The trainees indicated having gained a significant amount of knowledge to apply to their professional lives. The computer-mediated communication system made available to the trainees and mentors to provide a collaborative conference area, view the course syllabus, exchange ideas, confer through synchronous and asynchronous discussions, access information and documents, was quite inactive.

Acknowledgements

To my persevering husband for always believing in my educational achievements and support in affiliated projects. My Mom and Dad for tolerating my ambitions and absence at family gatherings due to my studies. I am forever thankful to my three beloved sisters and best friends, Connie, Lina and Nadia. We have a very unique, undying and unconditional sister relationship like no other. Thank you for being my support beams and caring for my baby, Luca, whenever I needed you through this important endeavor.

The future can only hope our academic efforts and research will see individuals through this life threatening illness should we be faced with it. I hope the future allows me to make more positive contributions to the field of cancer study by discovering helping *technologies for oncology.com.*

Dedication

I would like to dedicate my thesis to my late grandmother Concetta, survived by her daughter Filomena, in both their struggle with cancer. Being at their bedside until the cancer took their life away concede me to witness the devotion of the nurses in the Palliative Care. The important work and concerns of a nurse is never to be undermined.

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CHAPTER ONE

CONTEXT OF THE INITIAL PROBLEM

Initial Problem

Given the burden of suffering that Palliative Care addresses, there has been

relatively little research carried out in Canada and internationally (Palliative Care

Research, McGill, 2006). To date, little research has been carried out in the area of

Palliative Care, in spite of the degree of suffering that victims of cancer must endure.

According to the Cancer Institute of Health Research (CIHR), there is a great and

pressing need for the creation and dissemination of information about the most effective

and efficient interventions and health services, and how these might differ based on social

and cultural differences.

The medical education system prepares present and aspiring practitioners for

work in Palliative Care. The challenge educators face is how students acquire a

knowledge base that is largely experiential rather then evidence-driven. Drawing upon

the literature of educational technology, the use of videoconference and computer-

mediated communication (CMC) media to collaborate is a unique method of transmitting

knowledge. The pairing of the two has initiated a group of experienced oncologists to

design a mentor-led program for young researchers with the use of various

teleconferencing technologies.

Several cancer institutions have acknowledged the need to help individuals and

their families threatened with Cancer.

"Three national groups have been convened since 1999 to determine priorities for Palliative Care research. The similarities in recommendations are striking: all 3 groups decided that the first priority for advancing Palliative Care research in Canada is to increase the number of researchers who are able and willing to carry it out. There is a lack of specialized programs for Palliative Care research training worldwide. To our knowledge, nowhere in the world is there a program specifically designed to train Palliative Care researchers at the PhD level. In addition, there are a few Master's programs for clinicians that provide some training focused on Palliative Care research but, except for one, these are discipline-specific" (Palliative Care Research, McGill, 2006).

CIHR and the National Cancer Institute of Canada have funded a program in Psychosocial Oncology Research Training (PORT), which is a Strategic Training Program (Lois Elle, Bottorff, Butler and Degner, 2004) to address this critical gap. This is unique worldwide in its interdisciplinary nature, selection of trainees, mass of mentors with a mix of excellent academic and clinical Palliative Care research, inclusion of doctoral students, and support in developing a network of researchers able to communicate in both official languages of Canada.

The CIHR Strategic Training Program or Psychosocial Oncology Research Training (PORT) course consists of twenty-two mentors spread out within Canada, coast-to-coast between Halifax, Quebec, Manitoba, and British Columbia. One of the mentors at McGill University is the program leader for PORT. Of the twenty-two mentors, ten lectured and participated in at least one seminar. Of these ten, four were hosted from the University of Manitoba, three from the University of BC, two from Dalhousie University and one from McGill University each of whom would lead one or more seminars. The trainees were based at three of the above-mentioned universities: one at Dalhousie University, and two each at McGill University and the University of British Columbia. None of the trainees were based from the University of Manitoba. The project

coordinator who was the liaison and administrator amongst the mentors and the trainees resided at McGill University.

The course consists of a thirteen-week schedule of approximately three hours per week for seminar work. The trainees were provided with a syllabus indicating the mentor(s) who would be lecturing on every given week with a series of assigned readings to help prepare for the videoconference seminars. The trainees were required to conduct a weekly seminar of choice to collaborate with a mentor and write a research paper to present at the PORT two-day workshop in Victoria, BC. At the end of term, a two-day face-to-face workshop was organized for trainees and mentors, to continue debating research ideas and confer methods of research projects. The trainees were assigned to present their research paper, proposal and analysis of a key concept in Psychosocial Oncology. The program leader who attended twelve out of thirteen seminars was the primary evaluator of the trainees' assignments.

Throughout the term, the trainees were to participate in debates, discuss and question weekly research articles at the videoconference seminars. The discussions were based on predetermined weekly readings and case studies. This study will address these discussions and debates in the videoconference environment as a Seminar. Seminar derived from the Latin word *semen*, meaning "seed", is a "form of academic teaching, normally at a university in small groups where students are requested to actively participate during meetings" (Wikipedia, 2005). Typically, seminar participants are not beginners as students are confronted with the methodology of their area of expertise, which they discuss, and debate in order for them to be familiarized with practical

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problems that may arise in their research work. Seminal work is to allow work from

which other works come (Wikipedia, 2005).

As for the media, both trainees and mentors were given access to McGill's

computer-mediated communication (CMC) system. WebCT (which stands for Web

Course Tools) is an online web-based application course management communication

system, accessible through the University website portal, which allows the course

syllabus to be viewed, provides a common conference area for the exchange of ideas in

text base manner, enables synchronous and asynchronous discussions and offers access to

information and documents. Asynchronous communication means, digital instruction is

delivered at one time and the work or messaging that can be done at a different time via

electronic mail or e-mail. In an asynchronous class, students and teachers use various

technologies that allow them to communicate without having to be in the same place at

the same time. This medium is scalable and flexible. On the other hand, synchronous

media enables a type of two-way communication with virtually no time delay. This type

of communication allows participants to respond in real time as in a videoconference.

Each university was set up with a videoconferencing room with one television

screen and one larger screen for projected images such as PowerPoint. Each site had easy

access to technical services when in need of assistance. The videoconferencing system at

each site was presided over for possible technical malfunctions by a bridge operator

located in Toronto, Ontario. When problems would arise, the bridge operator would

interrupt the seminar to advise the four sites of having to reboot the system. If any of the

sites had technical difficulties, they could either call out for the bridge operator who was

looking-on to the seminar or advise their respective university technical service department.

Origins of Research

This study was based on a Formative Evaluation (Smith and Ragan, 1999). Formative evaluation is a method of assessing the value of a program while the program activities are forming or happening. The focus of a formative evaluation is on the process; however, the weakness in the material needs to be considered if the instruction is to be evaluated properly (Smith and Ragan, 1999).

In a Formative Evaluation, there are four stages: design reviews, expert reviews, learner validation, and ongoing evaluation. The first two stages, design and expert reviews, are less typically part of a formative evaluation. A design review is the actual development of an instructional method and the expert review is an analysis of the material after the completion of the instructional method and before their actual use with the learners (Smith and Ragan, 1999). The final two stages, learner validation and ongoing evaluation, involves the actual use of the instructional materials with the learners who represent the target audience. The target audience of this study is a small group evaluation of trainees recruited to the mentored training program in Psychosocial Oncology Research initiated with four Canadian Universities. The formative evaluation will be supported by course information provided by the program leader, seminar and workshop observations, collected data from instruments and one-on-one trainee and mentor interviews. The course design and feedback were provided periodically during the term.

<u>Significance of the Project</u>

The Initiative of a Psychosocial Oncology Research Training (PORT) course

The National Cancer Institute of Canada (2003) estimated 139,900 new diagnosed cases of cancer and has predicted that approximately 2 of every 5 men and slightly more than 1 of every 3 women will probably develop cancer during their lifetime (NCIC, 2003). Although cancer detection, treatments and patient survival rates have been improving, the number of cancer patients is expected to double within the next 15 years due to the aging population (American Cancer Society, 1997; Bultz and Kapusta, 2002). It is reported that 70% of new cancer cases and 82% of deaths related to cancer occur among individuals over 60 years of age. Still, cancer remains a leading cause of morbidity and premature death in Canada.

The diagnosis and treatment of cancer disrupts all aspects of daily life, affects loved ones, and is associated with significant levels of anxiety, anger, depression and a sense of helplessness. Zabora et al. (2001) found sudden increases in psychological distress among cancer patients. Additional stressors developed were widowhood, chronic illness and reduced income. Rosberger et al. (2002) learnt from their coping-related research study held at the Montreal Jewish General Hospital that patients were able to cope better following a problem-focused or emotion-focused intervention.

The advantages of interventions are many. The consequences of not identifying and effectively managing distress among the cancer population include below average therapy outcomes, decreased quality of life, and increased health care costs (Zabora, Brintsenhofeszoc, Curbow, Hooker and Piantadosi, 2001). As such, pressures mount for

health care researchers to find innovative, effective and patient-centered strategies for promoting optimal diagnosis, treatment, follow-up and strategies to increase the patients' quality of life. Exigencies also escalate on health care professionals as patients overwhelm them with information sought on the web (Akerkar and Bichile, 2004). Health information seekers are constantly challenging health care professionals by the information technology.

Researchers in medicine constantly attempt to find a cure for the illness. The PORT researchers aim to identify various psychological issues effecting patients and their families living with cancer. Once the cancer stressors are researched, the scientists of PORT look to implement interventions to help increase, combine and develop creative Palliative Care research methodologies from different fields, disciplines, and research laboratories. Trainees and mentors learn to conduct and disseminate research that will be used by health care providers and policymakers to optimize the quality of life of these patients and their families. Through mentorship, this network or community of practice (Stacey, 2004) can create an interdisciplinary group of Palliative Care investigators that result in future collaboration between one another and connect them to the broader Palliative Care research community. In Stacy (2004), a Community of Practice is defined as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (as cited in Wenger, McDermott, and Synder, 2002).

In PORT, the mentors provide the trainees opportunities to learn from experienced science researchers in oncology with awarded research grants, managing

emerging project initiatives and expert advice that can be directly applied to the research trainees daily work life in a related field of nursing.

This fellowship base program was advertised through various means. Informational ads were posted at each university, the PORT website (www.port.mcgill.ca), the Jewish General hospital in Montreal which the program leader is affiliated at and through word of mouth. Interested individuals were asked to fill out the online application available on the PORT website before the deadline. The financial support funded to the fellow trainees can range from $19,950 to $47,250. PORT is funded primarily by the Canadian Institutes of Health Research (CIHR) – Institute of Cancer Research (ICR) and the National Cancer Institute of Canada (NCIC). The CURE Foundation and the Newton Foundation provided additional funds. The total grant funded is 1,8 million dollars on a six year period (Loiselle, 2004).

Hypothesis/Research Goals

The purpose of this study is to investigate the benefits of using web-based learning environments, its effects and students' reactions to using instructional technologies for learning. With this study that will be conducted through the Psychosocial Oncology Research Training (PORT) course broadcast at four universities within Canada, I hope to gain a better understanding of the online learning environment and predicting achievement success when instructional technologies are used. This study also aims to contribute to the understanding of the instructional technologies used in the PORT seminar and help the instructors to re-evaluate and grapple with the overall structure of the seminar should the need present itself.

Hypothesis 1, predicted that the web-based teleconferencing learning environment (the virtual classroom) would be the ideal place and most beneficial common learning medium for these doctoral level students to gather with mentors coast-to-coast to collaborate through out the course.

Hypothesis 2, predicted that the computer-mediated communication (CMC) conference area would be the primary means of communication outside the virtual classroom. According to Keegan (1995), connecting the instructor and students electronically at various locations creates a virtual classroom.

The outcome of this study is to assist PORT with efficient and effective technology media easily accessible in this digital era. In consideration for the mentors' already busy workload with the university and other possible projects undertaken, the author of this study hopes to find the most effective media to accommodate this community of practice and provide proficient solutions to strengthen their virtual connection.

Through various media technologies, individuals are able to communicate, share ideas and support each other's specific area of interest. The founding belief of the PORT program is to help in connecting a group of experts train novice researchers to develop and implement evidence base interventions in their professional lives. These researchers deal with time sensitive and life altering research that can help prevent the deadly disease of cancer. Everyone knows someone who has been affected by some form of cancer. The data and projects of the PORT group have a significant impact on daily human life. Whether it be someone living with cancer today or someone else tomorrow, research in Psychosocial Oncology is necessary. The psychological effects of cancer need to be

addressed and interventions designed so that humanity can have the support they need to fight this life threatening illness. The reputable and dispersed coast-to-coast oncologists are providing the opportunity to these young prosperous scientists to acquire their expertise and model their practices.

In this study, the instruments attempt to gather information about the learners' background with online seminars, attitudes encompassing distance education, access, readiness and attitudes towards using instructional technologies. The seminar, face-to-face and interviews data collection methods seek to reaffirm and possibly fill the gaps and discover evidence not obvious in the pre questionnaire and post survey. Other than the face-to-face interviews and workshops being recording digitally, the seminar observations were written. Due to the confidentiality of patient information being discussed, the teleconferencing seminars were not recorded digitally.

CHAPTER TWO

LITERATURE REVIEW

Rationale for the Program

The characteristics of the program encompassed several strategies. One major component of the program was mentorship. The second was the computer-mediated communication (CMC) system with the videoconference medium used for the seminars. The third component was the participants' reactions to using instructional technologies to learn.

Mentoring

Relationships with other people are an integral part of our daily lives. Whether, it is on a professional or personal level, various outcomes occur as a result of these relationships. Some examples of relationships stated in Johnson et al. (1999) are: an employee taking a job in a new company, meets an experienced employee and learns the process of the job and surrounding environment; a new cancer patient meets a long time survivor who sees the patient through as he begins cancer treatments; and every Sunday a church member listens intently to the message preached by the pastor and then works hard during the week to live by that message. The occurring behavior is the individual change that is being simulated by a purposeful relationship with someone else. Mentoring is the more formal term for this outcome or cause and effect relationship. At times, mentoring brings individuals in contact with social groups and learner populations otherwise unfamiliar to them (Fresko, 1999). Mentoring and tutoring studies, identified

in Fresko (1999) recognize mentoring as an instruction proven to benefit the learner as well as the mentor. The mentors in this study (Fresko, 1999) demonstrated a positive attitudinal change as a result of the continuous contact, socially sanctioned and ambition towards achieving a laudable common goal.

In Johnson et al. (1999), *The mentoring model theory: dimensions in mentoring protocol* states that "mentoring can anchor a process in which persons acquire knowledge, skills, and dispositions that make them more or less able members of their society" (p.387). Change and growth is effected in each person, both the mentee and the mentor. Mentoring provides opportunities for young learners in a chosen field of study to be guided by a person who is willing and able to transfer their professional expertise of skills, information, and experience in order to help the mentees' professional growth.

Kram (1985) asserts to an organizational perspective to mentoring as a lasting relationship between a junior colleague and a senior colleague that contributes to career development. People interaction and relationships continue to be vital to our future even in the techno age (Johnson, 1999). Relationships continue even if organizations are becoming boundary less, virtual, flexible and with shorter office cycles. For most individuals, mentorship is a life skill and individual tool we are certain to use throughout our lifespan. True mentoring lasts a number of years.

<u>E-mentoring</u>

A new use in electronic communications that is gaining much momentum and interest is Electronic Mentoring or E-mentoring (Single and Muller, 2000). Electronic mentoring or E-mentoring is mentoring conducted through electronic communications,

primarily via electronic mail, as the main means of communication. Sproull and Kiesler (as cited in Single and Muller, 2000) found electronic communication tools to be flexible, available, independent of time and space, allow for asynchronous exchanges, and provide dwindling status differences that can facilitate the development of relationships. Electronic communication such as electronic mail (email) and connections to the World Wide Web (WWW) was once limited to the discourse of elite scientists and is now ubiquitous at educational institutions (Single and Muller, 2000) around the globe.

E-mentoring allows for many opportunities to connect with more students where mentors would otherwise be constrained by time and geography to participate (Single and Muller, 2000). The focal point of ementoring lies on developing the mentoring relationship by alleviating already a major obstacle, the medium. The administrative resources and staff required to make the electronic programs effective seems to be a challenge for most mentoring programs (Single and Muller, 2000).

Organizational Learning

Peter Senge (2006), founder of the Society for Organizational Learning (SoL) believes an organization will be productive once leadership roles, as mentorship, are decentralized and all people can be enhanced to work effectively towards a common goal. In his model, learning organizations are organizations where peoples capacity to create desired results is continually expanded, where vast and innovative patterns of thinking are nurtured, where group ambition is set free, and where people are continually learning to see the whole together (Senge, 1990).

Communication within a committee or organization has long been recognized as a key contributing factor in reaching high levels of productivity, efficiency and employee well-being (Senge, 1990). While all people have the capacity to learn, the structures in which they acquire knowledge and tools, needs to be provided with the expertise to guide their initiatives (Senge, 1990). Most people associate being part of a great team by the meaningfulness of the experience, being connected, being part of a larger entity and of being generative. Generative learning is defined as learning that enhances our capacity to create (Senge, 1990).

According to Siemens (2004), for an organization to be effective, it requires their source of information or knowledge to flow between individuals. The newly acquired information being continually acquired is based on altering foundations. The information sets, which allow us to make the learning connection, and enable us to learn more than we already, know, is defined as Connectivism (Siemens, 2004). Hence, the principle idea and core skill of Connectivism is to be capable of seeing the connection between fields, ideas and concepts.

Effectiveness of Online Learning Environments

Reilly (1992) suggests that it is not enough to simply bring in a subject matter expert but one needs to provide an effective learning activity in an online debate or a forum (Senge, 2004). Such forums allow the learners to ask prepared questions, reduce the pressure on the lecturer in the learning environment while involving the whole group. The learners can also continue gathering their knowledge base outside the structure of the course through a web-based communication medium. This type of active building of

knowledge in a progressive process to produce and improve ideas among a community is known as Knowledge Building (Campos, 2004).

Constructivism, an educational philosophy, is a key concert in learning (Smith and Ragan, 1999). Constructivism is based on the notion of conceptual change, higher order learning and knowledge building (Campos, 2004). The two areas discussed by Smith and Ragan are: Individual Constructivism and Social Constructivism (1999). Individual constructivism assumes an individual constructs knowledge from experience, learning occurs from personal interpretation, and the learning process is actively developed by making inferences to the experience (Smith and Ragan, 1999; Campos, 2004). Similarly, Social Constructivism supposes learning is regulated in a collaborative manner with meaning consulted from multiple perspectives. How does one know if the learner is being engaged in a meaningful learning? The Design of Constructivist Learning Environments (cited in Duffy and Jonassen, 1992) attempts to answer this question.

Design of Constructivist Learning Environments

The Design of Constructivist Learning Environments (CLEs) provides a model with eight guidelines to follow when designing Constructivist Learning Environments. According to Jonassen (n.d.), the designed environment should consider using technologies that emphasize the qualities illustrated in Figure 1 (Screen Shot).
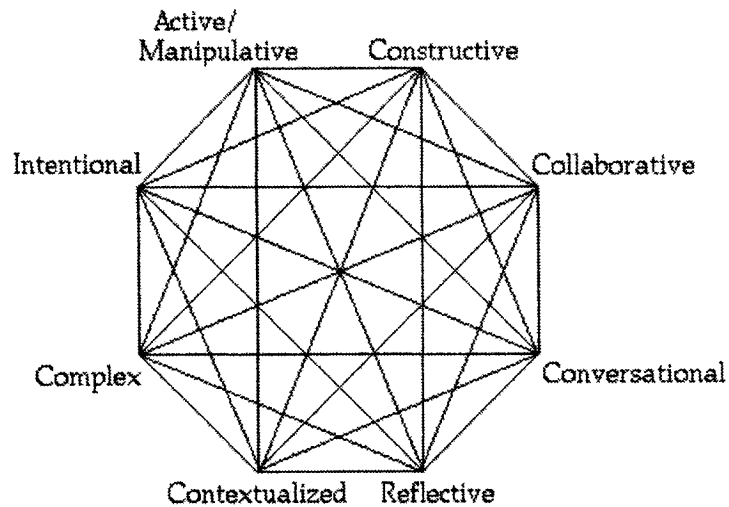
Figure 1: The Model of Constructivist Learning Environments

Active/ Manipulative

In this learning method, the design of the environment should be engaging. The learner is actively manipulating objects and tools of the trade and reflects upon the learning. The learning process can be accomplished in a formal and informal apprenticeship, communities, play and work while learners develop skills and knowledge in turn shared with other members of their communities.

Constructive

In sync with Constructivism (Campos, 2004; Smith and Ragan, 1999), the constructive learner develops new ideas with prior knowledge in order to understand new phenomena. At first, the learner thinking is simple but with experience, support and reflection, these ideas become more sophisticated.

Collaborative

Individuals, naturally look for others to support and help them solve problems. The learner also seeks out others to build knowledge, share ideas, and draw upon others skills while observing them, providing social support and imitating the behaviour.

Conversational

When learning a problem or a task, individuals automatically quest for opinions and others ideas. Learning is said to be a social and dialogical process. Connecting learners through a technology medium is conducive to the conversational design.

Reflective

Learners should be able to articulate the acquired information, reflect on the experience and discuss their decisions through the use of technology. A learning based activity in a CMC environment would be, an example, of formulating using existing knowledge to construct in new situations.

Contextualized

This design assumes the learner will be transferred knowledge and skills in a real life task as oppose to simply memorizing how to perform the task or idea. The idea of this design is for the designer to formulate a case-base or problem-centered task in a meaningful real world situation in useful contexts.

Complex

Problems should remain ill-structured and complex for the learner. Often times, instructors oversimplify an idea to make it easier for the learner. The learner needs to solve complex problems in order to engage in higher order thinking.

Intentional

Learning environments need to implement activities to support their learners in any situation. Human behavior is always intended to achieve a goal. When learners are intentionally willing and actively trying to achieve a cognitive goal such as developing new interventions for their job, the learning will be more significant.

Principled Approach to Facilitating Distance Education

In Kanuka, (as cited in Klemm and Snell, 1996) Principle-Based Strategies for Teaching and Learning affirms that the most effective means to help manage higher levels of learning is through an online collaborative group process (Campos, 2004; Reilley, 1992; Single and Muller, 2000; Smith and Ragan, 1999). E-mentoring and online learning environment are theories supportive of this principle.

Principle based strategies for teaching and learning requires the apprentice to use critical thinking skills, creativity and integrativity (Kanuka, 2002). If the online group discussion is to be meaningful, the instructor(s) need to raise the intellectual level (Kanuka, 2002). For instance, this can be achieved by having the learners produce tangible work products in a collaborative group project on a brainstormed topic. This joint activity could then be delivered to the virtual classroom or to a respective folder in

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the CMC system. According to Keegan (1995), connecting the instructor and students electronically at various locations creates a virtual classroom.

To be most effective in completing a online group project, each team member is assigned a well-defined role such as leader, concept list editor, concept map editor, paper editor, researcher, etc (Kanuka, 2002; Campos, 2004). Higher levels of learning increase when the learner finds relevance to the phenomena presented. The principle of relatedness has three constructs, (1) credible authority; (2) actual event; (3) guided discourse (Kanuka, 2002). First, having an authority in the field better supports and lends the phenomena more credit, relevance, making the issue worthy of study. Second, the phenomena under study are better understood when it is related to or derived from an actual event. Third, the learning process is more meaningful and understood when it is reasoned through a guided discourse.

CHAPTER THREE

METHODOLOGY

Research Questions

This study analyzed the surveyed opinions of the trainees, observed the seminars

and the two-day workshop, and interviewed five trainees and three randomly selected

mentors. With this data, the author of this study looked to answer how the PORT

participants learn in an online environment, their reactions to using instructional

technologies for learning and the effectiveness of this type of instructional method.

Research Objectives

Through this study, the author hopes to gain a better understanding of the learning

process and the outcomes related to using web-based methods such as videoconferencing

and WebCT, their communicated-mediated learning system. The objective of the PORT

course is to develop young science researchers in nursing related fields to become the

next generation of expert research scientists in initiatives related to oncology care.

Research Design

This study investigated the trainees personal attributes, learning with technology,

contact with instructors, professional experience, communication skills and performance

in the PORT course. The trainees selected for the PORT course were screened by several

PORT mentors through an application process. The computer-mediated communication,

WebCT, environment was created by the researcher with the information provided by the

PORT program leader and coordinator. The data collection consisted of a pre

questionnaire at the beginning of the course, weekly seminar and two day face-to-face

workshop anecdotal observations, a post survey distributed before the individual face-to-

face interviews with the five trainees and three randomly selected mentors.

3.1 Seminar outline

Several weeks before the course began on January 13th 2005, the selected trainees

were sent a course package with the required article readings, syllabus and general

information for the thirteen-week course via regular mail. As well, a welcome email and

the course syllabus information for weekly lectures were uploaded to the course

conference in WebCT for the PORT participants to access. The mentors were sent a copy

of these documents to their respective university electronic mailbox even though it was

posted in the WebCT course folder. Many relevant or requested documents for PORT

members were sent by the project coordinator to the trainees and mentors electronic

mailbox hosted by their respective universities.

On the first day of seminars, the trainees in each university were all present. The

program leader asked the trainees and mentors for verbal permission to have a researcher,

study the entire process of this course. On week two of the seminars, the author of this

study began attending the videoconference seminars at the McGill University site. As a

non-participant in the discussions, the author sat around the table with the other PORT

members documenting the happenings of the seminar.

Before the start of each seminar, the mentors would introduce themselves, as

would the trainees. Almost every week a new mentor would lead the seminar. Although,

one out of thirteen seminars was lead by two mentors, one-mentor lead two seminars and the program leader lead three seminars. There were a total of ten mentors giving lectures. Each trainee was responsible to co-lead a seminar of choice with a mentor. The distributions of marks were based on the trainees overall seminar participation, a co-lead seminar with a mentor and a final paper presented at the face-to-face workshop in Victoria, BC.

Before the end of term, the McGill program leader and administrator made travel arrangements for all available mentors, trainees and myself to attend the two-day face-to-face workshop held at the Delta Victoria Ocean Pointe Resort and Spa in Victoria, British Columbia from April 11 to 13, 2005. This gathering was organized to complement PORT's core course in psychosocial oncology research.

All five trainees and seven of the mentors attended the face-to-face workshop. The workshop provided the members to meet at a different level, continue debates, discuss research projects, and grapple with the trainees research topics presented. On the second day of the workshop after the trainees all presented their oncology topics, closing remarks delivered by mentors and the author began conducting the face-to-face data collection. All five answered post surveys and returned it before their individual interview. The three mentors that were available to stay were invited to share their thoughts and comments regarding the course in an individual interview as well. The author began the interview process in a private conference room at approximately 15:30 with the mentors while the trainees finished completing their survey. The trainees were given a scheduled interview time in order to provide them with some time before dinner. The interviews were conducted simultaneously for approximately 20 minutes each.

3.2 The Web-based Communication System – WebCT

The WebCT environment was developed to facilitate the mentors, administrators, trainees and support staff to correspond and acquire course information through out the thirteen-week course. As the initial designer of the WebCT environment, I designed the interface for the PORT project, uploaded all necessary files for the participants before the beginning of the course. The development of the PORT space in WebCT was designed primarily through the web-based application in the McGill portal website accessed by a user name and password identified in a Sign In box (Figure 2, Screen Shot). Some of the initial design and development was developed during several hands-on workshops at the McGill Training Center. The final learning environment interface in WebCT was completed by November 2004, just before the course began.

The designed environment in WebCT was developed in a comprehensible and user-friendly manner for the learners to access the course map (Figure 3, Screen Shot), retrieve the course syllabus, assignments, audio visual aids, resources, tutorials, general information, e-mail, etc. through a multitude of frames and folders. This computer-mediated communication system provides asynchronous and synchronous options with a password protected conference area for the user. This Internet based tool offered the PORT group to stay connected at all times, communicate and share ideas continuously in an effective and more cost efficient manner compared to the videoconference environment. During the thirteen-week course, I logged into WebCT regularly to observe the non-existent interactions. There was limited usage of the virtual conference area

between participants. The PORT members used their respective e-mail addresses to communicate or delegate the information through the project coordinator.

Figure 2. WebCT portable and Sign In box

- Type your **McGill ID** and **PIN** in the pop-up window
- Click the **Sign In** button
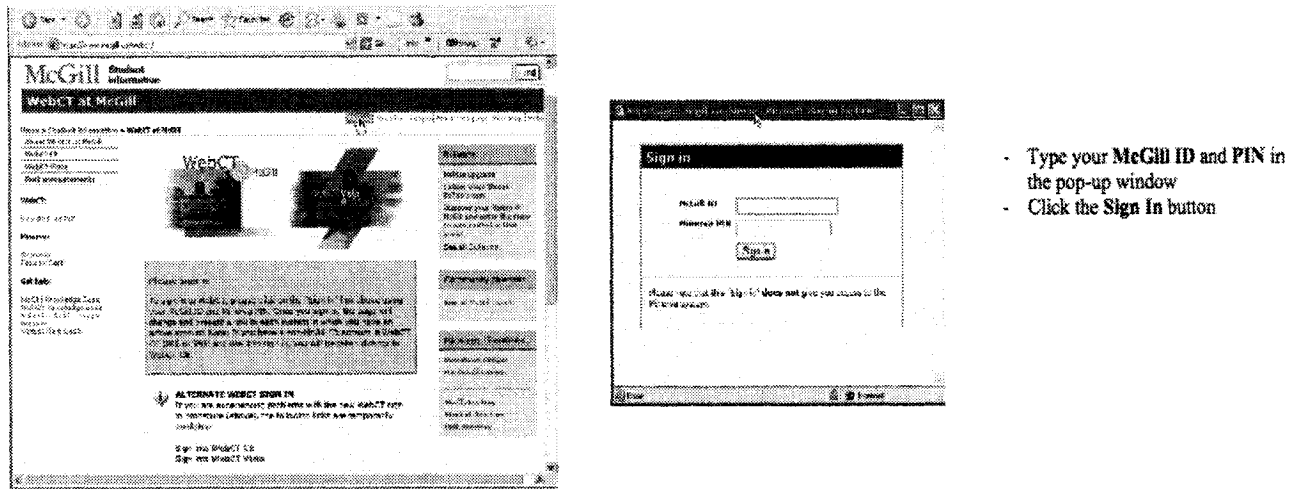
Figure 3. Course map displayed in WebCT
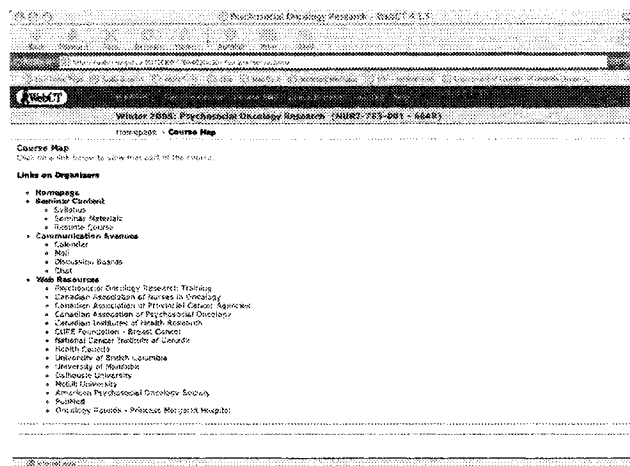
<u>Population</u>

The participants of this study consisted of 5 graduate students with fellowship awards. The graduate students enrolled in the Psychosocial Oncology Research Training course needed to be affiliated to a one of four Canadian Universities associated with a

PORT mentor. Each graduate was required to have a supervisor overseeing him or her through out the course.

The PORT course consisted of twenty-two mentors spread out coast-to-coast between Halifax, Quebec, Manitoba and British Columbia in Canada. One of the mentors at McGill University was the program leader for PORT. Out of twenty-two mentors, there were ten mentors who lectured and participated in at least one seminar. Out of the ten mentors, there were four mentors at the University of Manitoba, three mentors at the University of British Columbia, two mentors at the University of Dalhousie and one at McGill University who lead one or more seminars. There were trainees at three of the four Universities; one at Dalhousie University; two at McGill University; two at the University of British Columbia. There were no trainees recruited from the University of Manitoba. The project coordinator who was the liaison and administrator amongst the mentors and the trainees resided at McGill University

Of the 5 trainees recruited, all subjects (100%) agreed to participate in the study by signing and returning the consent form. The entire trainee group (n=5) was studied for the same variables. There was no treatment presented in this study. Once the consent form was signed, the pre questionnaire was mailed to each one. 4 out of 5 (n=4) trainees returned the pre questionnaire with a response rate of 80%. The post survey was returned by all 5 trainees with a response rate of 100%. All 5 trainees took part in the interview process at the face-to-face workshop in Victoria, BC. Anecdotal data was collected through weekly observations in the videoconference sessions.

Prior to the PORT course videoconferences, 2 trainees had never taken a distance education or an online seminar while the other 2 trainees had taken one online seminar

once before. All respondents felt comfortable communicating electronically, spent a minimum of six hours per week online gathering information, on e-mail, Internet, etc. They all spent more than ten hours per week using a computer for educational purposes. All trainees claimed to be independent workers with a high degree of initiative. At the beginning of the course, two trainees felt somewhat comfortable contacting other trainees or mentors outside of the seminars. One trainee indicated feeling very comfortable while another indicated feeling uncomfortable.

3.3 Concept Map of the PORT Seminar

Each university was equipped with a videoconference room where the weekly seminars were held. The diagram below (Figure 4) shows the visual representation of the seminar layout.

Figure 4. Concept Map of PORT's Videoconference Seminar Distribution
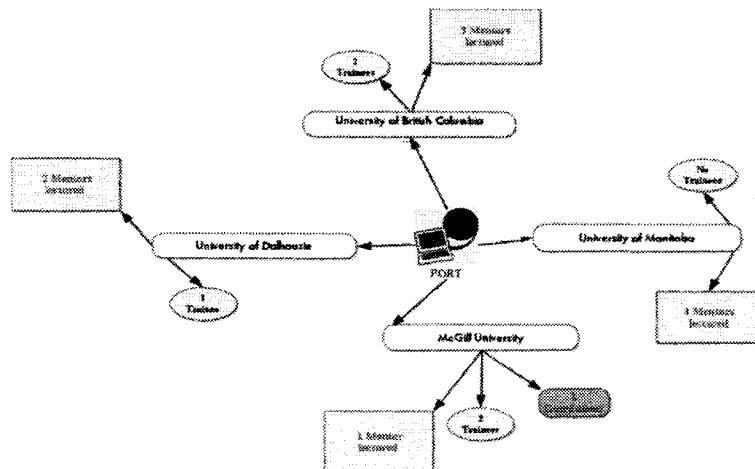
3.4 Instrumentation

The questionnaire and survey were created to measure an online learning environment and its effects as well as the students' reactions to using the instructional technologies such as WebCT and video-conferencing, for learning.

The trainees were asked for written permission to participate in the study. Trainee mailing addresses were provided to the researcher by the PORT coordinator. Then, the researcher mailed a *Consent to Participate Form* (Appendix II). When the consent to participate was returned to me signed, a pre questionnaire with a four point Likert scale entitled *Online Learning Via Instructional Technologies Survey* (Appendix III) was once again mailed to each trainee and asked to be mailed back completed in a stamped pre-addressed envelop. The pre questionnaire served to gather personal demographic information about the trainees, *Information about you (Section 1) a*s well as their experience, views about distance education and impressions of online learning, *Statements about Online Learning (Section 11)*. In this questionnaire, section I consisted of seven questions and section II consisted of thirty questions on a four-point Likert scale from strongly agree to disagree. This thirty-seven questionnaire was distributed at the start of the course in January 2005. This survey was adapted from the original questionnaire *Readiness for Online Learning Questionnaire* (Bernard, Brauer, Abrami and Surkes, 2004).

The post survey entitled *PedTech –PedagogyTechnology Survey* (Appendix IV) was used to gather the trainees' views about the PORT course. The trainees were asked about their preferred method of learning, perception of the seminars, their involvement in

the learning process, time sent on preparing for the seminars, interest in using technology, computer related tools, choice of computer applications used, course content and assignments, perceived effectiveness of the entire PORT course and a one open-ended question (Appendix IV, p.5). The post survey of fifty-six questions using a three and five point Likert scale and one open-ended question with place for comments answered on the *PedTech- Pedagogy Technology Survey Answer Form* (Appendix V), was distributed at the end of the thirteen-week course in April following the face-to-face workshop in Victoria, BC.

The observational research consisted of three methods to collect data. First, the observations of the weekly seminar, the analysis of the WebCT environment, the observations of the two-day face-to-face workshop in Victoria, BC and the audio recorded interviews with the five trainees and three mentors. A series of pre-detailed interview questions for the trainees (Appendix VII) and mentors (Appendix VIII) were based on the information gaps found in the pre questionnaire results as well as the observations in the seminars. The questionnaire and survey were used to conduct a parallel comparison (Appendix VI).

3.5 Procedures

Just when the program was in the midst of being established, I had heard about the course development. I approached the program leader, Dr. Carmen G. Loiselle, to possible study this new initiative. After the program leader discussed my proposal with the other mentors, I began my research. Before attending the seminar on January 13, 2005, Dr. Carmen G. Loiselle asked the trainees for verbal permission to conduct my

study by being at the seminars weekly to collect observational data, observe the CMC learning environment in WebCT, attend the face-to-face workshop in Victoria, BC for more observations and conduct interviews.

I began attending the videoconference sessions on week two of the course after the participants agreed to have me attend and conduct my study. The trainees and mentors were very welcoming. The program leader asked me to introduce myself, explain the purpose of my study and I welcomed questions. The trainees were informed of the true nature of the research at Seminar no. 2 after everyone introduced himself or herself. The following week, I received the trainees mailing addresses from the project coordinator in order to begin my research. As such, I mailed the consent forms (Appendix II) with a stamped pre-addressed return envelope. All five trainees agreed to participate in my research study by signing the form. Following their consent, a pre questionnaire with a four-point Likert scale entitled *Online Learning Via Instructional Technologies Survey* was mailed to the trainees with a stamped pre-addressed return envelope. Four out of five trainees returned the pre questionnaire.

During the videoconference sessions, I simply observed and took notes on the group dynamics, the technological effects and the use of technology. I also examined the course structure to see whether other technologies could help facilitate this distance education course. The one time when a trainee participated through a teleconferenced medium was quite innovative. No conflicts occurred.

At the face-to-face conference in Victoria, BC, all five PORT trainees, the PORT leader and six existing plus one newly recruited mentor were present. I arrived in Victoria, BC on April 11th, in the afternoon. It was a great pleasure to meet everyone

"face-to-face" at the welcome dinner. As some trainees mentioned, it was still different to meet everyone face-to-face and shake hands. As it was pointed out, some videoconferencing participants seemed different when seen through a television screen than in person. Everyone seems to immediately become comfortable once again. Being present at the conference, allowed me to continue observing the course development in a different milieu.

At the start of the conference, I was asked to take pictures through out the two-day conference. I also gathered more observations, distributed my post survey entitled *PedTech - Pedagogy-Technology Survey* and acquired observational data. At the end of the two-day workshop, on April 13th, I distributed my post survey to the five trainees. Thereafter, I distributed a time scheduled to interview the five trainees, two randomly selected mentors who volunteered and the program leader. First, I interviewed the two mentors, then the five trainees and after dinner in the evening I interviewed the program leader. The face-to-face interviews were all audio recorded and conducted individually.

3.6 Ethical Implications and Limitations

Some of the initial implications for the design and development were developed during my hands-on workshops at the McGill WebCT Training Center. The final site in WebCT was completed by November 2004, just before the course began. During the thirteen-week course, I logged into WebCT regularly to observe the non-existent interactions. There was very limited usage of this learning management system area. As discovered in the post survey and interview process, the PORT members used their respective email addresses to communicate or delegate the information through the

program coordinator. Many of the requested articles or information discussed in the seminars, were dispatched through the program coordinator as oppose to emailing it to the conference area directly.

As the researcher of this study, other implications with my full-time teaching job occurred. I was fortunate to be granted an early leave from my daily teaching job to attend the Thursday afternoon seminar sessions. Attending the seminars and the face-to-face workshop in Victoria, BC allowed me to understand the core functionalities of the program. Although, the seminar observations and interview data collected provided a strong affirmation of the results gathered from the instruments, shadowing the trainees' process and the course development was key.

The level of risk in this study is low. In my consent form, I assured the trainees that there be no potential risk of any information being disclosed before completion of the course. The students were informed that the non-participating as well as the participating students would in no way be discriminated against or impede on their grades. My goal was strictly intended to investigate the benefits of learning in web-based environment, its effects and students' reactions to using instructional technologies for learning. To protect the confidential nature of their participation, I used pseudonyms to protect identity and was the sole researcher collecting this data throughout the semester.

To remove any possible discomfort, I asked for written consent from the trainee whether they would allow their general comments to be used. Another potential risk to personal discomfort is the interviews recorded. In the instance that a participant is uncomfortable having the interview recorded, I would accommodate their request by taking detailed notes.

Some limitations exist in this study. The small sample (n=5) of participants may

threaten the validity of research. However, the seminar and face-to-face observations,

along with the interviews helped this study be more significant. This first term initiated

the course studied in the PORT program. A new course design would inevitably bring on

some challenges expected to bring on some course reorganization. There were some

technological problems mostly during the winter months. One disturbance forced the

Halifax site to shut down which obliged the trainee to leave the videoconference session.

At times, other interferences required the university technicians to assist or the bridge

operator to reboot the system during the seminar sessions.

The final risk relates to the reporting of the information revealed through out the

course. I was asked to sign a confidentiality letter to prevent any possible personal

patient related information discussed during the course discussions to be revealed.

3.7 Data Analysis

After the survey results were collected, the database file was incorporated into a

spreadsheet to organize and code the data. The researcher began analyzing the raw data

by computing descriptive statistics. The pre questionnaire drew the mean while the post

survey looked at the mean and frequencies. The data analysis method used in this study

is based on data collected from two instruments, virtual classroom and workshop

observations and interviews. Since the sample was very small, the mean and frequencies

were calculated. The variables in the questionnaire were compared and grouped in a

common variables identified from the survey. Thereafter, the common variables were

compared, grouped into themes and analyzed by the mean. The observations were

documented by note taking and the interviews were recorded to allow for the author of

this study to validate the information provided. The seminar and workshop observations

along with the interviews helped to understand the data collected from the instruments

and foresee any possible issues not prominent from the questionnaire and survey.

CHAPTER FOUR

RESULTS

Population

     This study investigated the benefits of using web-based learning environments, its effects and students' reactions to using instructional technologies for learning. The study ran over a period of thirteen weeks. WebCT was made available to the trainees and mentors as a common conference area outside the three-hour weekly seminar collaboration. Participation in this study was voluntary and the subjects were assured that all data would be confidential. Their identity and respective responses would remain confidential. Once the report of this study was compiled, a summary of the results would be made available to the PORT leader after all the trainees' grades were submitted.

     The entire trainee group (n=5) was studied and compared for the same variables. There was no treatment presented in this study. Of the 5 trainees recruited, all subjects (100%) agreed to participate in the study by signing and returning the consent form. Once the consent form was signed, the pre questionnaire was mailed to each one. 4 out of 5 trainees (n=4) returned the pre questionnaire with a response rate of 80%. The post survey was returned by all 5 trainees with a response rate of 100%. All 5 trainees took part in the interview process at the face-to-face workshop in Victoria, BC. There were also 3 volunteer mentors (n=3) approached by randomly asking the mentors immediately after the end of the two-day workshop whether they would be available and willing to stay for a twenty minute interview. One out of the three mentors who participated in the one-on-one interview was the program leader. Anecdotal data was collected from weekly

observations in the videoconference sessions, at the face-to-face workshop, the trainee and mentor interviews and in the CMC conference area, WebCT.

Demographic Data on the Sample

The study consisted of four females and one male. All five trainees in this research are students in a doctoral-level program affiliated with a Canadian University assigned to PORT. All five trainees (n=5) signed the consent to participate as well provided an additional consent to have their comments reported anonymously as quotes in a report or published data. One pre questionnaire was never returned which the data from the pre questionnaire will be based on a sample of 4 trainees (n=4). The post survey, seminar observations and interviews were based on a sample of 5 trainees (n=5). An examination of the raw data of the responses from the Likert scale pre questionnaire and post- survey will provide a parallel comparison with common themes identified.

In the background information, section 1 of the pre questionnaire, all four participants (n=4) had 4 or more years of post-secondary schooling and are presently enrolled in a doctoral-level program. Prior to the PORT course, 2 trainees had never taken a distance education or an online seminar while the other 2 trainees had. All four participants claimed to spend more than ten hours per week using a computer for educational purpose. 3 out of 4 respondents spent a minimum of ten hours per week on the Internet to gather information, research, communicate electronically, etc., while one respondent spent between six to ten hours per week.

Distant Education Survey Perceptions

The pre questionnaire and post survey were originally created to measure an online learning environment and its effects as well as the students' reactions to using the instructional technologies such as WebCT and video-conferencing, for learning. The data analyses of the trainee's responses from the instruments were grouped in Tables by a method of parallel comparison with the pre questionnaire and the post survey. The variables were then associated by common variables grouped in themes. The six emerging themes compared were: trainees' personal attributes, learning with technology, contact with instructors, professional experience and communication skills. The last theme, PORT performance, included independent variables only from the post survey. The PORT performance took into account the trainees overall perception effectiveness of the entire PORT seminars and the effectiveness of the mentors.

The final post survey question was an open-ended one "What lead you to register for the PORT seminar"; with an opportunity for the respondent to add any further comments or recommendations regarding PORT in the last section entitled Additional Information. The data resulting from the two-open ended questions was used in the commented results.

Instrument Data Comparison

4.1 Trainees Personal Attributes

The variables in this theme, analyze the students organization of course material and preparedness before the learning environment, enjoyment when working with others,

independent study methods, accessibility to communicate with others outside the learning environment and ability to work independently.

Overall, the pre questionnaire results in section II, revealed the participants were computer literate with a great deal of experience with asynchronous applications and some experience with synchronous. They stated being very willing to actively communicate with classmates and instructors electronically as they agreed to have enjoyed collaborating with other students in groups. In the post survey, all five trainees still believed needing to be connected with other learners but preferred working on assignments alone.

Initially, the trainees claimed to be independent workers with a high degree of initiative and self-directed people. As such, they benefited from having been given the opportunity to be active participants in their own learning and setting their own goals. On the other hand, 3 out of 5 preferred when the seminar content was highly structured by the mentors. In regards to collaborating with their peers, two trainees would have felt somewhat comfortable making contact with other trainees outside of the seminars, another trainee indicated feeling very comfortable while the last participant indicated feeling uncomfortable. In the post survey, they disclosed as never having met with fellow trainees in person or communicated electronically to discuss class material. Only twice did one trainee email two other trainees for personal information. They did mention having enjoyed and benefited from discussing ideas about the seminar content with the others. In fact, the desire to confer their course ideas about seminar content increased.

Table 4.1 – Provides a description summary of the outcomes related to the trainees'

personal attributes from the pre- to post instruments.

Variable commonalities
Working with others in group setting ✓ Preferred to work alone but enjoyed group collaboration ✓ Desire to confer course content increased
Independent study methods ✓ Claimed to be independent workers, high degree of initiative and self-directed people ✓ Benefited from opportunity and setting their own goals
Communication outside the learning environment ✓ Never met or hardly ever contacted one another outside the videoconference room. Only twice did one trainee email two other trainees
Independent abilities ✓ Very high

4.2 Learning with Technology

The trainees claimed to be computer literate especially composing text on a

computer in a virtual environment like e-mail and somewhat competent working through

other digital media. Trainees recorded being able to easily access the Internet for their

studies but rarely had to use any computer technologies for seminar work. Only in two

circumstances were other technologies used during seminars. Once when a trainee used a

laptop to produce notes during a seminar and the second when another trainee

participated in a seminar through a teleconferencing medium for the trainee was

unexpectedly called out of town. This trainee appeared to be very comfortable and

conducted the discussions with ease. They also often used word processing applications,

presentation software like PowerPoint except for spreadsheet or database software, which they never used for this course.

The trainees indicated being frequent users of the Internet for general work related activities. They very rarely used the WebCT tools including the e-mail component but rather used their e-mail service system established with their university or other. The uploaded syllabus in WebCT had already been sent to the trainees and mentors by the PORT coordinator; therefore, they did not need to access the online version. Computer related tools such as e-mailing systems did help increase their interactions with other trainees or mentors.

In the pre questionnaire, the trainees believed they would be slightly motivated by a web activity outside of the learning environment. The trainees would be disposed to carry out a web-based activity outside class time. They disagreed that the system of learning is the same in class as it is through a correspondent course with little guidance. The motivation level for learning strictly through online methods compared to a regular learning environment setting was minimal.

Table 4.2 – Provides a description summary of the outcomes related to the trainees learning with technology

Variable commonalities
Internet easily accessible for study ✓ Yes. Frequently used for work related activities
Comfortable to confer via web-based technologies ✓ Email, Internet, laptop, teleconference medium which helped increase interactions with trainees and mentors. ✓ Never used WebCT
Comfortable composing text on computer in a virtual environment ✓ Word processing, PowerPoint

Table 4.3 – Provides a description summary of the outcomes related to the trainees contact with instructors

Variable commonalities
Instructor contact outside learning environment   ✓ Trainees felt very comfortable if needed
Face-to-face contact necessary with Instructor   ✓ Not necessarily but valuable
Important to have a lot of Interaction, course structured and feedback from Instructor and/or staff   ✓ Great appreciation for performance feedback of seminars

4.4 Professional Experience

In the pre questionnaire, the trainees strongly believed their existing background experience would make positive contributions to the course and to their professions. In pursuit of the PORT course, they felt this opportunity had given them a great deal more aptitude for their careers and better prepared to help them apply interventions especially the concepts learnt in the material. Learning material simply from an Internet course to apply to a job would have been only somewhat promising. The learning strategies they used were to understand the material discussed, choose a meaningful topic and apply it to a real life situation. The post survey seems to point out the need to have practical usage for course material.

Table 4.4 – Provides a description summary of the outcomes related to the trainees professional experience

Variable commonalities
Background experience or meaningful topic can help me learn   ✓ S trongly believed would help develop interventions and aptitude for their careers

Application of learnt material from Internet course to job
  ✓ L ittle influence.
  ✓ M aterial needs discussion

4.5 Communication Skills

The trainees mentioned having an ample amount of written assignments. They

appreciated being given the freedom to choose an individual topic for their written

assignment. As such, they were able to choose a research topic, which was meaningful,

practical and relevant to their expertise. In regards to their oral communication, the

trainees unanimously preferred discussing their ideas about seminar content with others.

They agreed to being comfortable about communicating orally, however, they were

slightly less comfortable yet confident about their presentation skills.

Table 4.5 – Provides a description summary of the outcomes related to the communication skills

Variable commonalities
Comfort and strategies with written communication ✓ C omfortable writing Appreciated freedom to choose individual topic for assignment (relevant and meaningful)
Comfort and impressions of oral communication ✓ P r e ferred discussing content with others Comfortable in videoconference but less presenting

4.6 PORT Performance

The PORT performance analysis was conducted exclusively in the post survey

and in the interviews. The trainees perceived the overall effectiveness of the entire

PORT course as very significant (m=3.96). The trainees believed they had also made

positive contributions and performed well in the course. Even more, they benefited from

learning important key elements for their professions. They strongly agreed the seminars

and mentors to be very effective, the learning curve as high, the experience increased

their motivation and that PORT exceeded their expectations. The mentors were greatly supportive to the trainees' individual interests, differentiating opinions and actively listened to their learners.

Questions 48, 49 and 50 investigated the course assignments and tasks. The trainees stated the course provided the right amount of written assignments and enough trainee-led presentations in the seminars and face-to-face. In terms of the weekly readings, 60% thought the seminars included too many readings. The weekly readings were a combination of research-based studies where the participants dissected during the seminar. Sometimes the trainees would be e-mailed a series of questions for their readings to grapple with before the lectures while others questioned the trainees at the lectures. Two mentors used PowerPoint slides while others conducted their lecture like a traditional seminar (Wikipedia, 2005). Every mentor prepared and presented their lecture differently. The program leader mentioned how the PORT group decided to respect one another's' teaching styles.

Table 4.6 – Results from the post survey, Section VIII on Perceived Effectiveness of Entire PORT course

Variables	Post survey qsts	Mean
Overall, this has been a good seminar	51	3.8
Overall, the mentors were effective instructors	52	4.0
Overall, I learned a lot from the PORT seminar	53	4.0
My interest in this subject area has increased as a result of being a PORT seminar trainee	54	4.0
I would recommend this seminar to others	55	4.0
The PORT seminar has exceeded my expectations	56	4.0

Seminar, Face-to-Face and Interview Observations

Before each seminar, most mentors mentioned that it had been their first

experience lecturing through a videoconferencing medium. In the interviews, all three

mentors mentioned having enjoyed the experience. One mentor stated,

"Videoconferencing is a very important, vital aid for enhancing the spread of knowledge

and facilitating learning. The big advantage of videoconferencing is being able to allow

people from across the country in different areas to be able to participate and share

knowledge within". The mentors agreed but also felt that the classroom management of

the videoconference lecture versus a regular university classroom or learning

environment was quite similar. Aside from the technological breakdowns, the initial

challenge in the virtual classroom seem to lie in facilitating the environment. Another

lecturer who had never been involved in a videoconference seminar affirms,

> "Took me a little while to figure out how to engage people because there
> is kind of a bit of a delay. It is trying to let people know when they could talk
> because often people are waiting to see if someone is going to talk. I realized
> after I had done that conference, I probably could have been more directive and
> say Ok Tracey what do you think. You know to help facilitate that".

One trainee remarked that the PORT course is the ideal distance education

program. One trainee comments, "If I had to design what I would think would be the

ideal program for me, in Psychosocial Oncology which is my area of interest, this would

be it!" The inclusion and quality of the mentors who are subject matter experts, the

variety of interdisciplinary backgrounds, the flexibility and encouragement by the

program leader to exercise a variety of expressions according to ones learning/presenting

style as oppose to having one set structure were key components about the course. For example, some mentors used PowerPoint slides when presenting a seminar while other did not. The one concern mentioned was the weekly reading load. The post survey results and the trainee interview indicate 60% of trainees claimed to have had too many readings for the seminar discussions, however, they all agreed to have had just the right amount of assignments.

The final open-ended question in the PedTech survey looked to address why they applied for this course. The additional information question look to receive any additional information the study overlooked. The comments received reiterated the desire to have more guidelines about the assignments, the effectiveness of the course and the information provided. "This seminar was a wonderful way for me to get to know areas of the psychosocial oncology literature that I otherwise may not have been exposed to", one trainee writes.

Both the mentors and trainees pointed out the major role of the project coordinator efficiently played in helping facilitate the entire PORT program. The mentors felt that the administrative support provided by the project coordinator was very important considering their already busy work schedule. Hence, they did not feel that by lecturing at the seminar(s) increased their workload or burden them.

Although a camera separated the trainees, they still felt a sense of belongingness to a group. It was like being in a traditional classroom. In time, the trainees became more comfortable with one another and the mentors individual mentoring styles. The trainees felt a sense of commiserate with the trainee at Dalhousie for she was always by herself except for three times when a mentor was present. Although alone at her site, the

trainee did not feel excluded, as she had her onsite supervising mentor to confer the seminar discussions thereafter. As a result of her mentor, she did not feel left out, as the other trainees might have believed her to be. After each seminar, her supervising mentor would inquire about the happenings of the seminar. The involvement she received from her supervising mentor was important. She describes receiving a great deal of support in the program.

Effectiveness of the Media

The audience who had never assisted in a videoconference found it distracting when the technology would break down. Especially at the beginning of the course during the months of January and February, the videoconferencing system would need to be rebooted more often at the beginning of the course than at the end of the term. In one videoconference, one trainee comments "I find it hard to learn this way". Hand gestures were used at times to signal the return and verify the sound of the medium. One interviewee explains, "The draw back was the equipment not always working. There were some problems onsite and hopefully that could be fixed because if we have too many delays that could be problematic. So technology would be the greatest challenge I think".

Occasionally, both mentors and trainees found it challenging in the videoconference seminars to recognize who wanted to speak because there was a technological delay on the television screen. The switching of the sites on the television screen and the processing delay was what made it difficult for the audience to foresee. For instance, the audience would hear a voice before seeing the participants on the

screen. The difference between the videoconferencing lectures and meeting face-to-face, is that "the discussion was more fragmented I think, in the videoconferencing than it would be in a classroom", one interviewee comments.

Other than the program leader, the number of emails that the mentors received during the semester by the trainees appears to have been about five. In WebCT, there were five messages posted in the discussion board through out the thirteen-week course, four messages were sent by the researcher and one by the program leader without any returned messages. When they needed to contact a trainee, they would email the project coordinator the information and she would take care of dispatching the information and documents accordingly. It was reported that having had to familiarize oneself and utilize another communication system, WebCT, would have been more responsibilities than necessary. Most mentors never bothered logging into the WebCT conference area as they received mail communications in their respective university account, which they used regularly. The trainees had logged into WebCT to verify for new information or mail. However, when they say no interaction they stopped logging in. PORT related information would anyhow come in their university email account.

CHAPTER FIVE

DISCUSSION

The small sample may have been a threat to the validity of the results. This research was the first course to be conducted in the PORT program. In connection with the collected data from the instruments, the observations in the seminars, WebCT inactivity, the individual face-to-face interviews with the five trainees and three mentors in Victoria, BC provided a firm apprehension of the results.

Mentoring the Erudite Trainee

The demographic data demonstrates the capabilities and expertise the trainees bring to the course. The weekly time spent on a computer shows the frequent use and ease the trainees felt using a computer. At the level of schooling the trainees have attained, the weekly hours on computer for educational purpose (minimum of 10 hours) along with the weekly hours spent online for their professional use (minimum of 8 hours) did not require the study to question their computer literacy skills or readiness to learn via online media. Two out of four trainees claimed to have taken only one other distance education or online course for credit at the university level. The seminar observations showed they were comfortable interacting in the videoconference environment.

As the results confirm, it is crucial the trainees show an appreciation for working with others in a group setting, as it is inevitable in the PORT course. The data shows the trainees preferred to work alone and at times enjoyed doing group work. The course was conducive to this idea as the assignments were all individual except for the seminar co-

lead with a mentor. The trainees' results indicated that they were capable independent learners, as they preferred setting personal academic goals and learning material, which was meaningful to them. At the doctoral level, it was obvious the outcome would show the trainees to have a strong ability in communication skills, both in written and oral strategies.

The flexibility of allowing the trainees to select individual topics of interest for their assignments was encouraging for these independent and self-directed learners as both the trainees and mentors are required to grapple ideas, acquire techniques and look to design interventions cohesively. The trainees appreciated the flexibility, availability and the mentors' friendly approach. They truly felt that they were being mentored through their research trajectory. They feel privileged being associated with a group of expert oncologists with such a variety of expertise.

The fact the (n=5) trainees were selected among approximately fifteen applicants, this exclusive fellowship piloted program was rewarding. It has been said that the applicants were few and the pre-selection criteria was reached in a round table discussion among several mentors. Receiving feedback during the course from their mentors and program leader made them confident of their performance. They found the seminars and mentors to be very effective. One trainee mentioned being slightly intimidated by the mentors at the beginning of the term until they were able to get to know the others.

The Effective and Challenged Media

At times in the seminars, the participants would attempt to talk at the same time. This is also very common in a traditional classroom. The group interactions among the

trainees and mentors were very similar to the virtual seminar sessions and the face-to-face workshop. In the virtual learning environment, participants seem to be more focused on one other as they the focal point of the set up is the television screen. Participants were more conscience of the others body language. Two out of three sites used an on-off button to control their conversation. At the sites, most participants knew when the others wanted to speak as one could see them reaching out or leaning over to the remote control mechanism on the table. Some mentors were also more structured in their lectures so they would ask or select a trainee or a site to begin the conversation. "Let us start with Manitoba" one lecturer proclaimed. The problem with this is that it took time before new lecturers would get to know the trainees or be able to address the site. It would be advantageous if the sites or universities name were visible on the television screen as it was for Quebec. The McGill name was displayed on the background wall, which can simplify it for a lecturer or guest.

Two mentors used PowerPoint slides to help with their lectures. As mentioned in the seminars when asked if participants could see the slide, it was difficult to see the information provided. The color schemes seem to play a major role in the visibility of the slide. A select choice of colors schemes for videoconference television screen should be predetermined for PowerPoint presentations.

The fact each university had an onsite technical department seem to be re-assuring for the participants. When a problem would arise, they were prone to call out for a technician. Even though, they were called in only several times, the videoconference participants were never hesitant to call upon technical support or the bridge operator for help. The work done in the videoconference seminar is key. There is much research data

to be grappled with in the seminars. When technology breaks down, it disrupts the flow of the discussion. After one of the technical disruptions, one participant states, "Now where was I before the disruption…lost my train of thought". As some oncologists only plan to lecture once, the disruption also affects the mentors who volunteer their time that given week or the trainee who has a particular interest in a specific topic that week.

Technology is an imperfect science. At times, the sites were disconnected, echoing sounds were heard and the television screen would freeze. Glitches will occur, however, if there are too many, users may become frustrated or discouraged. Tech glitches should be prevented or investigated. Even though, the mentors can be contacted outside the classroom, the convenience of discussing ideas in a group was very valuable, appealing to the trainees and the foundation – fundamentals of this course.

Being confident with computer technologies is enough to have the trainees and mentors participate in CMC activities with ease. The WebCT environment provides too many frames or folders for the user to link to in order to see various folders. This environment had many folders which both the trainees and mentors did not see the need for, as they would receive, effortless pertinent information sent to their general email box from the project coordinator. "I would log in but I never saw any activity so I stopped logging in after a while" one trainee states. A response from one mentor informs, "Professors have too much already. I figure Jill would just take care of putting it on WebCT. I have never used WebCT. This is not the only course I am teaching but four. Using WebCT would mean I have to remember four passwords", one mentor mentions.

Both mentors and trainees did not see the value of using WebCT. The trainees were able to access the syllabus but used other familiar and existing asynchronous and

synchronous systems to communicate with the mentors or other trainees. The program leader submitted a welcoming message while almost all other mentors did not use it at all. They did not see the value of using WebCT since they were able to use their usual e-mailing system that they already were familiar and comfortable with. Some trainees looked at WebCT but were not tempted to go back since there was never any information posted. The trainees were not encouraged or required by the PORT mentor(s) to use WebCT so they did not use it. The trainees and mentors claimed they would have used the CMC environment if they were given reason to access it for the course.

Meeting Face-to-Face

The two-day face-to-face workshop in Victoria, BC demonstrated the cohesion the trainees developed through out the term. Trainees felt collegial connection with one another and with the mentors. They truly felt as though they were on the same team through out the seminars. Meeting face-to-face reinforced this cohesiveness. They were able to get to know one another better through various unstructured conversations at breakfast, lunch and dinner. The trainees mentioned having benefited form hearing in depth conversations about the research projects, which the mentors extensively debated at the discussion table. They asked the mentors if a list of their project grants could be made available to the trainees in which they agreed. Day one of the workshop was predominantly mentor-led. This happening was not distressing for the trainees as they particularly enjoyed hearing about the mentors present project research endeavors. The discussion on the first day of the workshop was very stimulating. There was a lot of debating going on and in-depth talk of prosperous research projects. The trainees felt

very comfortable with the mentors. They would have liked to learn more about the mentor's research during the seminar of the thirteen weeks as oppose to at the end of the course. There could possibly be some time set-aside during the seminar of the course with out an agenda or readings to discuss any issues of concern or interest in the field. This short time period could be allocated weekly or periodically.

The Effectiveness of the Course

A Mentorship approach is the origin of the PORT program as it was predominantly mentor lead with enough flexibility and independence for the trainees implement their own eloquent views. The whole idea of the PORT course was very motivating and significant to the trainees. The outcome from Section VIII in the perceived effectiveness of the entire course was very significant. The trainees were confident of having done well in the course and that the interventions ascertained in the course were capable of being applied to their job. Without a doubt, the findings recorded a great deal of information acquired to implement in their professional careers and increased their motivation in the field of psychosocial oncology.

In conjunction with formative evaluation, the trainees recorded in their surveys and verbalized in a videoconference during a mid-term evaluation (i.e.: learner validation and ongoing evaluation), that they prefer having some structure before the weeks' seminar. They felt a series of questions provided by the lecturer on the weekly readings prior to the seminar would help them be better prepared for the seminars. It would allow them to grapple with the articles before the seminars, helping them increase the quality of their seminar and participation.

The pre-guided questions the trainees preferred making reference to with their article readings would provide more structure. At the beginning of the term, the trainees surveyed not being as organize or having as much time in a week to digest the numerous ideas presented in the readings, as they would have like to. It could have been because there were too many weekly readings assigned. On the other hand, their surveys showed that they enjoyed discussing the ideas in the seminar. In the seminars conducted with pre-guided questions before the seminar, the author of this study observed a higher degree of interaction and discussion through out the seminars. This could also be argued that the increase of interactions in the mentioned seminar was as a product of the lecturer as opposed to the outcome of the trainees' preparedness with the article readings that week. The notion of varied mentoring styles warrants future research.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Community of Practice

The Moodle environment would become the extension of the seminars where the PORT team can build on their community of practice. According to Senge (2006), this type of team learning environment is an ideal way to practice a team skill. "A group of talented individual learners will not necessarily produce a learning team, any more than a group of talented athletes will produce a great sports team" (Senge, p.240). Learning teams need to practice just like a sports team. If anything, team skills as oppose to individual skills are more challenging to develop than individual skills. For this reason, Senge (2006) suggests that learning teams ascertain "practice fields," ways to practice together to help develop their collective learning skills. Moodle would be disposed to performing such activities as in a practice field.

The contact outside of the seminars was very limited. Trainees did not get together outside the seminar time even where there were two or more trainees at a site. Although they appreciated having the opportunity to make comments or toss an idea out on the table after the seminar with others, the support received from mentors seemed to be just as important. "I felt bad for her. She was alone", one trainee sympathizes. Coincidently, the other three mentors expressed their concerns for the one trainee alone at the site. Consequently, one mentor who lectured alone advised, "Being alone onsite was not a problem. It was actually better because I could focus only at the camera. Other wise I would have a tendency to look at the people on site".

The trainees were very pleased with the variety of expertise of the mentors. They would like to have had the opportunity to meet the salient mentors affiliated with PORT who had not participated in the seminars or the workshop. The trainees were eager to particularly meet some of the salient members, as they would have liked to discuss their area of research. These salient mentors could possibly be candidates to participate in the CMC environment. As the PORT community of practice continues to grow, E-mentoring may be the most economical and resourceful method of staying connected. The Alumni trainees can still co-lead a seminar. It could be insightful to have guest speakers from the field of medicine to be guest speakers at the seminars to support or answer study related questions.

Rationale for the Use of Technology and Course Content

Moodle, a password-protected environment, could eventually become a necessary and key component in PORT. This learning management system would provide all associates to produce a bank of information knowledge with out having to log in or learn much of another system. The Moodle's façade is user friendly, at a glance with simple and advanced tools for all users. No need to change CMC tools as Moodle can support up to 50,000 students (www.moodle.org). As a message is posted in Moodle, any user associated to that specific environment will receive a message in their regular mailbox advising them of a message. The user can choose to click or not on the message displayed in their inbox.

If the technological breakdowns occur too often another media or system may need to be considered. When the cost of such a service is high, the university may speak

with their technology department for a solution. PORT is paying a great deal of money to the universities for this service. The university may help find PORT another VoIP (Voice over Internet Protocol) system solution for the alumni trainees or mentors that may be moving out of Canada so they could still remain within the community of PORT. Videoconference participants were insightful, respectful and cued in to others body language when one wanted to talk. One mentor explains, "It is important to keep students awake and aroused. It is the instructors responsibility to do so".

In seminars, when using PowerPoint slides, backgrounds should be an apparent and easy to read color such as dark blue with a white writing with a maximum of four points with a maximum number of words per slide. Mute buttons should be off through out the seminar. It is less disruptive. At the beginning of the course, there may be value in just discussing how to engage in a conversation through this medium with the group. It could provide some tips on effective conferencing, making the most out of the time spent in seminars.

Trainees would have liked to have had written guidelines for the co-lead seminar as they were not sure what was expected of them. They were uncertain how they would be graded, the criteria or how they were expected to perform as it was not specified in the course syllabus. In a mid-term discussion about the course, for instance, the trainees wondered whether they are to lead 80% or 50% of the seminar, provide PowerPoint slides, etc.

Pelz (2004) has introduced a series of online pedagogy activities in his Three Principles of Effective Online Pedagogy, which can be considered for implementation. The three principles presented by Pelz (2004) are: (1) Let the students do the work; (2)

Interactivity is the heart and soul of effective asynchronous learning; (3) Strive for

presence. The interaction in the online pedagogy experience is beyond a discussion in

the asynchronous environment. The learner can be asked to interact with another, with

text, with the Internet, with another member or in a small group (Pelz, 2004). One less

reading could allow for some time per week to contribute to the weekly activity. They

claimed having spent approximately 4 hours but less than 7 per week max preparing for

the seminar discussions outside of videoconference time.

Recommendations

In regards to the assignments, the curriculum could substitute some reading for

practical activities or discussions in CMC for all PORT mentors including salient mentors

or alumni trainees to contribute. Today's workers are scattered. It is inevitable and more

effective to communicate with an asynchronous medium like e-mail. As identified in the

study, all trainees and mentors have at least one active electronic mailing address they

use regularly. While email and Internet access might once have been limited to the

communications of elite scientists (Single and Muller, 2000), today they are inevitable.

The CMC environment can become an asset in the PORT program. Through the latter,

the mentor can provide one scheduled virtual office hour slot following their lecture to

consult any unanswered thoughts or questions the trainees might have.

Today's worker moves around a great deal. The flexibility of technology adapts

easily to this idea. Technological solutions would be recommended to keep the trainees

involved in PORT should they move out of Canada. Provide easy CMC opportunities for

all members of PORT who move away. After spending all this productive time in

collaboration to train and develop Psychosocial Oncology issues, you should strengthen the connection and accommodate growth of the community. The PORT website may include an open forum for outsiders to ask questions and provide support to concerned individuals.

Operation costs are high. Expenses paid to travel abroad for the face-to-face, use of videoconference service fees and the CMC area. Eventually, PORT could consider a free Open Source Course LMS (Learning Management System) for the online learning environment such as Moodle - http://moodle.org/, as the author of this study has discussed.

Have the alumni trainees become future mentors. Begin the cycle rolling – potential mentors can possibly continue co-leading seminars or become future mentors. In the Mentorship Program (Reilly, 2004) recruits prospective mentees through a screening process. This program looks for candidates who are motivated, academically capable, have identified and documented needs for advanced learning.

Have the university's name appear in the background for the videoconference environment to easily recognize which university is speaking. This would allow the occasional lecturer or guest speaker to easily identify the individuals at other locations and can call upon them or the site name to prompt discussion or question.

Future Research

The past research has focused abundantly on the effects of e-mail as a communication medium. Little research has been pursued on the asynchronous nature of e-mail with a coach or mentor. The characteristics of e-mail (Harrington) described as

the time gap between sending a message and receiving it, the text, users computer literacy, mechanism for communicating with disparate groups, will inevitably affect the experience of ementoring in this medium. This study can be further explored by assessing ementoring styles and its process in the asynchronous environment. In a digital era where many forms of computer-assisted learning are widespread, mentoring via e-mail can be insightful. The different Styles of Mentoring introduced by Clutterbuck and Sweeney in 1997, (Harrington) could also merit some investigation.

As previously mentioned, relationships are still a crucial part of our society. In this study, the mentor and trainee are required to work close together regularly. According to Johnson (1999), the choosing of a mentoring relationship should be considered before engaging in an interactive exchange that provokes changes. Johnson (1999) describes several studies on the mentoring relationship, which may be advantageous to analysis in the future.

As the literature and the author of this study suggests, a LMS or a CMC collaboration environment has many advantages. Should the CMC produce more activity, it would be worthwhile to monitor the activities as identified in the constructivist model (Jonassen, n.d.). It would also be worthwhile to eventually evaluate the effectiveness of the collaboration efforts and intervention application with medical researchers as a result of PORT's. Could be a prosperous initiative in this field as a pioneering method of a learning organization (Senge, 2006) in health research. Much still remains to be studied.

Conclusion

The videoconference medium was effective, as it appeared to be the best way to allow these very busy subject matter experts to collaborate coast-to-coast. The advantage of the videoconferencing medium is the multitude of technologies it can incorporate (i.e.: audio, visuals, etc). The disadvantage is the frequent breakdown in the lines of communication as a result of poor weather. On the other hand, WebCT was very ineffective, as it was not used. Even though, PORT is subsided by several health institutions, they may look to consider a free open source learning management application as Moodle. The use of a Learning Management System (LMS) environment would greatly support the inhibitions expressed vis-à-vis the present system, WebCT. It would assist and corroborate the trainees and mentors needs outside the virtual classroom. If an idea or though comes to mind out of class time, the PORT member could communicate to all. The pre questionnaire results did identify the students' readiness for online learning.

In time when the PORT structure is solidified, it would effective for all associates of the program to discuss interventions, urging topics, new matters, etc. in this contained environment to remain connected in this community of practice. In sync with Johnson (1999), a mentoring portfolio is when an individual can mentor several people simultaneously while each mentor is tailored to a specific life scenario. Consequently, each mentor can moderate a specific topic as the seminars have been organized. The advantage of a learning management system like Moodle is that it will become the extension of the core learning environment area (the seminars). The Learning Management System (LMS) may also help create a database to refer back to for present

and future associates. At the same time, a LMS or CMC area could release the project

coordinator from some ineffective tasks like dispatching.

REFERENCES

Akerkar, S. M. and Bichile, L. S. (June, 2004). Doctor patient relationship: changing

dynamics in the information age. *E-Medicine, 50,* 120-122. Online journal:

http://www.jpgmonline.com

American Cancer Society (1997). CA: A cancer journal for clinicians. In: Peters, S.

Lassoing hope. New frontiers in cancer treatment. *Advance for Nurse Practitioners,*

5, 55-58.

Bernard, R.M. Brauer, A. Abrami, P. C. and Surkes, M. (2004). The Development of a

Questionnaire for Predicting Online Learning Achievement. *Distance Education, 25,*

31-47.

Bulz, B. and Kapusta, B. (2002, December 11). Where's the compassion in medicare?

The Globe and Mail, p. A21.

Campos, M. (2004). A Constructivist Method for the analysis of networked cognitive

communication, and the assessment of collaborative learning and knowledge-

building. *Journal of Asynchronous Learning Networks, 8,* 1-30.

Canadian Association of Psychosocial Oncology (1999). National psychosocial oncology

standards for Canada. Retrieved November 2003 from,

http://cancercentre.com/capo/finalstandards.cfm

CIHR Strategic Training Program in Palliative Care Research - McGill University.

Retrieved August 02, 2006 from http://www.mcgill.ca/cihr-

pcresearch/program/#CONTENT

Creswell, J.W. (2002). *Educational Research: Planning, Conducting and Evaluating*

Quantitative and Qualitative Research, Upper Saddle River, NJ: Merrill Prentice

Hall.

Duffy, T.M. and Jonassen, D.H. (1992). *Constructivism and the technology of*

instruction: A Conversation. Hillsdale, N.J: Erlbaum.

Fresko, B. (1999). Mentoring and tutoring as preparation for prospective teachers (Report

no. SP038690). Beit Berl College, Israel: International Conference on Teacher

Education. (Eric Document Reproduction Service No. ED432567)

Harrington, A. (March, 1999). The Coaching and Mentoring Network articles

E-mentoring: The Advantages and Disadvantages of using e-mail to support distant

mentoring. Retrieved on August 17, 2006 from

http://www.coachingnetwork.org.uk/ResourceCentre/Articles/Default.asp

Johnson, S., Geroy, Gary D. and Griego, O.V. (1999). The mentoring model theory:

dimensions in mentoring protocols. *Career Development International, 4,* 384-391.

Jonassen, D. (n.d.). Design of Constructivist Learning Environments (CLEs). Retrieved

online on January 08, 2006 from

http://www.coe.missouri.edu/~jonassen/courses/CLE/

Kanuka, H. (2002). A Principled Approach to Facilitating Distance Education: The

Internet, Higher Education and Higher Levels of Learning. *Journal of Distance

Education, 17*, 70-86.

Keegan, D. (1995). Distance Education Technology for the New Millennium Compressed

Video Teaching. (Eric Document Reproduction Service No. ED389931)

Kram, K. E. (1985). Mentoring at Work: Developmental Relationships in Organizational

Life. Glenview, IL: Scott, Foresman.

Learning Network: Using Technology to Enhance Learning- Definitions (2006).

Retrieved online on August 07, 2006 from

http://www.oln.org/student_services/definitions.php

Loiselle, C. G. (2004). PORT: Une nouvelle initiative pour la formation de chercheurs.

Perspective Infirmière, Septembre/October, 36-37.

Loiselle, C.G., Bottorff, J.L., Butler, L. and Degner, L.F. (2004). PORT - Psychosocial

Oncology Research Training: A Newly Funded Strategic Initiative in Health

Research. *Canadian Journal of Nursing Research, 36*, 159-164.

National Cancer Institute of Canada (2003). Canadian Cancer Statistics [web page].

Retrieved November 2003 from,

http://www.ncic.cancer.ca/ncic/internet/standard/0,3621,84658243_85787780_91026

515_langId-en,00.html

Pelz, B. (2004). (My) Three Principles Of Effective Online Pedagogy. *Journal of Asynchronous*

Learning Networks, 8, 33-47. Retrieved February 21, 2006 from

http://www.sloan-c.org/publications/jaln/v8n3/v8n3_pelz.asp

Picciano, A. G. (2001). *Distance Learning: Making connections across virtual space and*

time. Upper Saddle River, NJ: Merrill Prentice Hall.

Reilly, J. (1992). *Mentorship: The Essential Guide for Schools and Business*. Dayton,

Ohio: Ohio Psychology Press.

Rosberger, Z., Edgar, L., Collet, JP. C., and Fournier, M. A. (2002). Patterns of Coping in

Women Completing Treatment for Breast Cancer: A Randomized Controlled Trial of

Nucare, A Brief Psychoeducational Workshop. *Journal of Psychosocial Oncology,*

20, 19-37.

Senge, P.M. (1990). The Fifth Discipline: The art and practice of the learning

organization. Retrieved on August 07, 2006 from

http://www.infed.org/thinkers/senge.htm

Senge, P.M. (Eds.). (2006). The Fifth Discipline: The art and practice of the learning

    organization. USA: Doubleday.

Siemens, G. (December 12, 2004). Elearnspace. Everything elearning.

    Connectivism: A Learning Theory for the Digital Age. Retrieved June 10, 2006 from

    http://www.elearnspace.org/Articles/connectivism.htm

Single, P. B. and Muller, C. B. (2000). Electronic Mentoring: Quantifying the

    Programmatic Effort. (Report no. SP039206). *Paper presented at the 2000 (April)*

    Annual meeting of the American Educational Research Association in New Orleans,

    LA. (ERIC Document Reproduction Service No. ED440969). Retrieved February 21,

    2006 from http://www.mentornet.net

Smith, P. L. and Ragan, T. J. (1999). Instructional Design: 2nd Edition. University of

    Oklahoma, NY: John Wiley and Sons, Inc.

Sprandio, J. (2001). The integrative approach to cancer care. Monitor on Psychology, 32,

    74-75.

Stacey, E., Smith, P.J. and Barty, K. (2004). Adult Learners in the Workplace: Online

    learning and communities of practice. *Distance Education, 25,* 107-123.

Wikipedia, the free encyclopedia. (2005). [Electronic]. Retrieved July 28, 2005 from

 http://en.wikipedia.org/wiki/seminal_work & http://en.wikipedia.org/wiki/seminar

Zabora, J., Brintsenhofeszoc, K., Curbow, B., Hooker, C. and Piantadosi, S. (2001). The

 prevalence of psychological distress by cancer site. *Psycho-Oncology, 10,* 19-28.

Additional references

Bernard, R. M. and Abrami, P. C. (2004). How Does Distance Education Compare with

 Classroom Instruction? A Meta-Analysis of the Empirical Literature. *Review of*

 Educational Research, 74, 379-439.

Eisenberg, A.F. (1999). Forms of Socialization: Graduate Education and the Graduate

 Seminar. Response to "Rethinking the Graduate Seminar"* *Teaching Sociology, 27,*

 187-191.

Gaide, S. (2005). Web Conferencing Solutions for Higher Ed: Buyer Beware. *Distance*

 *Education Report, 9,*1-2, 6.

Harper-Chelf, et al. (2001). Cancer related patient education: An overview of the last

 decade of evaluation and research. *Oncology Nursing Forum, 28 (7),* 1139-1147.

Hiltz, S.R. (1994). The virtual classroom: learning without limits via computer networks.

 Norwood, N.J: Ablex Pub. Corp.

Holley, D. (2002). "Which room is the virtual seminar in please?" *Education and Training, 44*, 112-121.

Maurer, S.B. (1999). The Role of the Area Seminar in Graduate Education. Response to "Rethinking the Graduate Seminar"* *Teaching Sociology, 27*, 174-179.

Schwartz, M.D. and Tickamyer, A.R. (1999). Socialization and the Graduate Seminar. Response to "Rethinking the Graduate Seminar. *Teaching Sociology, 27*, 187-191.

Steen, S., Kubrin, C. and Bader, C. (1999). Rethinking the Graduate Seminar. *Teaching Sociology, 27*, 167-173.

Vivre avec le Cancer. (1998). [Cd-Rom] Digital Rain Inc., Toronto, Canada.

Appendices

Appendix I: Summary Protocol Form

Concordia
U N I V E R S I T Y

SPF# _____

Summary Protocol Form

- *For faculty externally-funded, contract, librarian, administrative and support staff research, send to the Office of Research Services, Room GM-1000*
- *For faculty internally-funded, faculty non-funded research and graduate student research, send to Associate/Vice-Dean, Research office of relevant University Faculty.*
- *For undergraduate honours research, send to relevant Departmental Human Research Ethics Committee.*

Date: January 09th, 2004

What type of review do you recommend that this form receive? Expedited ☒ or Full ☐

Part One: Basic Information

1. Names of Researchers:

Principal Investigator: Sara Iatauro

Department / Programme: Masters in Educational Technology

Telephone no.: (home) 514 - 426 - 0992

(work) 514 - 481- 7425

E-mail address: s_iataur@education.concordia.ca or siatau@gmail.com

2. Title of Research Project:

Teleconference Mentored Doctoral Researchers' Training Program in Psychosocial Oncology

3. Granting Agency or Contractor (if any):

N/A

4.   Brief Description of Research:

For funded research, please include one-page summary; otherwise, include a brief overall description. Include a statement of the benefits likely to be derived from project. You can address these questions by including the summary from the grant proposal.

The purpose of this study is to examine the use of an online learning environment and its effects as well as the students' reactions to using the instructional technologies such as WebCt and video-conferencing, for learning. With this study that will be conducted through the PORT, Psychosocial Oncology Research Training seminar at four universities within Canada, I hope to gain a better understanding of the online learning environment and predicting achievement success when instructional technologies are used. This study also aims to contribute to the understanding of the instructional technologies used in the PORT seminar and help the instructors to re-evaluate and grapple with the overall structure of the seminar should the need present itself. A report of the findings will be made available to the students and instructors/mentors of the PORT project after completion of the seminar.

The consenting students will complete two surveys, one at the beginning of the seminar and the other at the end of the seminar as well as commit to a half hour face-to-face interview. The surveys will be closed-ended questions using a four-point rating scale. It attempts to gather information about the learners' background with online seminars, attitudes encompassing distance education and access /facility with technology.

5.   Scholarly Review of Proposed Research:

Complete the appended Scholarly Review Form (SRF) if you are conducting non-funded or contract bio-medical research or any other non-funded or contract research involving more than minimal levels of risk to humans involved.

N/A

Part Two: Research Participants

1.   Sample of Persons to be Studied:

The five graduates and a random selection of instructors/mentors will be the sample group for this study. There are two Ph.D. students from McGill University, one Ph.D. student from

Dalhousie University and one Ph.D. and M.Sc. student from University of British Columbia. There will not be any students from the fourth University involved (University of Manitoba) for there were no applicants. The instructors/mentors will be asked to participate on a voluntary base at the face-to-face workshop in Victoria, BC from April12th to the 14th. I, being the study researcher, will collect all data and conduct the qualitative interviews with the consenting students and instructors/mentors.

2.   Method of Recruitment of Participants:

The students interested in the PORT seminar applied online through their website (www.port.mcgill.ca). The students were then obliged to find an instructor or mentor in the PORT project to be their supervisor who would guide them through the thirteen-week seminar.

The students enrolled in the first semester of the project beginning January 2005, will be asked verbally at the first class and by written consent. As the researcher of this study, the students will get the opportunity to meet me through videoconferencing on the first day of class, January 13th/2005. At this time, I will introduce myself by providing a brief description of my involvement in the PORT seminar as well what is expected of them if they decide to participate. My contact information including telephone numbers, email and mailing address will also be provided.

3.   Treatment of Participants in the Seminar of the Research: A brief summary of procedure, as well an account of the training of researchers/assistants.

At the first class, participants will be made aware of the time and effort required for this study and any subsequent contact needed to arrange for interview times. It is anticipated that the time required will be approximately half hour per interview.

Private and confidential information will be protected in the following manner:

- Only the researcher will have access to the gathered data. The instructors/ mentors will have access to the report of findings following the completion of the seminar.
- Pseudonyms will be used to protect the participants identity during reporting of results

- No names will be place on surveys and audio cassettes will be labeled with pseudonyms
- Any distinguishing information within the artifacts will be removed

The consenting students will complete two surveys, one at the beginning and one at the end of the seminar; one face-to-face interview during mid-semester with the students and volunteering instructors/mentors in Victoria, BC at the two day workshop. The first data collection tool, a pre-evaluation survey is designed to acquire general background information about the students' years of schooling, experience online, beliefs and views of online learning which will be distributed at the beginning of the seminar. The post-evaluation survey will allow the students to share their experience within the semester at the end of seminar. This would include questions regarding their assignment and seminar obligations in the learning process, implicated time on task, learning with technology and perceived effectiveness of technologies used vis-à-vis their seminar obligations. I will also be observing the group dynamics at the lectures in the virtual classroom environment. In my Student Consent to Participate Form (see attached), I have asked the participants permission to use quotes from the lectures.

The delivery system for the asynchronous online learning environment will be communicated through WebCT, which the PORT members are to use. This will allow everyone to be connected and communicate with the seminar participants, share links and information amongst one another, upload and download files. Video-conferencing will be used to broadcast the synchronous seminar lectures throughout the four Canadian universities in each virtual classroom environment. The data collection is to be completed by May 2005. Analysis of the data will take place after it has been collected.

Part Three: Ethical Concerns

1. <u>Informed Consent</u> :

Written consent form or written draft of oral protocols must be attached; see instructions and sample. See attached "Student Consent to Participate" form.

2.　Deception: (The researcher must both describe the nature of any deception, and provide a rationale regarding why it must be used to address the research question, i.e., is it absolutely necessary for the design? Deception may include the following: deliberate presentation of false information; suppression of material information; selection of information designed to mislead; and selective disclosure. It is assumed that the participants will be debriefed. (See section 6 below.)

No deception is associated with the conduct of this evaluation. No active manipulation or deception of the subjects is intended. This study is strictly an evaluation of the process of learning through an online medium and the use of instructional technologies in the PORT training seminar.

3.　Freedom to Discontinue:

Written and verbal explanations will be mentioned to the students and instructors/mentors that they may choose to withdraw from the study at any time. These instructions will be given in the following instances:

- Following a personal introduction of myself in the first lecture
- On the consent form
- On the pre- and post- evaluation surveys
- At the beginning of the face-to-face interview
- Throughout the collection of data procedures

Participants will be able to indicate their desire to discontinue their involvement in the study either verbally, in person at the face-to-face workshop, by telephone, email or a written note.

3.　Assessment of Risks to Subjects' Physical Well Being, Psychological Welfare, and/or Reputation:

The researcher has assessed the level of risk in this study as low. The potential risk is that the participant may feel uncomfortable disclosing personal academic information, and other personal information that may occur during the collaboration between students and instructors in the virtual classroom or in the online environment that are participating in the study. To reduce this discomfort, the researcher has asked for consent from the student whether they would allow their general comments to be used.

Another potential risk to personal discomfort is the audio taping of interviews. In the instance that a participant is uncomfortable having the interview audio taped, I will accommodate their request by taking detailed notes.

The final risk relates to the reporting of findings. Students may have concerns that their personal information will be exposed and possibly affect their grades. To protect the confidential nature of their participation, I will be using pseudonyms to protect identity and be the sole researcher collecting this data throughout the semester.

5.   Protecting and/or Addressing Participant "At Risk" Situations:

The students will be informed that the non-participating as well as the participating students will in no way be discriminated against by affecting their grades. The researcher is strictly intending to evaluate the process of the online learning process and gather pertinent data to assist PORT members evaluate the seminar structure.

6.   Post-Research Explanation and/or Debriefing:

The study will be explained to the participants at the first lecture on January 13th/2005. The PORT members will be encouraged to contact me should they have additional questions following the first lesson.

7.   Confidentiality of Results:

At no time will the identity of the students be revealed by name. Once again, pseudonyms will be used to protect the confidentiality of the students.

8.   Other Comments: Bearing in mind the ethical guidelines of your academic and/or professional association, please comment on any other ethical concerns which may arise in the seminar of this research (e.g., responsibility to subjects beyond the purposes of this study).
       None

Signature of Principal Investigator: _____

Date: _____

Appendix II: Student Consent Form

<div style="border:1px solid black; padding:10px;">

Online Learning via Instructional Technologies
Student Consent to Participate in Study

</div>

As you probably recall from the PORT seminar, my name is Sara Iatauro and I am a graduate student at Concordia University in Montreal (Quebec) working on completing my MA degree in Educational Technology. For my thesis, I am interested in conducting a study on how students learn in an online environment, their reactions to using instructional technologies for learning and the effectiveness of this type of instructional method. In this study, I hope to gain a better understanding of the learning process and the outcomes related to using web-based methods such as video-conferencing and WebCT. As well, I hope this study will inform the PORT mentors of future learning activities within the seminars. With your consent, I would ask that for this study you respond to two short surveys approximately fifteen minutes each to complete at two times during the term and one face-to-face interview conducted in Victoria, BC during the annual meeting. The first survey will be sent to you by mail shortly after the beginning of the seminar, the second following the completion of the seminars.

Your participation in this study is voluntary and the information collected will solely be available following the completion of the seminar and when all grades are submitted by the PORT mentor(s). Your identity and respective responses will remain confidential. Once the report of this study has been compiled, a brief summary of results will be made available to you and to the PORT mentors.

Any questions or concerns you have with respect to this study can be addressed directly to me. I may be contacted by phone or e-mail at s_iataur@education.concordia.ca. The professor overseeing this study is Dr. Richard Schmid in the Department of Education at Concordia University.

Consent to Participate in Study

This is to state my consent to participate in the proposed study conducted by Sara Iatauro, a MA student in Educational Technology at Concordia University. I have read the above description and I: ☐ consent to participate.   ☐ do not consent to participate.

☐ I agree to have my comments reported anonymously as quotes in reports or published data.

☐ I do not agree to have my comments reported anonymously as quotes in reports or published data.

Name (please print): _____Student ID: _____

Signature: _____ Date: _____

Appendix III: Pre questionnaire

Online Learning via Instructional Technologies Survey

Winter 2005

PORT Graduate no. 1

Student ID _____

Instructions: For each of the statements below, please place an ☒ in the box that best describes yourself or you and your opinion concerning online learning/distance education. I am aware that I may withdraw from this study at any time. After you have completed the survey, please return it in the self addressed envelope provided to you for: Sara Iatauro, PORT Survey (address)

Section I:

*Information about You _(Please select one from each)_

A. Gender	Female	Male		
B. First Language	English	French	Other	
C. Age	18 – 22	23 – 27	28 – 32	33 or more
D. Years of Post-Secondary Schooling	1	2	3	4 or more
E. Number of distance education or online courses I have taken for University credit	0	1	2	3 or more
F. Estimated number of hours I spend per week using a computer for educational purposes	< 1	1 – 5	6 – 10	> 10
G. Estimated number of hours I spend per week online (i.e.: email, gathering information, web quest)	< 1	1 - 5	6 - 10	> 10

Section II:

*Statements about Distance Education

	1 Strongly Agree	2 Agree	3 Disagree	4 Strongly Disagree
1) I am able to easily access the Internet as needed for my studies.				
2) I am comfortable communicating electronically.				
3) I am willing to actively communicate with my classmates and instructors electronically.				
4) I feel that my background and experience will be beneficial to my course.				
5) I am comfortable with written communication.				
6) I am comfortable with oral communication.				
7) I feel I need to be well prepared and have organized my thoughts before I attend class lectures.				
8) In my studies, I am self-disciplined and find it easy to set aside reading and study time.				

	1 Strongly Agree	2 Agree	3 Disagree	4 Strongly Disagree
9) I am able to manage my study time effectively and easily complete assignments and course tasks on time.				
10) As a graduate student, I am able to work independently.				
11) I enjoy working with other students' in-group settings.				
12) I like a lot of interaction with my instructors and/or assisting staff.				
13) I possess sufficient computer skills for doing Internet related work.				
14) If required, I would feel comfortable composing text on a computer in the virtual learning environment.				
15) I feel comfortable communicating and following the course in English.				
16) I feel that face-to-face contact with an instructor is necessary for learning to occur best.				
17) I can ask my instructors questions and receive a quick response outside of class.				
18) I would be motivated by a web activity provided outside of class.				
19) Outside of class, I can discuss with other graduate students and instructors about class related activities and /or topics.				
20) Outside of class, I feel comfortable contacting other graduate students or instructors.				
21) Outside of class, I can collaborate with other students about Internet related activities.				
22) Outside of class, I can implement the course subject matter from just learning through the WWW (world wide web).				
23) Learning is the same in class as it is at home through the Internet.				
24) I believe that learning via an online method is more motivating than a regular course.				
25) I believe a complete course can be given through the web without difficulty.				
26) I could pass a course given through the WWW without any assistance by an instructor.				
27) I believe an Internet course is possible but applying the material to a work environment could be difficult.				
28) I believe that material acquired in an Internet based course is more motivating than a traditional class course.				
29) When it comes to learning and studying, I am a self-directed person.				
30) In my studies, I set goals and have a high degree of initiative.				

*Survey items adapted: Bernard, R.M. Brauer, A. Abrami, P. C. and Surkes, M. (2004). The Development of a Questionnaire for Predicting Online Learning Achievement. *Distance Education, 25*, 31-47.

PedTech - Pedagogy-Technology Survey

PORT Trainee no. _____

Student ID # _____

INSTRUCTIONS

Please mark all your answers on the accompanying answer sheet by circling the most appropriate response. After you have completed the survey, please return both the survey and the answer sheet to Sara Iatauro.

Section I: Learner Preferences
In this section, we are interested in knowing how you prefer to learn. Please choose the response that **best** describes you.

1. When working on assignments:
   A. I prefer to work alone.
   B. I prefer to work with others.

2. I prefer it when:
   A. Seminar content is highly structured by the mentors.
   B. I can develop my own ideas about the structure of the seminar content.

3. Typically, I complete:
   A. Only what is required.
   B. I complete required assignments as well as those that are optional.

4. Typically,
   A. I enjoy discussing my ideas about seminar content with other learners.
   B. I prefer to keep my ideas about seminar content to myself.

5. Typically, I prefer to:
   A. Study what my mentors tells me is important to learn.
   B. Study what is important to me and not always what the mentors says is important.

6. I prefer classes that are:
   A. Task oriented that focus on *what* I learn.
   B. Process oriented that focus on *how* I learn.

7. It is <u>more</u> important to me:
   A. To get a good grade regardless of how much I learn.
   B. Learn as much as I can regardless of the grade I receive.

Section II: Seminar Structure
In this section we are interested in how you perceived the structure of PORT seminars.

Using the scale provided, please rate the extent to which you agree or disagree with the following statements.

A	B	C	D
Strongly Disagree	Disagree	Agree	Strongly Agree

8. The lectures in the PORT seminar were predominantly mentor-led lectures.
9. The material (i.e., readings, electronic handouts, etc) provided for the seminars, were meaningful and relevant.
10. The mentors were supportive of individual differences and ways of learning.
11. This seminar provided appropriate learning challenges.
12. The mentors encouraged collaborative learning and/or team work among trainees.
13. The mentors supported individual interests and creativity.
14. The mentors encouraged us to listen to and think about the opinions of fellow trainees.

Section III: Active Learning
This section asks you to state your perceptions of your involvement in the learning process during the seminars.

Using the scale provided, please rate the extent to which you agree or disagree with the following statements.

A	B	C	D
Strongly Disagree	Disagree	Agree	Strongly Agree

In the seminars:
15. I felt that I was actively involved in my own learning.
16. I was able to set personal learning goals.
17. I made use of supplemental materials or learning activities.
18. I organized seminar concepts or ideas into charts, concept maps or themes.
19. I used learning strategies such as notes to keep track of my learning goals.
20. I considered and reflected on the comments I received on seminar tasks and my participation.

Section IV: Time on Task
Learners vary on the amount of time they spend on a course. This section is interested in examining how much time you spent on preparing for the seminars as well as how you spent that time.

21. On average, how much time did you spend <u>per week</u> preparing for the seminar outside of class time?
A. Less than 1 hour
B. Between 1 and 4 hours
C. Greater than 4 and less than 7 hours
D. More than 7 hours

Please tell us how you spent your time preparing for the seminars. Using the scale provided, please rate the extent to which you agree or disagree with the following statements.

A	B	C	D
Strongly Disagree	Disagree	Agree	Strongly Agree

22. I completed all of the required readings and/or tasks before each seminar.
23. I made note of the material that I did not understand so that I could ask questions in seminars.
24. I met with fellow trainees in person or electronically (email, chat, etc), to discuss class material.
25. After class, I reviewed my class notes to ensure that I understood the material discussed.
26. The information provided in the seminars prepared me well enough to help me apply interventions.

Section V: Learning with Technology
This section is interested in how often you used computer technology for the seminar and what applications you used.

Using the scale provided, please indicate how often you used the following applications for the seminars, both inside and outside of the video-conference room.

A	B	C	D
Never	Sometimes	Often	Very Often

Frequency of use:
27. Overall, how often did you use a computer technology (computer, PDA, etc) at the seminars?
28. Overall, how often did you use a computer outside of video-conferencing for the seminar related work?

Applications used for the seminars:
29. Word processor (i.e., Word or WordPerfect)
30. Spreadsheet or database (i.e., Excel or Microsoft Access)
31. Presentation software (i.e., Powerpoint)
32. PORT website (www.port.mcgill.ca)
33. E-mail in another provider **other than** WebCT
34. WebCT tools **other than** the E-mail function
35. The Internet (i.e., Search engines, Databases, Websites)

Section VI: Perceived Effectiveness of Computer Use
This section asks you to state your perceived effectiveness of your computer use in and outside of the video-conference room.

Using the scale provided, please rate the extent to which you agree or disagree with the following statements.

A	B	C	D
Strongly Disagree	Disagree	Agree	Strongly Agree

Use of computer related tools for the seminars:

36. Helped me to be more actively engaged in my learning.
37. Made it easier for me to review topics that I did not understand in conferences.
38. Helped me to organize seminar materials and integrate them in a way that was meaningful for me.
39. Helped me set realistic learning goals.
40. Allowed me to think in new ways about the seminar material.
41. Increased my confidence that I could learn the material.
42. Increased my interest in the subject matter at the seminars.
43. Made seminar content more personally relevant.
44. Was appropriate to my needs and level of understanding.
45. Increased my interactions with fellow trainees and/or the mentors.
46. Was flexible enough to allow for individual differences in learning.
47. Made it easier for me to express opinions and engage in discussions.

Section VII: Context of Computer Use
This section asks you to examine how you prepared for readings, written assignment and presentations.

Readings

48. Overall, did the seminars include too many readings?
    A. Yes
    B. No
    C. Just enough

Please answer the following:

Using the scale provided, please indicate how often you use the following applications as part of the seminars both inside and outside of the video-conference room.

A	B	C	D
Never	Sometimes	Often	Very Often

To prepare for the readings:
48a. I review the material and try to comprehend important facts or ideas in order to prepare for discussion.
48b. I try to organize the material into something that is personally meaningful
48c. I critically reviewed the provided material so that I could transfer the concepts to my job.
48d. I used computer related topics to help better understand the readings.

48e. In general, the strategies that I used to study for the seminars were:

A	B	C	D
Very *ineffective*	*In*effective	Effective	Very Effective

Written Assignment(s)

49. Overall, did the PORT seminar provide enough written assignments?
    A. Yes
    B. No
    C. Just enough

Please answer the following:

Using the scale provided, please indicate how often you used the following applications as part of the seminars both inside and outside of the video-conference room.

A	B	C	D
Never	Sometimes	Often	Very Often

To prepare for the written assignment(s):
49a. I reviewed the material and tried to comprehend important facts and ideas in order to prepare for my final paper.
49b. I tried to select a topic that was personally meaningful.
49c. I critically reviewed the seminar material before writing my final paper.
49d. I use the computer related tools to help gather information for my final paper.

49e. In general, the strategies that I used to prepare my written assignment(s) were:

A	B	C	D
Very *ineffective*	*In*effective	Effective	Very Effective

Presentations

50. Overall, did the seminars as well as the face-to-face conference include enough trainee-led presentations?
    A. Yes
    B. No
    C. Just enough

Please answer the following:
Using the scale provided, please indicate how often you used the following applications as part of the seminars both inside and outside of the video-conference room.

A	B	C	D
Never	Sometimes	Often	Very Often

To prepare for my presentations:
50a. I reviewed the material and tried to comprehend important facts or ideas to better prepare for my presentations.
50b. I feel comfortable with my presentation skills.
50c. I critically reviewed the material to help me prepare for my presentations.
50d. I used computer related tools to help me with my presentation in the video-conference room.

50e. Overall, the strategies that I used to prepare projects for my presentations were:

A	B	C	D
Very *ineffective*	*In*effective	Effective	Very Effective

Section VIII: Perceived Effectiveness of the entire PORT seminar
This section asks you for your view on the overall seminar.

Using the scale provided, please rate the extent to which you agree or disagree with the following statements.

A	B	C	D
Strongly Disagree	Disagree	Agree	Strongly Agree

51. Overall, this has been a good seminar.
52. Overall, the mentors were effective instructors.
53. Overall, I learned a lot from the PORT seminar.
54. My interest in this subject area has increased as a result of being a PORT seminar trainee.
55. I would recommend this seminar to others.
56. The PORT seminar has exceeded my expectations.

Final Open-ended Question
Qst1: What lead you to register for the PORT seminar?

_____
_____
_____
_____

Additional Information:
If there are any further comments or recommendations that you would like to add regarding the PORT seminar, I would greatly appreciate your feedback on the sheet provided.

Thank you for your time

Appendix V- Post Survey Answer Form

PedTech - Pedagogy - Technology Survey
Answer Sheet

Section I: Learner Preferences		
1.	A	B
2.	A	B
3.	A	B
4.	A	B
5.	A	B
6.	A	B
7.	A	B

Section II: Seminar Structure				
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D
11.	A	B	C	D
12.	A	B	C	D
13.	A	B	C	D
14.	A	B	C	D

Section III: Active Learning				
15.	A	B	C	D
16.	A	B	C	D
17.	A	B	C	D
18.	A	B	C	D
19.	A	B	C	D
20.	A	B	C	D

Section IV: Time on Task				
21.	A	B	C	D
22.	A	B	C	D
23.	A	B	C	D
24.	A	B	C	D
25.	A	B	C	D
26.	A	B	C	D

Section V: Learning with Technology				
Frequency of Use				
27.	A	B	C	D
28.	A	B	C	D
Applications Used				
29.	A	B	C	D
30.	A	B	C	D
31.	A	B	C	D
32.	A	B	C	D
33.	A	B	C	D
34.	A	B	C	D
35.	A	B	C	D

Section VI: Computer Use				
36.	A	B	C	D
37.	A	B	C	D
38.	A	B	C	D
39.	A	B	C	D
40.	A	B	C	D
41.	A	B	C	D
42.	A	B	C	D
43.	A	B	C	D
44.	A	B	C	D
45.	A	B	C	D
46.	A	B	C	D
47.	A	B	C	D

Section VII: Context of Computer Use				
Readings				
48.	A	B	C	
48a.	A	B	C	D
48b.	A	B	C	D
48c.	A	B	C	D
48d.	A	B	C	D
48e.	A	B	C	D
Written Assignment(s)				
49.	A	B	C	
49a.	A	B	C	D
49b.	A	B	C	D
49c.	A	B	C	D
49d.	A	B	C	D
49e.	A	B	C	D
Presentations				
50.	A	B	C	
50a.	A	B	C	D
50b.	A	B	C	D
50c.	A	B	C	D
50d.	A	B	C	D
50e.	A	B	C	D

Section VIII: Perceived Effectiveness				
51.	A	B	C	D
52.	A	B	C	D
53.	A	B	C	D
54.	A	B	C	D
55.	A	B	C	D
56.	A	B	C	D

Appendix VI: Parallel Comparison Results with Pre questionnaire and Post Survey

Table 4.1 – Provides a description summary of the outcomes related to the trainees' personal attributes from the pre- to post instruments.

Variable commonalities	Related Questions	
	Pre questionnaire	Post survey
Student organization and preparedness to learn	7, 8, 9	3, 5, 22, 23, 25, 48e
Enjoy working with others in group setting	11	
Independent study method	29, 30	2
Communication outside the learning environment	19, 20, 21	4, 24
Independent abilities	10	1, 15, 16

Table 4.2 – Provides a description summary of the outcomes related to the trainees learning with technology

Variable commonalities	Related Questions	
	Pre questionnaire	Post survey
Internet easily accessible for study	1	27, 28, 35
Comfortable to confer via web-based technologies	2, 3	32, 33, 34, 35, 45
Comfortable composing text on computer in a virtual environment	14	29
Good computer skills for Internet work which helped me through out the course	*13*	*48d, 49d, 50d*
Motivated by a web activity	18	
Home and classroom Internet based learning same	23	
Online learning more motivating	24, 28	
Internet course can be done through web	25, 26	

Table 4.3 – Provides a description summary of the outcomes related to the trainees contact with instructors

Variable commonalities	Related Questions	
	Pre questionnaire	Post survey
Instructor contact outside learning environment	*17*	
Face-to-face contact necessary with Instructor	16	
Important to have a lot of Interaction, course structured and feedback from Instructor and/or staff	12	2, 20

Table 4.4 – Provides a description summary of the outcomes related to the trainees professional experience

Variable commonalities	Related Questions	
	Pre questionnaire	Post survey
Background experience or meaningful topic can help me learn	*4*	*26, 48b, 48c*
Application of learnt material from Internet course to job	27	

Table 4.5 – Provides a description summary of the outcomes related to the communication skills

Variable commonalities	Related Questions	
	Pre questionnaire	Post survey
Comfort and strategies with written communication	*5*	*49c*
Comfort and impressions of oral communication	6	*50b*

Appendix VII: Trainee Interview Questions

Trainee Interview

- Did you feel that you were making positive contributions to the seminars during video-conferencing?
- Did you feel that you were making positive contributions to the annual meeting - yesterday and today?
- Did you feel comfortable in voicing your opinion? There seems to be more trainee input today the first day than second day?
- Being connected with top Oncologists through PORT, is that intimidating at all or do you feel like a type of associate?
- Was it different having your supervisor in the same room with you?
- Did you feel uncomfortable in any way during the video-conferencing? (i.e.: having lunch, shuffling paper, bathroom break)
- Were their any critical events that influenced your behaviour throughout the PORT seminars?
- Was their communication with any mentors outside of seminar time? Via email, Face-to-face (co-leading, questions, needing of information) How was their response?
- How did you communicate/interact? (WebCT insight, email)
- How would you of liked to use WebCT or common area differently?
- Some would say that an seminar should be conducted freely? What re your views on this?
- Advantages of using this technology?
- Disadvantages of using this technology?
- How much would you say that you have learnt in the PORT seminar vis-à-vis a traditional classroom?
- How would you or would you like to continue being mentored or connected with trainees?
- Any further info. on seminar format, increasing the learning process, benefiting more from PORT?

- Questions specific to particular trainees:

1) Using a laptop during seminar and contact with peer onsite?
2) Being by herself vis-à-vis with supervisor?
3) Discuss other video-conferencing learning environments taken elsewhere?
4) First year Ph.D. student intimidation?
5) Disturbed having to be selected when issues of gender specific cancers (Masculinity) arise?

Appendix VIII: Mentor Interview Questions

Mentor Interview

- Have you ever been involved in a videoconference seminar or seminar before PORT? How would they be compared?
- As a researcher, why would one be interested in participating/lecturing in this PORT seminar?
- As a seminar presenter, would you say you need certain teaching skills to be an effective presenter through videoconferencing?
- Some articles would say that a seminar is suppose to be "thinking and debating on the spot" as oppose to having some pre-reading questions. The PORT seminars seemed to have both. Why would that be?
- What was the workload like outside the video-conferencing room? (i.e., preparation for seminars, e-handouts, emails to co-leaders, evaluations, marking?)
- How did you contact the students? WebCT? (i.e., sending website info, co-leader collaboration)
- How would you or could you compare this technology driven seminar with possibly having had the information delivered in a more traditional manner?
- Draw back and challenges in the videoconferenced room/seminars?
- Draw back and challenges meeting face to face here in Victoria (BC)?
- Would you change anything in the seminar format?
- Do you foresee yourself continuing to be a mentor for the present trainees? How? Can they still contact you in the future?

- **Program Leader**
- Being the PORT leader, in general, has the PORT seminar including this workshop met, exceeded, etc, your expectations? How?
- How were the trainees selected? Range of fellowships assigned?
- If I am not mistaken, there are 22 mentors associated to the PORT project? However, there were only about half that presented. How are the other mentors involved in the PORT project? (support group)
- What was the workload like for you outside the video-conferencing room? (i.e., preparation for seminars, e-handouts, emails to co-leaders, evaluations, criteria for marking?)
- How did you contact the trainees/mentors? WebCT? (i.e., sending website info, co-leader collaboration)
- How were the mentors instructed/told to contact the trainees?
- WebCT had approximately five messages by the end of the seminar session. In your opinion, why do you think that the trainees and mentors did not use WebCT very often?
- As a seminar presenter, would you say you need certain teaching skills to be an effective presenter through video-conferencing?
- How would you or could you compare this technology driven seminar with possibly having had the information delivered in a more traditional manner?
- Draw back and challenges in the videoconferenced room/seminars?
- Draw back and challenges meeting face to face here in Victoria (BC)?
- Would you change anything in the seminar format?

- Do you foresee yourself continuing to be a mentor for the present trainees? How? Have the trainees been encouraged to still contact mentors in the future?

- Questions for particular mentors:
  1) Discuss seminars with no trainees in room
  2) Seminar Co-Lead task involvement
  3) Seminar protocol
  4) How was it presenting solely to the camera?
  5) When presenting in week 6 and 12, did you feel separated from the group or would have liked some kind of resume from past seminars in order to be able to contribute more to the group/seminar?