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CURRENT STATE OF TECHNOLOGY IN GRADUATE COUNSELLING PROGRAMS IN CANADA

BY

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ABSTRACT

The following project investigates the current state of technology usage in Canadian graduate counselling psychology programs. The use of technology is evident and rampant among post-secondary institutions as a whole. Technologies, ranging from a simple e-mail to the delivery of online courses, are common amongst the majority of institutions. There are some programs in Canada that resist the inclusion of Web-based technologies in teaching counselling skills. However, this resistance, in some instances, may be the result of a lack of clarity and a lack of consensus towards a clear definition of blended learning and its attributes. Overall, the growth of technology usage amongst graduate level counselling programs in Canada is limited by an attitude of many that counselling skills cannot be taught at a distance.

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CHAPTER I: INTRODUCTION

A climate currently exists in certain professional and educational spheres that cast doubts on the credibility and viability of alternate models for graduate training of counsellors and psychologists in this country. The potential bias towards full-time, classroom instruction in graduate programming is evidenced in current discussions of program accreditation and certification and licensing practices by national bodies. A number of provincial regulatory bodies have also introduced legislation restricting use of online courses for licensing purposes. Distance education programs are promoting licensure for their graduates (Murphy, Levant, Hall, & Glueckauf, 2007) and, as such, have shaped their programs to meet the requirements of these regulatory bodies. The Agreement on Internal Trade requires inter-provincial mobility of psychologists and counselors, which will continue to put pressure on these regulatory bodies to expand their views of educational processes.

Currently, trends have shown that "distance education programs in higher education have grown significantly, particularly for undergraduate degree programs but also in certificate and graduate programs" (Murphy et al., 2007) and are accessible to individuals around the world. This opportunity exists because of the accessibility of any Web site practically from any place in the world and at any time. Many educational institutions have embraced multimedia technology, while others have not. According to Murphy et al., survey data from a study by the U.S. Department of Education published in 2002 indicated that approximately 56% of all regionally accredited colleges and universities offered courses or certificate or degree programs available by way of distance education. Undeniably, the number of colleges and universities offering education courses and programs has continued to grow since this data was collected. There are also many who are not engaging in alternative models of delivery, perhaps due to pedagogical

rationales or to barriers such as institutional readiness and acceptance of innovative learning technologies.

At the same time, it is evident that counselor educators across the country are engaged in various levels and forms of innovation in program design and delivery, mainly involving the use of technologically mediated instructional processes. The gap between innovations in practice and organizational / systematic assumptions creates a number of potential problems and challenges for programs across the country, especially for those where traditional training practices are being more comprehensively challenged. Traditional training practices are being challenged by a new generation of technology driven students who desire and demand programs that meet their technological expectations and learning styles (Piercy & Lee, 2006).

Distance education programs in higher education have grown significantly for not only undergraduate programs but graduate degrees and certificates as well (Murphy et al., 2007). As of 2007, the American Psychological Association (APA) had accredited two graduate training programs (Fielding University & Capella University) that primarily use distance education. The main characteristic of distance education is that the student and faculty are geographically divided. Distance education is commonly held in high regard for its ability to remove barriers to the accessibility of education, including physical, geographic, and socioeconomic barriers (Murphy et al., 2007). Therefore, distance education overcomes the limitations of traditional classroom study. The quality, accessibility, and availability of technology have enabled graduate level counsellor training to reach a wider range of the population. Despite the growth of technology certain barriers to distance education such as lack of familiarity and knowledge with technology exists.

According to Piercy and Lee (2006), graduate education as a whole has experienced a significant growth. This growth has come from an increase in *nontraditional* students who are most likely to be female, part-time, and more mature in age. These nontraditional students typically look for applied programs that offer convenience and flexibility. These nontraditional learners are increasingly choosing technology-based distributed learning programs as their preferred choice. However, not every student can succeed at distance education. Distance Education is the best fit for students who are mature, highly motivated, well organized, and have previously excelled in education pursuits (Piercy & Lee, 2006). Interestingly, it seems that the type of student that seeks distance education (i.e., the nontraditional student) is also the best fit for distance education; one might call it a perfect marriage.

Offering distance-based graduate courses also benefits the campus-based students, as they can typically take one or more of their courses via distance, increasing the flexibility of their degree programs (Piercy & Lee, 2006). However, offering distance-based graduate courses can provide new challenges for graduate campuses. Obstacles can include library access, administrative support, maintaining course quality, recruitment, continual update and maintenance of Web resources, and quick access and resolutions when problems arise for distance students (Piercy & Lee, 2006).

In Canada counselling psychology programs are accredited through the Canadian Counselling and Psychotherapy Association (CCPA). Currently three programs from two institutions in Canada (University of British Columbia (UBC) and Acadia University) are accredited. Therefore, from a marketing standpoint, accreditation has yet to become a significant hurdle; for distance education or traditional counselling program to overcome. In some other disciplines, including some areas in psychology, accreditation plays a significant role in student

recruitment and marketing of programs (Bendersky, Isaac, Stover, & Zook, 2008). Non-accredited programs may be seen as not providing students with the same career opportunities as accredited programs and, as such, may be less appealing to prospective students.

Professional regulatory bodies have the responsibility to evaluate and determine the role of technology on both the training and practice of counselling psychologists (Cohen, 2010). The use of technology in the training of counselling psychologists is in its infancy, and as such, fairly evaluating technology usage is difficult. Accurately evaluating the use of technology in the training psychologist must be preceded by the implementation of these technologies (Cohen, 2010).

The average student who enters a blended program, such as the University of Lethbridge's (U of L) Masters of Counselling program, is typically working, raising a family, and wants to get a master's degree in counselling (McBride, 2010). Enabling individuals to achieve their goals of becoming counsellors or psychologists benefits the community as well, because those individuals are then able to help others. U of L Alumna Donna Piercy is an example of the program's success. Having previously obtained a certificate in rehabilitation medicine and a degree in physical education, the flexibility of the U of L's Masters in Counselling program allowed her to continue her education (D. Piercy, personal communication, November 12, 2010).

The context above described the tensions, issues, and possibilities facing counsellor educators in the design and delivery of responsive, innovative, and relevant graduate programming in Canada. The overall goal of the project is to identify key challenges to innovation in counselor education and increase awareness of innovative practices in counselor education nationally. This will result in the development of the best practice guidelines for

instructors and who are looking to integrate technology into their delivery options or for those who are offering primarily online or blended programs. It is anticipated that this initiative will function to:

1. Increase dialogue among counselor educators.
2. Highlight the reality of both student / stakeholder needs and counselor training processes.
3. Challenge some apparent myths and misperceptions within the fields of counseling and psychology.
4. Foster a more supportive environment for future innovation.
5. Provide a resource for the development of distance-based graduate programs.

The intent of this project is not to test a particular hypothesis regarding the efficacy or feasibility of specific program design and instructional practices, although it is anticipated that some areas of future program evaluation or outcomes research will be identified. The development of the best practice guidelines is intended to be a resource for counsellor educators, while highlighting the assumptions, current practices, and future directions of technology usage.

The timing of this project is quite strategic in terms of the increased level of innovation in educational and training practices in graduate counselling programs, the current issues facing the fields of counselling and psychology nationally, and the growing program initiatives at AU in this area. The primary contribution to the mission of AU relates to the positioning of this university as a leader in such innovation, as well as proactively addressing potential barriers to the program development currently underway. Informal discussions by the project supervisor with counselor educators at other universities suggest that there is potential to begin to build a national climate that fosters, supports, and even demands innovation (S. Collins, personal

communication, August 15, 2007). However, as long as educational practices are conducted and reflected upon in isolation, the prevailing traditional assumptions may remain unchallenged and may, in fact, form barriers to innovation and professional barriers to students who graduate from innovative programs.

CHAPTER II: THEORETICAL FOUNDATIONS

This project investigates the role of distributed learning and technology in graduate level psychology training across Canada. Computer-mediated communication devices offer extraordinary opportunities for individuals to connect with one another, as long as educators change the way they view technology (Rudestam, 2004). Traditionally, technology has been thought of as the way we manage information, but society has begun to shift away from this traditional thinking to view technology as a medium for relationships. The question remains whether higher education has followed a similar course. The focus of this chapter is to overview the literature related to the use of technology in the delivery of graduate education, with particular focus on graduate education in psychology in Canada. I will begin with a discussion of the state of the art in technologies that support relationship building and collaborative learning processes. In the second part of the chapter, I will review the literature on the application of these and other distance education methodologies for design and delivery of graduate education, with a particular focus on Canadian contexts.

Collaborative Communication

There is general agreement that one of the main functions of graduate education in counselling is to enable student to build a sense of community, a community of learners engaged together in building their professional identities and competencies. There are a number of collaborative tools available that support this type of learning process, including email, internet based meeting tools that include audio and visual capabilities, whiteboards, chat, and application sharing. The media richness theory (Daft & Lengel, 1986) suggests communication capacity needs to vary according to the subject material. Subjects such as graduate-level psychology would benefit from high capacity/rich media that is characterized by its capacity to provide

immediate feedback, personalization, language variety, and the transmission of body cues such as body language and facial expression (Liaw, Huang, & Chen, 2007). Often, in educational realms, educators match technology with the task when in actuality the task should determine the technology selected. Hence, distributed graduate level education / learning environments should include both asynchronous and synchronous communication technologies that are appropriate, accessible, and easy to use (Liaw, Huang, & Chen, 2007).

State of the Art in Collaborative Learning Technologies

Instant messaging. E-mail, texting, Twitter, and Facebook are common technologies that allow users to send and receive messages and attach files or pictures. Chat rooms are utilized in educational and businesses and allow for real time communication. A professor may have open office hours using chat features allowing students to ask questions regarding lectures or assignments without attending in person (Wood, 2010).

Open course ware. Open course ware is a philosophy that information should be freely accessible to anyone, and that you do not have to belong to a member of an organization, group, or classroom to access this knowledge (Alexander, 2006). For example, MIT Open Course Ware makes all information that students learn in their courses available to everyone interested in obtaining it. Similarly, many universities are partnering with YouTube to create their own channels. The information available varies depending on the institution, ranging from recruitment information to entire lectures.

Due to the growing number of learning technologies available, implementing technologies can be overwhelming to many. Morton (2010) suggested starting small when implementing technology into the classroom. Over time, the learning technologies that are

discussed in this project will most likely become second nature to us, similar to the technologies that came before the current technologies.

Mobile devices. Mobile devices used in education spheres include iPod, iPad, Kindle, and Netbook. The primary reason students have an iPhone is text messaging, surfing the Web, email, and other applications. However, mobile devices have many other uses. For example, the iPod touch has built in applications such as a voice recording allowing a student to record an entire lecture and listen to it again later and ease the burden of taking notes (Knight, 2005). Rapid Reader allows the student to increase her/his reading time by displaying one word at a time on a screen at a font size and speed of the students choosing. The iTunes U application is being used by several institutions who are publishing podcasts of lectures and, in some instances, entire courses that are available to students wishing to download them (Alexander, 2006). Many universities across Canada use Blackboard Learning System technologies to access class information. Blackboard Learn is a free application, allowing student's access to all the same information they would find on their online Blackboard account (Liaw, 2008). They simply need to download the application, enter their username, and they will have access to all their information. Information ranging from teacher announcements, assignments, and grades are available. It is a free application and available if the institution uses Blackboard.

Blogs. Blogs are websites that are characterized by regular commentary or posting and individualized by their interactivity which allow visitors or followers to regularly post comments. Blogs simply allow individuals to add text and photos onto an individual page. Course management systems, such as Moodle, have implemented technology allowing for blogs. Blogs should be implemented in the classroom with direction and with a specific purpose in mind (Wood, 2010). Blogs are effective in encouraging students to reflect on new learning.

They are also beneficial because they connect individuals or classmates, allowing them to share ideas and thoughts regarding information posted on the blog.

Wikis. Wiki software is a tool that allows students, instructors, or groups to participate in developing and sharing information using the WWW (Alexander, 2006). Numerous independently managed and named wiki spaces can be incorporated into a single website. Wiki users are able to control who can change content on their space and to determine whether the wiki space will be public or private. Students or instructors can invite others to participate in collaboratively sharing knowledge within their wiki space. Wiki are relatively easy to use, only require a web browser, and include simple text formatting (Wood, 2010). Wiki space followers can be notified of changes through email notification or real simple syndication (RSS) feed.

Concept mapping. Concept mapping has existed in educational spheres for decades; however, educational concept mapping allows collaboration among students in creating a concept map (Knight, 2005). Concept mapping allows you to create links within the concept map towards creating visualization and understanding of how content within the concept map are related. Concept mapping software, Cmap, is a free software.

Data visualization. Wordle takes the most frequent used words from, for example, all the student blogs and puts them on a poster (Enkerli, 2010). The most frequently used words are displayed in larger text allowing for a visual display focusing on class or subject themes.

Google moderator. This software enables students to type in questions that occur to them during the lecture or presentation, while other students are able to go into Google Moderator and vote whether it is a question that is relevant to them as well. This enables the teacher to determine the level of interest in the question that was asked (Enkerli, 2010). For example, an individual may ask a question that will shift the focus of the lecture or presentation. However,

there may be little interest among the majority of students in the class in the new direction the lecture has taken. Google Moderator would enable an instructor to accurately gauge the overall interest of the students in any subject area or to discern if certain topics need more or less focus.

Voicethread. Voicethread provides the ability to verbally comment on an item, such as a document, slide presentation, video, or picture (Enkerli, 2010). Voicethread comments can be created using a microphone, webcam, or telephone. Voicethreads' advantage is its ability to provide students with verbal dialogue, which minimizes the confusion often attributed to asynchronous communication. Voicethread uses an embedded link via a picture or photo gallery representing the individual(s) that have left the comment. In the educational setting, voicethread may be particular useful in collaborative projects or small classes (Enkerli, 2010).

Podcasting. The term *podcasting* originated from Apple Computer Corporations IPod (Enkerli, 2010). It is a portable digital audio player that allows the user to download music or audio directly to the device that the user can listen to later. Podcasting no longer refers to only IPod, as it includes any software and hardware combination that allows automatic download of audio files, usually mp3 files. Podcasting makes use of Real Simple Syndication (RSS) standard. It is different than broadcasting or Webcasting as it sends audio directly to the IPod or similar device. Collaborative audio allows the listener's voice(s) to be added to the podcast. Podcasts allow education to be more portable. The majority of students are familiar with the IPod technology, therefore the implementation of Podcasting on the IPod is rather simple (Walters & Kop, 2009).

Podcasting is simple to use, and costs are minimal. Podcasting should become a mainstream application in higher education (Wood, 2010). Imagine the scenario in which a student misses a lecture, the student can listen to a podcast of the lecture that can include

dialogue with other students. This is a major advantage compared to simply getting class notes. Podcasting technology is accessible to anyone with internet access as it only requires a computer, microphone, and internet (Walters & Kop, 2009). Examples of podcast technology in graduate counselling training are recording lectures, inclusion of guest speakers, evaluation and feedback, student created podcast, student reflection, course updates, and demonstration of counselling sessions.

Screen-casting allows the educator to place a small audio-visual podcast of themselves, in addition to allowing the student to see the content which the lecturer is looking at. An important advantage to students is they can listen and learn while they walk, run, ride the bus, or any other scenario one can imagine, while being away from the internet (Wood, 2010). There are disadvantages of using podcasting in graduate education. For some students, the need for sufficient bandwidth to download podcasts is a barrier. The quality of the speaker's voice, speech pattern, intonations may not allow for easy understanding. Also, podcasting has not been adapted for the hearing impaired (Drake & Asper, 2007).

Webconferencing. Webconferencing is a synchronous or real time tool, using computers and the internet (Wood, 2010). Webconferencing can range from text messaging to videoconferencing, combined with application and/or whiteboard sharing. The majority of Webconferencing programs allow users to record and save the conference to view it later. The advantage of Webconferencing over videoconferencing is participants do not have to go to a special room to view the conference; they can view or participate in the conference anywhere that has the software and internet (Drake & Asper, 2007). Webconferencing is significantly less expensive than videoconferencing. Typical features of Webconferencing include audio, video,

PowerPoint, application sharing, Web co-browsing, text messaging, file sharing, and polls and surveys.

Webconferencing is commonly sold as a service. In graduate psychology training, it can be used for group meetings, virtual classes, and guest lectures. Elluminate is the most common software currently used in Canadian Universities. Elluminate offers audio, direct messaging, live Webcams, application sharing, file transfer, interactive whiteboard, and breakout rooms (Drake & Asper, 2007). The moderator or professor is able to create content, conduct presentations, track and control participation. Webconferencing applications, such as virtual classes or meetings, can be integrated into a course management system (CMS) without a separate login.

Despite the success of asynchronous learning, some students are more engaged when they can interact with others providing social connections and removing feelings of isolation common for online learners (Hrastinski, 2008). Providing students with more opportunity to socialize and develop relationships in the online environment further bridges the gap between online and traditional classrooms. On-campus students can have more flexibility in their schedules while working on group projects or even studying with another student who is in a different location. Individuals are able to collaborate without the necessity to travel to the same location.

Real Simple Syndication (RSS). RSS is a protocol that allows the user to subscribe to online content using an aggregator, which automatically checks Websites and downloads new material (Drake & Asper, 2007). The advantage of using an RSS is the user does not need to go to each individual site to check for new content. RSS compliments blogs, news sites, and podcasts. For example, a student with an RSS feed to a course or educators site could have the latest course lecture downloaded automatically to a file on their computer or into their IPod. A

counselling psychology professor might subscribe to her/his students' blogs for updates on their practicum experiences or new learning, and, as such, would be able to get all of the students new content without having to check each blog individually, thus saving a considerable amount of time. RSS provides an efficient way for educators and students to communicate and inform each of course developments, and other academic activities (Drake & Asper, 2007). Educators can use RSS to access the latest developments in teaching in their field.

Classroom response systems. Clickers are a personal response system used to gauge students understanding of the classroom information in an interactive classroom experience (Beatty, 2004). Clickers are a wireless system that allows students to answer multiple-choice questions during lectures which gives the student and teacher instant feedback of class progress with the option of grading. Clickers increase the interactivity within the classroom. Virtual clickers could be used with live chat sessions for distance education. Students can further benefit if they are not comfortable speaking in class for whatever reason. This enables students to increase their learning and gives the teacher more accurate feedback. This can be seen as a progression to interacting in class.

Course-Management Systems (CMS). CMS are becoming as common as e-mail and the Web throughout academic institutions (Meerts, 2003). CMS provide educators with a framework and set of tools making course creation, teaching, and interaction with students simple. The major contributors in providing CMS to academic institutions are WebCT, Blackboard, Moodle, and desire2learn. CMS are World Wide Web based server platforms that can function to add online elements to tradition face-to-face delivered courses or allow development of online courses with few or no face-to-face encounters (Meerts, 2003). Regardless of the system utilized, CMS providers have instructional resources available for

educators who want to gain a better understanding and ability with their given system. CMS have become common amongst academic institutions and there are no indications to suggest this reliance on CMS changing anytime soon.

Web 2.0. Web 2.0 is a buzzword that encompasses applications that facilitate interactive information sharing and collaboration on the World Wide Web (Alexander, 2006). Web applications, blogs, wikis, social networking sites, and video-sharing sites are examples of Web 2.0. Academic blogs can enable students to reflect on their learning, such as providing a summary of class discussion. Also, access of peers and professor can enable the discussion to continue beyond the lecture. Academically, the evolution of Web 2.0 has led to the creation of the personal learning environment (PLE). PLE allow the learning process to shift from information gathering to a collaborative process from which the student can organize, reflect, and integrate information allowing for a deeper connection (Alexender, 2006). Basically, students can assimilate the information available on a given subject rather than have a professor direct the student's learning through assigned reading and specific access to information.

The Importance of Community

Computer mediated conversations have the criticism that they result in misunderstanding, often the result of the absence of facial expression and voice inflections (Rovai & Jordan, 2004). However, computer mediated conversations allow for reflective interactions between students which takes the emphasis off the instructor. In the majority of traditional face-to-face classrooms, generating discussion is the goal for instructors. Often this conversation occurs between a few select students and the instructor. Computer mediated conversation allows peers to discuss and generate new learning, with the instructor interacting as the expert and generating new and advanced dialogue.

Hara and King (2001) studied online courses, and their results indicated student dissatisfaction with online courses is typically related to course design and pedagogy. Instructors who are inexperienced and have limited skill in using computer mediated learning to generate learning and develop a sense of community within the classroom. According to Hara and King (2001) there are three ways in which instructors can generate a sense of community amongst online students:

1. Have instructor and students introduce themselves to each other, preferably with a synchronous technology such as a podcast.
2. Include synchronous chats.
3. Encourage students to form groups in their community with fellow classmates.

The ideal class would include both synchronous and asynchronous communication (Rovai & Jordan, 2004). It would include podcasts of introductions to the course and lectures. Rovai and Jordan (2004) stated the most important aspect of implementing technology into courses is to incorporate technologies for a purpose, do so slowly, and request feedback from the individuals in the course regarding the new technologies.

Distance Delivery of Graduate Education in Canada

Groen, Tworek, and Soos-Gonczol (2008) stated that graduate level distance education in Canada began two decades ago when students received course information in mail and would meet at various locations and listen to lectures through audio-conferencing. A decade later, students were receiving lectures through teleconferencing and, within the next few years, synchronous platforms such as WebCT, Blackboard, and Elluminate were delivering asynchronous and synchronous distance education, allowing instructors and students to fully interact in lectures in real time. As a result of the ease of access to online courses, it has become

common for students in Canada to graduate without physically attending a campus. However, the goal of providing an environment where instructors and students are actively involved in meaningful learning does not change regardless of the mode of delivery. Groen et al. also stated that many adult learners pursuing graduate degrees in Canada are *non-traditional*. These learners prefer to stay in their communities and continuing earning a salary while pursuing higher education. According to Groen et al., out of 900 graduate students more than 400 chose to pursue their degree online which is evidence of this new phenomenon.

Canadian universities are being asked to fulfill societal demands for increased access to higher education (Ellis, Bayley, & Ellis, 2008). Accordingly, universities in Canada will attempt to meet these demands by offering new programs with broader access, while working within the parameters of accrediting bodies. In the research conducted by Ellis et al., 31 of 33 universities offering graduate level education degrees in Canada provided information regarding mode of delivery (2008). Delivery of Masters level education varied amongst these institutions: 0% of universities offered entirely Web-based studies, 64.5% offered traditional delivery (onsite or offsite face-to-face), and 35.5% offered a blended method that incorporated both Web-based and traditional instruction (Ellis et al., 2008).

A diverse range of programs are being offered through faculties of education and other departments offering counsellor education in Canada. Canadian universities are funded by government agencies and student fees and have jurisdiction over admission, curriculum, and granting of degrees. Ellis et al., (2008) stated that "… there does appear to be a movement towards a mixed method of instructional delivery" (p. 95). Ellis et al. further hypothesized that the reason program and course offerings usually utilize a traditional delivery rather than mixed-method of delivery may be the result of institutional inability to obtain instructors with a

technological skill set to support such delivery, as well as copyright and design issues. In a study by Stacey and Wiesenberg (2007), U of C professors surveyed showed a stronger belief in online mode of delivery as compared to traditional classrooms. These professors also expressed a belief that the online mode enabled students to be more self-directed and professors to be more innovative and facilitative. Therefore, Canadian universities tend to offer programs that meet the demands in the workforce.

Conrad (2005) conducted a multi-year study of students in a blended delivery graduate program in Western Canada. Conrad's study revealed that students' perceptions of online community shifted from technological considerations to affective considerations, in which students took responsibility for creating and maintaining a sense of community. Conrad defines community as "a general sense of connection, belonging, and comfort that develops over time among members of a group who share purpose or commitment to a common goal" (p. 2). This sense of community is important for success of distance learners. Conrad stated that the creation of this sense of community as:

> The creation of community simulates for online learners the comforts of home, providing a safe climate, an atmosphere of trust and respect, an invitation for intellectual exchange, and a gathering place for like-minded individuals who are sharing a journey that includes similar activities, purpose, and goals (p. 2).

Results of this study indicated that the blended delivery of the program, in which students met for face-to-face traditional classroom delivery, was paramount in strengthening and developing a sense of community amongst the graduate students in this blended delivery program.

Muirhead (2005) stated that the growth of distance education in Canada has made it a priority for university administration. The availability of educational materials, online

collaborative tools, and increased usage of learning management systems has transformed teaching and learning in both traditional and non-traditional classrooms. Muirhead observed both distance and traditional educators and found that it is difficult to find educators in Canada who are not using some form of information and communication technologies in their teachings. Muirhead also stated that an increasing number of universities in Canada are adopting technology enhanced teaching methods. Technology enhanced methods, such as utilizing blended learning in course delivery, is growing at university campuses across Canada (Muirhead, 2005). Undoubtedly, there is an increased reliance on technological driven activities in higher education institution in Canada. Muirhead (2005) views blended learning as a shift from traditional learning thereby allowing students and educators acquire new technological and distance skills.

Kanuka, Heller, and Jugdev (2008) stated that teaching technology-mediated courses has unique requirements beyond the traditional classroom. Unique requirements for teaching technology-mediated courses include "an understanding of the impact of technology selection and preference, increased course development and time, and reduced autonomy and flexibility in developing and delivering courses" (Kanuka et al., p. 130). Kim and Bonk (2006) stated that the ability to effectively moderate group communication tools for teaching technology driven courses is essential. Collaborative learning processes are often view as a fundamental feature of higher education, therefore acquiring skills to effectively moderate group discussion is the key to the success of technology driven courses in graduate level education (Kanuka et al., 2008). As such, the success of graduate level distance education may be dependent on the ability to effectively moderate group communication tools. Further, it is crucial that educators understand the interpersonal aspects of a technology mediated learning environment. Kanuka et al. (2008)

suggested that it is imperative that educators acquire specific technical abilities for teaching distance courses. Technical abilities include using course management systems, course assessment tools, social media, and the necessary pedagogical ideology.

Distance education used to be undertaken as a geographic necessity. However, it is now common for students who have access to on-site education to choose distance education because it suits their androgogical needs (Lewis & Price, 2004). The forces that drove the development of distance education are educational, economic, and political (Powell & Keen, 2006). Distance education is a means of providing the opportunity and benefits of higher education to anyone wanting to further their education regardless of socioeconomic barriers.

Canadian universities are experimenting to find the ideal combination of traditional and online studies (Kanuka, et. al, 2008). These institutions understand the usefulness and appeal to students who either are unable to attend traditional classes or who simply prefer the blended delivery model. Canadian institutions continue to strive to maintain accreditation and high standards while providing the flexibility that student's desire.

CHAPTER III: PROCEDURES

In addition to the comprehensive review of current literature on counsellor education and technology in Canada, I reviewed the available information about specific counselling programs in Canada with a view to understanding the current situation in terms of implementation of technology and innovative learning models.

The institutions listed on the Canadian Counselling and Psychotherapy Association (CCPA) Website as of March 11, 2010 providing masters level counselling training were used as the basis for the review. There were a total of 35 institutions in Canada offering graduate level counsellor training in Canada listed on the CCPA Website (Figure 1). The writer first investigated the use of technology among the academic institutions themselves and then narrowed the focus to the specific programs. The review was admittedly limited by a couple of factors. Web-based research of technology available is limited to the information available on schools Websites, and, therefore, this review may not be inclusive of technologies individual professors are utilizing. Nine programs investigated had the majority of their information in French. The investigation utilized Google Translate to navigate program information, and, as such, the information may not be completely accurate although every effort was made to correctly interpret information. Since Chapter IV draws extensively from the university and program Websites, the main URL's for each reference will be embedded directly in the text rather than in my final reference list. The rationale for this is to provide a more user-friendly resource where information can be easily accessed directly from the URLs. The direct links to all programs examined are provided in Figure 1 as well. All URLs in the following document are as of November 24, 2010.

Acadia University - http://education.acadiau.ca/graduate-programs.html
Adler School of Psychology - http://www.adler.edu/academics/42DegreePrograms.asp
Athabasca University - http://cpp.athabascau.ca/
Brandon University - http://www2.brandonu.ca/academic/education/gradStudies/
McGill University - http://www.mcgill.ca/edu-ecp/prospective/graduate/
Memorial University - http://www.mun.ca/educ/grad/counselling.php
Simon Fraser University - http://www.educ.sfu.ca/gradprogs/masters/counselling_psychology/
St. Boniface University - http://www.cusb.info/programmes/faculte-education.php
St. Paul University - http://www.ustpaul.ca/index.php?page=312
Trinity Western University - http://www2.twu.ca/cpsy/
University of Alberta - http://www.gradstudies.ualberta.ca/program/listing.jsp?sort=subject
University of Calgary - http://www.ucalgary.ca/apsy/
University of Concordia - http://psychology.concordia.ca/graduateprograms/programoptions/
University of Guelph - http://www.family.uoguelph.ca/graduate
University of British Columbia - http://ecps.educ.ubc.ca/web/prospectstudents.htm
University of Laval - http://www.fse.ulaval.ca/prog/m-orn-orn/
University of Lethbridge - http://www.uleth.ca/edu/master-counselling/mastercounselling
University of Manitoba – http://umanitoba.ca/faculties/graduate_studies/admissions/programs/
University of Moncton - http://www.umoncton.ca/repertoire/etudes_sup/prog_educ_mo.htm
University of Montreal - http://www.programmes.uqam.ca/3038
University of New Brunswick - http://www.unbf.ca/education/grad/med.html#cp
University of Northern British Columbia - http://www.unbc.ca/education/master_of_education.html
University of Ottawa - http://www.uottawacounselling.ca/
University of Quebec - http://services.uqo.ca/ConsultationBanqueProgrammes/
University of Regina - http://education.uregina.ca/index.php?q=MEd-EPSY.html
University of Rimouski - http://www.uqar.ca/etudes/domaines-etudes/
University of Saskatchewan - http://www.usask.ca/education/epse/graduate-program/mscp.php
University of Sherbrooke - http://www.usherbrooke.ca/programmes/fac/education/2e-cycle/maitrises/sciences-education/
University of Toronto - http://aecp.oise.utoronto.ca/cp/index.html
University of Victoria - http://www.educ.uvic.ca/
University of Western Ontario - http://www.edu.uwo.ca/programs/graduate-education/
University of Winnipeg - http://www.uwinnipeg.ca/index/grad-studies-mmft
Wilfred Laurier University - http://www.wlu.ca/homepage.php?grp_id=12516

Figure 1. List of academic institutions investigated, with program URLs.

CHAPTER IV: APPLIED PRODUCT

The Current State of Technology in Graduate Level Psychology in Canada

The previous chapters have highlighted a context for understanding the types of technological resources available to support innovative teaching and learning models for graduate education in counselling and psychology. The purpose of this chapter is to describe the outcomes of my review of what is currently being done in Canada to optimize use of these technologies. I will begin with a summary of what I have learned from exploring the Canadian counsellor education programs identified in Chapter III. I will then provide conclusions in the form of suggested *Best Practice Guidelines*, intended to support the continued goal of excellence in the use of technology to support the accessibility, responsiveness, and quality of counsellor education programs.

Considering "academic institutions not only pioneered the dissemination of digital technology but were among the first institution connected to the Web" (Walters & Kop, 2009, p. 278), there is an expectation that these institutions remain pioneers of technology usage. It is not surprising that all of the institutions investigated have Websites and use Websites as their primary means of communicating. It is almost preposterous to include its usage as evidence of the growth of technologies in graduate education. However, it is quite plausible that, in the very near future, many technologies that some are cautious to implement now, will be as widely accepted as Websites are today.

The first thing that is apparent, while navigating through universities in Canada, is that the utilization of technology and distance education is current and relevant from coast to coast. Prior to the arrival of the World Wide Web, information regarding counselling and psychology training programs was only available through printed material and only to those who requested it

(Hunter, Delgado-Romero, & Stewart, 2009). Today, a prospective student has access to an enormous amount of information on any graduate psychology training program in Canada anytime they connect to the Web. Seemingly, the information posted on the World Wide Web about a program is the fundamental method by which a student gains knowledge of psychology training programs. Specific information such as program overview, model of training, requirements, course descriptions, and an abundance of other information is common among graduate psychology programs in Canada.

Several institutions including the University of Northern British Columbia (UNBC) allow prospective students to take virtual tours of the institution, which allow the students to visit the campus without an actual physical presence (http://www.unbc.ca). Others, such as the U of C, have their own television channels, which provide current and prospective students with an additional resource of current research and school activities (http://www.ucalgary.ca/). Institutions, such as Trinity Western University (TWU), require applicants to their counselling psychology stream to submit a video of themselves expressing qualities of warmth, support, and encouragement (http://twu.ca/). It appears that the utilization of technology as a recruitment tool exists to some extent in every graduate psychology training program in Canada.

The ability to utilize technology is a requirement for success throughout academic institutions across Canada (Goode, 2010). The majority of universities in Canada have computer terminals throughout campuses and have wireless access spots. Students are required to use technology to manage course enrollment, apply for scholarships and loans, navigate electronic library databases, conduct research using electronic resources, complete multimedia assignments, and submit assignments. However, the majority of universities do not have prerequisites regarding a student's technological ability and usage to as part of the admissions process.

Therefore, students' entering into a post-secondary institution does so with a certain expectation placed upon them that they have considerable technological abilities. Walters and Kop (2009) stated "in the field of higher education, advanced computational techniques, mastery of standard software, and the ability to make sense of online information form an integral part of curriculum…" (p. 278). Educational institutions and their instructors provide students with familiarity and experience with many new technologies. Similarly, education is preparation for life and, as technology continues to have a large impact on society, educational institutions implement new technologies to best prepare their students for future employment (Walters & Kop, 2009). Academic institutions have moved away from directly managing students, towards a student-centered environment that is technology driven and focuses on the self-autonomy of the student (Rovai & Jordan, 2004).

However this lack of pre-screening for technological skills is drastically different from the distance, Web-based, and blended programs that clearly and specifically indicate to prospective students that they must have specific technology available and have a particular technological skill set. The U of L's Webpage titled *Suitability for Online Learning* specifies that students must be comfortable with technology (http://www.uleth.ca/). They further suggest minimum processing speed, memory, Web camera, headphones, operating system, browser requirements, and video conferencing systems. Athabasca University's GCAP specifies that its students should be able interact with instructor and peers in computer conferences and email (http://www.gcap.ca/). Additionally, they must be proficient at transferring files, accessing audio and visual materials, and utilizing electronic databases. Undeniably the technological demands placed on students utilizing online learning are significant; however, several of the same technological abilities are required of students in traditional classrooms to access class materials,

perform research, prepare presentations or papers, and communicate with instructors or classmates.

At campuses throughout Canada, there appears to be a concerted effort to provide educators and students with knowledge and training in the latest technologies (http://www.ctl.ualberta.ca/). Universities have created specific centers to support this cause, which take on various names such as e-learning, learning technologies, and several others. These centers offer various workshops and Webinars to students and staff. The University of Alberta's (U of A) *Centre for Teaching and Learning* is an excellent example of technology driven educator resource (http://www.ctl.ualberta.ca/). They provide technical support, mentoring, and *how-to* resources to educators looking to implement technology into the classroom. Educators have the opportunity to learn to engage learners by customizing their courses through a range of Webpage design, interactive flash games, and implementing Web 2.0 technologies, such as social networking and mobile devices. Concordia University's *Centre for Teaching and Learning Services* provides educators with numerous educational opportunities to improve their teaching with technologies (http://oor.concordia.ca/services/otherresearchsupportandservices/centreforteachingandlearningservices/). Educational opportunities include screencast series that look at how other teachers are using technologies, ranging from PowerPoint to social media, workshops, and pedagogical theories using technology. The UBC's e-learning department provides resources for teaching using technology (http://www.elearning.ubc.ca/). The UBC Webpage includes orientation tutorials for teaching and learning online, resource guide, course examples, workshops, and a support hub where students and teachers can ask an expert about learning technologies. There are links to UBC student Weblogs. For example, one student's Weblog is titled *Michelle's*

Online Learning Freakout Party Zone, which focuses on learning technology resources for initiatives at UBC.

There are several uses of technology that have become commonplace both in society and in academic institutions. All 35 institutions investigated have Webmail or email and utilize online formats for applications and for program and course registrations. These seemingly basic technologies have revolutionized how content is delivered, and they have become the primary method for communicating in academic institutions (Liaw et al., 2007). Navigating through the programs that were investigated, it seems every facet of applicable institutional information and administrative tasks are available via the World Wide Web. For example, the University of Toronto has numerous administrative links online including financial accounts, student loans, room bookings, libraries, communication devices, educational technology support, training, and several others (http://www.utoronto.ca). Clearly, the advent of these technologies has simplified administrative tasks and simplified communication between the administrators, teachers, and students.

Universities across Canada are not only using technology to manage their students but to manage their courses as well. Continuing to navigate through graduate programs in Canada, all 35 institutions investigated and their programs utilize technologies, such as a learning management system or virtual learning environment. An example of a virtual learning environment is the Modular Object-Oriented Dynamic Learning Environment, more commonly known as Moodle, a course management system or virtual learning environment (Finley, Brothen, & Froman, 2005). Moodle is designed to assist educators in creating online courses with an emphasis on interaction and collaborative production of content. Graduate psychology programs in Canada tend to use Moodle or another virtual learning environment, Blackboard

Learning System, formerly known as Web Course Tools (WebCT). Blackboard Learning System allows educators to add tools such as discussion boards, live chat, documents, and Web pages to their courses (Finley et al., 2005). A McGill University Webpage states WebCT is used in nearly 1500 courses per semester (http://www.mcgill.ca/it/). Counselling psychology programs in Canada have the technology available to them; however, many programs seem to use these technologies to store information rather than for communication. Students routinely access course information from learning management systems, but for the most part are not using learning management systems to its full potential.

The vast majority of universities in Canada have some form of programs and/or courses available that are housed under a variety of names such as distance education, continuing studies, or extension studies. It is apparent that offering technology driven programming and courses is required to remain competitive in higher education delivery (Goode, 2010). There are drastically more online courses available in undergraduate programs and courses when compared to graduate level programs and courses. Two opposite opinions exist amongst graduate psychology institutions: One viewpoint suggests graduate level psychology cannot and should not be delivered via distance (http://aecp.oise.utoronto.ca); while, at the opposite end of the spectrum, other institutions embrace the inclusion of distance education through a blended delivery model (http://www.athabascau.ca). Athabasca University states their program "provides a blend of theory and practice designed to give students a solid background in philosophical and theoretical foundations of counselling skills and strategies essential for working with a range of clientele using a variety of intervention modalities" (http://www.athabascau.ca).

Interestingly, an apparent shift towards acceptance of distance or Web-based education is taking place among many counselling psychology programs in Canada. This shift is evident

when we see the inclusion of questions surrounding distance or Web-based studies on many counselling psychology programs frequently asked questions links. An example of a softened stance on distance education is apparent when looking at the University of Toronto's *Ontario Institute for Studies in Education* (2010), which upon an initial investigation indicated the counselling psychology program and courses cannot be taught remotely or at a distance (http://aecp.oise.utoronto.ca/cp/courses/faq.html#c2). However, a more current response to questions of distance education and online studies stated opportunities for online courses are growing, but it may be difficult to complete all degree requirements through online study.

Although there is evidence of substantial growth with the use of technologies, such as delivering programs through blended delivery, the Canadian Psychological Association's (CPA) *Standard III* states "the programme's curriculum requires the equivalent of a minimum of three academic years of full-time resident graduate study" (CPA, 2002, p. 35). Provincial bodies are responsible for issuing registration to their own applicants. The College of Psychologists of British Columbia in response to a frequently asked question made the following statement:

> The College does not have a pre-approval process. We receive many letters with questions from people interested in applying. However, we do not provide feedback of this nature. Your education, training, and experience will be carefully reviewed after the formal application has been made (http://www.collegeofpsychologists.bc.ca/appfaq.php).

Applicants are encouraged to carefully read registration requirements for registration in British Columbia. The requirements specify that only a graduate degree from a program of study accredited by the CPA at the doctoral level is acceptable. According to current research conducted by the writer, there are not any accredited online or blended doctoral programs in Canada. The Ontario Psychological Association (OPA) also requires a doctoral degree from a

CPA accredited institution. (http://www.cpo.on.ca/WorkArea/showcontent.aspx?id=2682). However the OPA further states:

> The program must have a body of resident students who are enrolled in the program for a doctoral degree. This residency requirement ensures a pattern of direct, consistent and sustained academic and interpersonal interactions among students and faculty of the program. In-person mentoring of students as well as peer interactions are considered crucial to professional training in psychology. (p. 6)

The OPA will grant the title of *Psychological Associate* to individuals applying with a Masters Degree. However, the OPA requires the identical body of residency requirements for registering as a psychologist mentioned above in addition to the following statement: "Resident study and training consists of in-person participation in courses, seminars, practica, and internships with face-to-face contact with faculty and other students (p. 6)".

The College of Manitoba Psychologists has nearly identical residency requirements as OPA. It is very apparent that a bias exists amongst some provincial regulatory bodies against institutions that offer blended modes of course delivery. This bias and /or discrimination may also exist against individuals who are unable to complete these residency requirements due to various socioeconomic factors (family demand, financial limitations, geographic barriers, disability, etc.).

Social Media

The impact of social media Websites on our society is enormous and profound (Goode, 2010). All 35 universities investigated have official or unofficial Websites on social media sites such as Facebook, Twitter, and YouTube. This should not be surprising considering Facebook boasts 400 million users worldwide, and Twitters figures are over 75 million worldwide

(Alexander, 2006). For example, McGill University's Twitter page has over four thousand followers (http://www.mcgill.ca/). McGill is among several universities that have links to the university's social media Websites on sites such as Facebook, Twitter, YouTube, and iTunes. These links are often found on the universities' Website homepage. The impact of social media is considerable, as 19 of the 35 universities investigated have social media links on their home pages. Social media is commonly thought of as a venue from which to share information about ourselves and connect with others (Walters & Kop, 2009). Social media is used by a wide-range of large and small groups, ranging from the university institutions themselves to specific faculties and groups. Social media is typically used to share general information and connect students with each other. Universities also use social media as a platform to show faculty and student research, projects, and broadcasting events. Social media enables students to connect and communicate with each other and create dialogue.

The University of Saskatchewan is one of a few institutions offering iPhone or iPod applications (http://iusask.usask.ca/). The University of Saskatchewan developed the iUSask application, which offers students access to campus maps, course information, grades, and several other features (Silverman, 2009). The iUSask application was released in August 2009 and, within a month, the application had been downloaded over one thousand times. The growth of social media, such as Facebook, Twitter, and YouTube, combined with the ubiquity of the internet and technological gadgets, has resulted in universities adopting the latest technologies in order to stay current with the new generation's lifestyle and learning style (Rovai & Jordan, 2004). Depending on the university and the professor, students can download class lectures and correspond with other students on Facebook groups.

Applications such as iUSask seem to gain immediate acceptance from students and faculty as it is thought to benefit everyone (http://iusask.usask.ca/)/. Students' ability to access the internet during a lecture and other technological gadgets can be distracting, but some professors, such as Dr. Neufeld, a University of Saskatchewan professor, use technology to their advantage (Silverman, 2009). Dr. Neufeld avoids the hassle of showing a video clip in class by referring the class to YouTube where the video clip is permanently located (Silverman, 2009). Considering the number of resources and the advancement of technology that professors can utilize, it seems many are falling short in appealing to today's generation of students, instead relying on the standard PowerPoint presentation (Silverman, 2009). Professor's' reliance on PowerPoint presentations come with a certain amount of redundancy for the student attending several lectures a week. Availability of lectures online decreases the incentive for students to attend in-class lectures (Silverman, 2009). According to Silverman, professors struggle with creating a balance between technology and face-to-face interaction.

The continual advancement and presence of technology in higher education has created debate among counselling educators as to its usage. Dr. Smith, a professor at Ontario Institute of Technology, recalled decades ago debating whether students should be allowed to use pocket calculators in class, which is now a laughable dispute (Silverman, 2010). Other professors at the University of Toronto are using applications to their advantage, such as assigning students to listen to a podcast lecture before class, which creates class discussion and frees up class time for other activities. Counsellor educators have the opportunity to use social media for tasks that would have previously only occurred in the classroom.

Twenty-eight of the 35 institutions reviewed utilized blog technology on their Websites. The popularity of blogs seems to stem from their simplicity to use

(http://www.elearning.ubc.ca/blogs/). Blogs are supported by various applications and most of the 28 institutions used this technology to offer training and support to their users. UBC has a *UBC Blog Squad*, which houses blogs from numerous students and faculty in a variety of categories such as 1st year, 2nd year, international, recreation, and spirituality just to name a few. The U of C houses *UCalgary Blogs*, which enable anyone in the academic community to create one or more blogs. There are various ways which universities utilize blogs, ranging from a few select students or staff to entire communities or student populations. U of M professor, Denis Hlynka (2010) requires students to blog, read, and comment on others blogs after each lecture, which enables learning to occur outside the classroom. Regardless, they all share a common goal of sharing information, experiences, knowledge, and the ability to interact with peers in a similar situation.

Online learning

Only 4 of the 35 institutions investigated offer blended graduate degrees in counselling psychology. These institutions include the UBC, AU, U of L, and the U of C. The last three institutions previously fell under the Campus Alberta Applied Psychology (CAAP) Consortium. In 2008, the CAAP consortium dissolved, and each program now operates their programs independently. These institutions deliver their curriculum through a combination of online study, teleconferencing, videoconferencing, traditional classroom study, summer institutes, and weekend delivery (Collins & Jerry, 2005).

U of C offers a 36 credit program designed to be completed in three years. The U of C delivers its courses via online, summer institute, and weekend seminars. They specify that graduates of their counselling psychology specialization will have the appropriate graduate education to apply for registration with the College of Alberta Psychologists or for certification

with the Canadian Counselling and Psychotherapy Association (http://www.ucalgary.ca/apsy/mc-online). Students are required to meet specific minimum computer requirements in order to participate in the program. The U of C program utilizes Blackboard as its learning management system and Elluminate Live as its audio-conferencing software, enabling real-time synchronous communication.

U of L offers a Masters of Counselling degree to be completed over three years, which is delivered through a blend of online and face-to-face courses. The program emphasizes its use of innovative technology, providing small class sizes, and a high level of online engagement (http://www.uleth.ca/edu/master-counselling/). The U of L uses Courseware that allows for the creation of an interactive learning environment, allowing teachers and students to interact in a virtual classroom. Courseware allows instructors the ability to create entire course or simply to complement their classroom based course. Navigating through the School of Graduate Studies, the technology influence is obvious as there are links to iTunes U and their blog (http://www.uleth.ca/graduatestudies/). The iTunes U link provides a broad range of information from student life to general information. The U of L site is interesting because it provides only basic information and asks the user to sign up for a *discover* account, which results in a personalized Website experience with only pertinent information provided to the user. It is a unique and effective experience for the prospective student. These prospective students are asked to be comfortable with technology, able to commit 15 hours of study time per week for each course, and motivated to work independently. U of L suggest minimum computer requirements for each operating system for the completion of the program. The U of L use Adobe Connect Pro for video conferencing, which requires a high-speed broadband connection,

Web-cam, and headset. The U of L has numerous links to tutorials that contain information on how to use the technologies that the university utilizes.

AU's Masters of Counselling program, housed under the name of GCAP, offers a Masters of Counselling distance based degree program. The GCAP program is designed to meet the academic requirements for professional counsellor or counselling psychologist (http://www.gcap.ca/). It is a 36 credit offers specialization in counselling psychology, career counselling, and art therapy. Students are expected to maintain minimum computer requirements, which are routinely updated because technology changes so rapidly. GCAP utilizes Moodle learning management system for the delivery its program.

The UBC offers both a Masters of Arts and Masters of Education in counselling. UBC's Master of Education vocational rehabilitation specialty is a graduate cohort specialty (http://ecps.educ.ubc.ca/grad_programs/vrc.html). The vocational rehabilitation program is delivered entirely through online study. The program is intended to be completed part-time over three years. In addition, the program has four pre-requisite courses, which are required before commencing the program. Two of the courses are available via online study through UBC and the other two are available via online study through AU. In addition to UBC's fully online program, they offer online courses within their on-campus programs. The on-campus educational psychology program currently offers five courses online. The counselling psychology program offers six online courses with course titles such as *Career Counselling* and *Introduction to Theories of Counselling*. UBC utilizes Wimba Classroom learning management system, which is designed to easily interact with WebCT, as well as to provide audio and multi-video conferencing capabilities. This technology includes Wimba Voice that allows instructors to provide verbal instructions, collaboration, coaching, and assessment. It enables students to

use voice discussion boards that enable students to participate in discussions through voice recording rather than text-based posts. Wimba also enables podcasts, voice-enabled email, and voice embedded in specific course content. UBC provides e-portfolio's to its students, which provides the student a venue to house examples of their skills and demonstrate achievements.

Eight of the 35 institutions investigated offer online graduate level counselling courses. At first glance, considering there are only four institutions offering counselling degrees in a blended format, it would be easy to assume that this format is a novelty created through the CAAP consortium and that the rest of the academic institutions are resistant and not accepting of the blended format. However, when we delve deeper into the counselling programs, we realize a blended program may be more common than we think and, in fact, the lack of visibility of this model may be a matter of terminology or semantics. The term *blended* learning has changed in the fifteen or more years of use (Buckley, Pitt, & Norton, 2010). Blended learning has been defined by a range of terms from a combination of traditional and Web-based studies to the combination of pedagogic approaches, regardless of the technology used. Buckley et al. suggested because of the inconsistency in how the term *blended learning* is used a new description is needed. However, for the purpose of this project blended learning is defined as a "the carefully designed synthesis of online and face-to-face learning incorporating a range of media based upon a sound constructivist pedagogical framework" (Buckley et al., 2010, p. 57).

An in depth review of Memorial University's (MU) Masters of Education in counselling psychology suggests a three-year tentative plan for completion (http://www.mun.ca/educ/grad/counselling.php). In the first suggested fall semester, 9 out of the 14 courses offered are World-Wide-Web based courses, and this number climbs to 10 out of 14 courses in the winter semester. The suggested spring semester offers 4 out of 16 courses via the

World-Wide-Web. Combined, MU offers 50% of graduate level counselling psychology courses online. MU uses Desire2Learn, a course management system, and Elluminate Live an audio-conferencing software used for synchronous communication. Looking at the course syllabi of the online courses offered, students are reminded that asynchronous Web based discussion is essentially class time and are graded up to 15% for Web forum participation. A statement on MU's Faculty of Education Website titled *Important Notice* reminds students that the counselling psychology masters degree is not a distance program, although they try to offer as many Web based courses as possible in a given semester. MU's Masters of Education in counselling psychology may not be a distance program, but it certainly appears to fit the description of a blended program.

A thorough investigating the University of Western Ontario (UWO) Masters of Education in counselling psychology 2009 – 2010 course offerings revealed an abundance of online courses (http://www.edu.uwo.ca/programs/graduate-education/masters-counselling.html). In the summer semester, 10 out of 15 courses are delivered online. The fall semester has 5 out of 18 courses offered through online delivery. The winter semester has 13 out of 24 courses through online delivery (http://www.edu.uwo.ca/programs/graduate-education/masters-counselling.html). UWO utilizes WebCT for the online delivery of courses. UWO uses asynchronous communication and emphasizes regular and consistent participation in online discussions. Forty-nine percent of UWO counselling psychology courses are delivered online. The high percentage of online courses should not be surprising considering the UWO student population is education professionals seeking to further their education, and, as such, it is easy to assume they require a certain amount of flexibility in their schedule. Therefore online learning is both practical and appealing.

Acadia University's Masters of Education in counselling psychology is typically a full-time on-campus program. However, the program offers an option for part-time study with courses available through Open Acadia, which is their distance and online education division (http://www.openacadia.ca/). A thorough investigation of the current course offerings for Acadia University's Masters of Education program revealed 12 graduate level courses offered through online delivery in the upcoming year. Selected graduate courses are offered through Open Acadia on a five-year rotation. Acadia University offers several graduate education courses and programs using a combination of distance and online delivery (http://gradstudies.acadiau.ca/tl_files/sites/gradstudies/docs/MEprograms). The core courses for the Masters of Educational Psychology are not offered via online study, but rather through cohort locations. The argument presented is, due to the nature of the core counselling courses it is preferred to offer these courses via cohort studies rather than via distance learning. Acadia University's frequently asked question Webpage suggests they do not *yet* offer any graduate education degree fully online. The wording of this answer suggests that it may be in their future plans. They suggest that a student normally needs to take some summer or evening on-campus courses to complete the program. Acadia University's Graduate Faculty of Education states: "All graduate education students should be aware that their degree will normally include a combination of face-to-face and on-line courses" (http://gradstudies.acadiau.ca/tl_files/sites/gradstudies/docs/MEprograms_FAQ.pdf). This fits the description of a blended program. Interestingly, as the Faculty of Education considers itself a leader in learning and technology, full-time students will typically be expected to take at least one course online to ensure they have a direct distributed learning experience.

The U of M offers online courses towards a Masters of Education in education psychology or counselling (http://www.umanitoba.ca/education/prospective/graduate.shtml). In the upcoming 2010-2011 academic year, the Faculty of Education is offering 8 out of 32 graduate level education courses online. Twenty-five percent of graduate level education courses are available online during the academic year. The U of M uses the Angel CMS for the delivery of its online courses.

TWU offers a Masters of Arts in marriage and family therapy as well as a Masters of Arts in counselling psychology. On the program Webpage, it mentions that they are continuing to expand their course delivery options for online and modular delivery of courses (http://www2.twu.ca/cpsy/). TWU offers several modular courses in which the students have on-campus classes for one week during a semester and the rest of the semesters course work is completed independently. Although this is not an example of technology driven instruction, it is an example of blended studies. Marriage and Family therapy students are able to take two introductory research courses through online study. In the 2010 summer and fall semester, there were no other online courses available. However, other specializations offer online courses. Applicants to their programs must submit a DVD of themselves displaying their ability or knowledge of counselling (http://www2.twu.ca/cpsy/admission/requirements.html). TWU extension studies allow adult learners, which are students over the age of 23, to complete the Masters of Arts of counselling psychology through TWU extension. The extension program is flexible and convenient for the adult learner. It uses modular, face-to-face, and online delivery methods, another example of a blended delivery format.

Other programs that are, for the most part, full-time on-campus programs, such as the U of A Master of Education in counselling psychology, are utilizing blending technologies. The

program requires students to complete an online ethics course / modules (http://www.gradstudies.ualberta.ca/degreesuperv/ethics/index.htm). The University of New Brunswick offers Masters Degrees via online study in curriculum studies and educational administration, but not in the counselling stream (http://www.unbf.ca/education/grad/med.html#cp). Institutions such as Simon Fraser University are not currently offering online programs, but they are noted as in development (http://www.sfu.ca/~educgp/masters/counselling_psychology/). The University of Victoria is offering a Masters of Education in counselling psychology with a summer intensive training from July to August for three years, with weekend courses approximately once per month, and assigned readings and practica throughout the year. Counselling psychology programs across Canada are definitely looking at alternative ways to deliver quality education to individuals wanting to advance their education while continuing to work.

It is clear from the review of the literature and of the current situation in Canadian universities that blended learning is becoming the norm rather than an anomaly in graduate counselling programs. It will be important for this evolution to be accompanied by knowledge and skilled application of appropriate technology to advance the objectives of these programs and to ensure that collaborative learning opportunities and building of professional community are supported. In this next section, I have assimilated some of the technological information available into best practices guidelines that can be used at the institutional, program, or individual course level to ensure optimal use of technology to support the objectives of graduate education.

Best Practices Guidelines

The following consists of comprised guidelines for professionals developing or looking to improve their delivery of distance-based graduate courses in counseling psychology. According to Overbaugh and Casiello (2007), there is a growing interest in graduate level learning at a distance. Offering courses at a distanced allows students to be selected not by where they live but in terms of interest, motivation, intelligence, and academic and professional background. Providing distributed learning courses at the graduate psychology level begins with two essential questions: (a) what pedagogies will enable distributed graduate level students to generate new knowledge and skills to successfully enter the workforce? and (b) what tools or systems need to be in place to implement the pedagogies? Overbaugh and Casielo suggested that graduate studies should focus on real problems that students attempt to solve through investigation of theory, research, and opinion papers. The essential qualities that make a good online course are no different than what makes a good face-to-face course (Finley et al., 2005). That is, students must have access to the instructor and there must be interaction and collaborative learning.

Teaching online courses can create challenges for educators (Finley et al., 2005). There are several considerations one must ponder when considering a move to online course delivery:

1. Be familiar with or willing to learn about online teaching paradigms.
2. Teaching online typically takes 1/3 more time compared to traditional classroom.
3. Creating an online course takes a great deal of structuring time ensuring standards of graduate education are met.
4. Be willing to develop good computer technology skills.
5. Be or become familiar with the course management system.

6. Consider your time availability as you must be available to check in online at least every other day if not daily.
7. Consider your comfort level with having less control over the classroom.
8. Be creative in adapting classroom activities and lessons for online learning.

Overbaugh and Casielo (2008) identified five key elements to consider for a quality online education: learning effectiveness, cost effectiveness, access, faculty satisfaction, and student satisfaction. MU's *Distance Education and Learning Technologies* (2009) guide suggested six instructional design phases for creating an online course. See Figure 2.

6 Instructional Design Phases	**Details of Each Phase**
Phase 1 – Preplanning	Nature of Course is planned. This includes role of instructor, content design, multimedia, interactivity, synchronous versus asynchronous communication
Phase 2 – Needs Analysis	What do the students need to learn from the course? Consider scheduling convenience, flexibility with other responsibilities, and credibility of course.
Phase 3 – Design	Determine course content, structure, student assessment, and determine what multimedia is required. Also consider the type / amount of support required for multimedia.
Phase 4 – Development	Create the content of course and organize into course / learning management software. Include syllabus, short biography, instructions, evaluations, multimedia instructions, and academic policies.
Phase 5 – Implementation and Delivery	Deliver the course; assess student learning and evaluate and revise course as needed based on feedback.
Phase 6 – Maintenance	Revise course and keep it current and ready for delivery.

Figure 2. Instructional design phases for online course development.

Pedagogical Principles

There are several advantages of technology-based learning. Charlesworth and McKinney (2005) outlined five characteristics of technology-based environments that are designed to enhance learning:

1. Provision of a multi-media environment.
2. Integration of various types of information and construction of information bases.
3. Support interactive communication.
4. Immediate access to information.
5. Provision of a cross-platform environment enabling access to information from any operating system.

One of the greatest challenges of pedagogy within the framework of technology is the ability to consider how technology can enhance the student's learning rather than allow the technology to dictate the learning (Charlesworth & McKinney, 2005). Technologies should be viewed as a tool in learning and, as such, selection and implementation of a new technology should include an assessment of its ability to achieve the learning objectives. Charlesworth and McKinney offered seven principles to assist educators using educational technologies that, when followed, will enable educators to improve teaching and increase student learning:

1. Encourage interaction between students and faculty. Technologies such as e-mail, chat rooms, and message boards potentially increase the quality and quantity of interactions.
2. Develop reciprocity and cooperation amongst students while communicating using collaborative learning tools.
3. Utilize active learning and encourage students to accept responsibility for their learning.
4. Provide prompt feedback to students as they can access feedback as soon as it is posted.

5. Emphasize time spent on educational tasks. Technologies allow easy access to information and more study time as time is not spent traveling to and from classroom
6. Clearly communicate and define expectations. High expectations of students emphasizing communications on message boards and some assignments may be posted and viewed by entire class.
7. Respect diverse talents and methods for learning and asking students to analyze, synthesize, and solutions.

As educational technology continues its rapid growth, educators may be easily enamored with gadgetry and forget that technology is dependent on the underlying pedagogy and learning principles delivered by the program (Yellowless & Marks, 2006). Theories of learning support the notion that knowledge is built through interaction regarding the subject matter (McCrory, Putman & Jansen, 2008). In online learning environments, interaction among students is essential in creating learning opportunities beyond simply reading course materials. Gunawardena, Lowe, and Anderson (1998) developed a model for categorizing five levels of online interactions:

- Level 1 - Sharing and comparing information.
- Level 2 - Exploration of inconsistency among ideas and concepts.
- Level 3 - Negotiating meaning of knowledge.
- Level 4 - Testing and modification of proposed meaning.
- Level 5 - Application of newly constructed meaning.

Research by Wallace (2003) suggested that interaction in the majority of online discussions typically remained at the sharing and comparing information level and rarely moved beyond exploring inconsistency among ideas and concepts. Although a certain amount of sharing and

comparing information will always exist, online graduate level counsellor education courses should strive for interactions to occur at or beyond level two. The level of student interaction and engagement in online courses is unpredictable (McCrory et al., 2008). These student interactions tend to be student controlled regardless of the structures put in place. The key challenge for educators becomes implementing norms that invite student participation and create routines that support student engagement at the appropriate level. McCrory et al. concluded that student motivation, how they respond to each other, and the timing of their responses all contribute to the level of interaction. While this is true in any classroom, its relevance is heightened in online courses, because instructors have fewer ways of influencing student interactions.

Buckley et al. (2010, p. 57) suggest that the best pedagogical framework for online courses is a constructivism approach, a "… cognitive model based on an understanding of how human attention, memory, and language operate". Traditional classrooms are social experiences and online classrooms are no different. Buckley et al. stated "learning occurs in a social context through collaboration, negotiation, debate, and peer review" (p. 57). Blended learning gives students a greater sense of community and belonging. Blended learning enables each participant the opportunity to contribute to class discussions, unlike traditional classrooms where some students may be less likely to contribute, which may result in attrition (Rovai & Jordan, 2004).

Pros and Cons of Asynchronous and Synchronous

A variety of synchronous and asynchronous tools have been developed for education (Turney, Robinson, Lee, & Souter, 2009). Typically, most technology-enhanced learning has utilized asynchronous models; however, because of technological advancements and increased bandwidth capabilities, synchronous learning is becoming a more feasible option. Asynchronous

learning is typically facilitated by media such as e-mail and discussion boards. Its main advantage is its flexibility, because learners and instructors do not have to be online at the same time. Many people choose online learning because of the asynchronous nature, allowing for individuals to combine work, family, and various other commitments (Rovai & Jordan, 2004). Another advantage is learners typically spend more time reflecting on and refining their contributions to discussion forums compared to synchronous communication (Hrasinski, 2008).

The main drawback of asynchronous learning is that it can leave students feeling isolated (Hrasinski, 2008). Synchronous learning is most often supported by media such as videoconferencing and chat. Synchronous learning limits the feelings of isolation. There are definite advantages and disadvantages to both models. An educator developing a course needs to understand why, when, and how to use both synchronous and asynchronous tools. It is not a matter of choosing one over the other; rather there needs to be a determination of how asynchronous and synchronous can best complement each other in a specific course or program.

The ease and flexibility of asynchronous learning is the primary reason that people take online courses (Hrastinski, 2008). Asynchronous learning allows the student to combine higher education with work, family, and other commitments. Asynchronous communication allows contributions that are thoughtful, substantial, and allow for reflection on the communication with others. The speed and ease of online asynchronous communication is often a misconception, as preparing a good response takes a significant amount of preparation (Rudestam, 2004). Asynchronous communication is flexible and allows for anytime and anywhere interaction. A disadvantage of asynchronous learning is that it can take longer to identify conflict and reach consensus (Finley et al., 2005). Given that asynchronous learning is entirely text based, there is greater potential for misunderstanding. Synchronous communication is less flexible than

asynchronous, but it can be useful in simulating classroom environment or group collaboration (Hrastinski, 2008). Synchronous communication is more social and, as such, removes feelings of isolation students may experience. Synchronous communication enables students to receive immediate feedback, thus reducing frustration. Neither asynchronous nor synchronous is better than the other; it is more a matter of understanding when, why, and how to use the different technologies. Figure 3 provides some tips in this regard.

Choose	Asynchronous	Synchronous
When	Complex issues that require reflection Synchronous meetings cannot be scheduled because of busy schedules (i.e., family, work)	Getting acquainted Planning projects or tasks Discussing less complex issues
Why	Provides more time for reflection	Simulates traditional classroom
How	Email Blog Discussion Forum	Videoconferencing Instant messaging Chat

Figure 3. Asynchronous versus synchronous - How to choose.

Computer Requirements for Online Courses

The technologies for online courses require instructors and students to meet minimum computer requirements. The investigation of current technology usage in the graduate level counselling psychology programs in Canada reviewed to develop these guidelines can be used to determine current minimum standards. The information in Figure 4 reflects the consensus minimum of the programs offering blended programs.

	PC Windows	**Mac OS X**
Processor	Pentium III, IV at 500 MHz or higher	G4 Processor
Memory (RAM)	512 GB(minimum), 1GB recommended	512 GB (minimum), 1GB recommended

Peripherals	Web Camera, headset, microphone, DVD reader	Firewire Web camera with Apple ISight, headset, microphone, DVD reader
Operating System	Windows XP or higher	Mac OS X 10.4 or higher
Web Browser	Internet Explorer 7 or higher	Mozilla 1.7 or higher
Video-conferencing	High-speed broadband connection (min. 128 kbps upload speed).	High-speed broadband connection (min. 128 kbps upload speed).

Figure 4. Minimum computer requirements for students in blended programs.

These Best *Practice Guidelines* provides basic guidelines for instructors and who are looking to integrate technology into their delivery options or for those who are offering primarily online or blended programs. The basic assertion is that there is no right or wrong technology; there is rather optimal or poor use of technology to support particular learning objectives.

CHAPTER V: SYNTHESIS AND IMPLICATIONS

According to Levine (2000), the most appealing and competitive higher-education institutions of the future will combine traditional and virtual universities, such as the blended programs that are currently offered by several institutions. Such a rapid increase in the diversity of institutions and their ability to provide higher education also places a greater emphasis on future program evaluation to ensure quality graduates. Regulatory bodies, such as the Canadian Psychology Association (CPA) and the Canadian Counselling and Psychotherapy Association (CCPA), have an important role in assuring accreditation standards are met regardless of method of educational delivery. DeMers, Horne, and Rodolfa (2008) suggested moving away from relying on degree, coursework, hours of experience, and the EPPP as the only measures of competence. They suggest a shift not only towards direct assessment of competencies in the initial licensing of psychologists and counsellors, but also in various specialized competencies within the field. The emphasis on competencies is also reflected in the current Mutual Recognition Agreement of the Regulatory Bodies for Professional Psychologists in Canada (2001).

The utilization of distributed education solves several problems, such as crowded classrooms, and reduces the cost involved in maintaining education buildings (Rudestam, 2004). Distributed education also benefits students living at a considerable distance from educational institutions and adult learners who are unable to regularly attend on-campus classes because of family and/or work commitments (Rovai & Jordan, 2004). The same benefits, such as living at a distance, wanting more flexibility, or balancing family or work, are appealing to educators looking (Overbaugh & Casiello, 2008). Additionally, distributed learning offers students more choice when considering which method of learning best suits not only their lifestyle but also their learning style. Online classes allow quiet or reserved students the opportunity for their

opinions and questions to be voiced without interruption. Blended learning courses rely heavily on online courses. Most online courses are asynchronous in that they don't occur in real time but rather at the convenience of the student, within the acceptable guidelines of the course (Overbaugh & Casiello, 2008). This enables the student time to analyze others comments, to utilize additional resources, and to be more reflective and deliberate in discussions.

The success of learning technologies is dependent on several factors, most notably human factors, such as developing a cultural change amongst the academic community (Hamuy & Galaz, 2009). This cultural change is an embracing of learning technologies in graduate psychology programs in Canada. Possibly the greatest challenge to innovation in graduate psychology is the attitude of graduate educators themselves, as they commonly hold the opinion that computer-mediated devices cannot replicate the training of the interpersonal skills that are crucial to counsellors and psychologists. Interestingly, a 2004 study on attitudes towards technology among counsellor educators (Piotrowski & Vodanovich, 2004) found a favorable attitude towards the use of technology. However, this favorably attitude did not correlate with the amount technology was actually used by the faculty. Piotrowski and Vodanovich speculated that perhaps psychology faculties are in the infancy of receiving education and training on Web-based pedagogical approaches. Perhaps counsellor educators have not been informed as to the unlimited potential of technology. The greatest barrier to innovation in academic psychology could simply be a lack of awareness of technology's potential for the training of psychologists. Some educators may maintain a close-minded view of the limits of technology rather than openly exploring how technology can support and enhance the learning experience.

Technology is expensive and not all universities have the resources to benefit from the types of innovations available (American Psychologist, 2009). A misconception remains among

some educators, who believe technology replaces the intellectual engagement sought in higher education. Contrary to this assumption, technology is not a substitute for these educational processes; rather, it is a tool for teaching and learning that can support these processes.

Another common criticism of innovation is that the asynchronous nature of online classes leads to miscommunication that could last for an extended period of time (Rovai & Jordan, 2004). Rovai and Jordan determined that using a direct and concise communication style helped minimize misunderstanding. Additionally, courses delivered online offer several advantages that traditional classrooms are unable to. Specifically, online courses place value on reflective thinking, additional processing time, and the opportunity to re-enter dialogue, as opposed to limited discussion during face-to-face classroom time.

Potentially we could see clinical training of psychologists, including supervision and practica, occur without face-to-face contact between trainee and clients and between supervisors and trainees. Further, with the advancement of technology we could see entire training and professional practice occurring without direct contact. Piercy and Lee (2006) argued that it is crucial that counsellor educators incorporate new technology into their work as distance educators. Counsellor educators are most likely to incorporate new technologies into their programs when they understand how to use them. However, this requires academic institutions and/or the counsellor educators themselves to advance their knowledge through education. The advancement of distributed education at the graduate level will only succeed if educators receive ongoing training and education regarding distance education technology (Murphy et al., 2007). Technology has advanced to the point where synchronous real time communication is possible if the educator desires to use it in their class. The educator must determine what they are trying to accomplish and weighing the pros and cons of the technologies available.

Technology is changing all components of life, including education (Walters & Kop, 2009). Prior to the technological revolution, educational institutions were solely responsible for producing and sharing of knowledge. Today, knowledge is a marketable commodity accessible to everyone through technology, such as the internet (Goode, 2010). Higher education is a place for the training of professionals and technicians. The submission of assignments, course materials, and communication is technologically mediated.

The face of technology in higher education is changing from thinking about delivering instruction to using technology to produce learning and expand the delivery of education beyond physical walls (Rovai & Jordan, 2004). In many instances professors teach in the same way as they were taught and, as such, the introduction of new technologies and new pedagogies is met with resistance (Rudestam, 2004). The increasing prevalence and acceptance of distance education and online courses is obvious among most universities and colleges in Canada. However, the notion that technology based learning is suitable for some programs and courses, but not for others, remains. While many other disciplines have embraced innovative technology, counselling psychology's interpersonal nature and hands-on practical skills are difficult to teach online (Siebert & Spaulding-Givens, 2006). However, the advancement of technology and, specifically, streaming video that enables synchronous communication may change the perception regarding the limits of teaching counselling skills online (Adams, 2008). It seems, for this reason, several institutions offering graduate level counselling degrees utilize the blended delivery model, which combines traditional face-to-face delivery with technology based online delivery. Rovai and Jordan (2004) suggest the result of blended learning is potentially a more robust learning experience than either traditional or online delivery.

There is an opinion that technology mediated learning is most suitable to self-regulated, motivated, and independent students (Rovai & Jordan, 2004). These qualities are desirable and marketable in our society. Consequently, if traditional education institutions are not producing self-regulated, motivated, and independent students, is it not time to re-examine the learning pedagogies of traditional classrooms? Technology mediated learning allows the student access to the same information that a professor provides during the majority of their traditional lecture; however, the students are able to learn this information at their own pace, reflect, and engage in meaningful synchronous and/or asynchronous communication that furthers their understanding of the subject (Rovai & Jordan, 2004). A 2004 survey conducted by the Association of Universities and Colleges suggested more than half of university courses feature online components (University Affairs, 2004). According to Rudestam (2004) distributed learning programs have been criticized for their lack of interactivity; however, some educators remain naïve regarding the amount of interactivity that occurs in a face-to-face environment.

Distance learning goes back to the 1800's where correspondence study became a popular form of study through the postal service (Rudestam, 2004). Today, there are universities throughout the world whose entire curriculum is based on the distance model. As the role of technology increases in the delivery of education the term *distributed learning* has emerged as broader, more inclusive concept, of which distance education is a subset. Distributed learning usually refers to education that integrates information technology into the learning and teaching. Distributed learning combines the use of technology-based education, offering anytime and anyplace availability to students for their learning. This instruction encompasses online courses distributed to students in different locations across the country and even in different locations in

the world, as well as campus-based courses with additional online discussion groups that the student can access from anywhere.

The technology available within Canadian universities does not reflect technology that is being used by the majority of counsellor education programs in Canada. This was evident from the information gathered from university versus program Websites in Chapter IV. Advanced technologies are available but are not currently utilized by the majority of graduate counselling programs in Canada.

The use of technology has the ability to improve learning for students both on and off campus (Turney et al., 2009). It is very difficult to determine the efficacy of technology in higher education, because it can take on such a range and degree of usage. Using technology effectively requires a focus on pedagogy and ensuring it is combined with an appropriate media. Several researchers, such as McLoughlin and Luca (2006) and Saunders and Klemming (2003), found that direct communication between students and instructors is important for learning. The best compromise seems to be the blended learning approach, which combines technology with direct contact.

There are several noteworthy barriers to technology integration, which currently exist in Canada (Kotrlik & Redmann, 2005). These barriers include funding and cost, lack of training and expertise, lack of time, access to technology, resistance to change, and changes to organizational structures. On a larger scale, technological intervention is not merely a matter of instructors integrating technology into their classroom. Integration must occur from university commitment to systematic change and training (Murphy et al., 2007).

The most striking observation that came out the research into the current state of technology in Canadian graduate level counselling training programs was the number of

programs offering a few to several online technology-based courses with still an emphasis on face-to-face programs. These programs did not embrace the term of *blended* learning or program delivery. In contrast, programs that were designed and developed as blended programs typically had a greater emphasis on online courses versus traditional classrooms. If we define blended learning as "a blended approach can combine face-to-face instruction with computer-mediated instruction" (Rovai & Jordan, 2004, p. 3), the definition could be applied within the confines of a specific course or to a program as a whole. With this definition in mind, it would seem apparent that the combination of different methods of delivery or blended learning is more common in Canada than many realize or are willing to admit. Is this resistance or simply a different use of terminology?

The intent of this project was not to suggest online learning and technologies are better than traditional classrooms and, as such, should be adopted by programs across the country. Online learning and the adoption of new technologies are not for every course, institution, student, or instructor (Finley et al., 2005). However, it is a viable and achievable option for those students and instructors seeking an option to traditional studies. Many graduate level counselling psychology programs may not be prepared and/or motivated to move a significant number of courses online; however, they may be motivated to adopt technological innovations from a financial and efficiency standpoint (Rudestam, 2004).

Murphy et al. (2007) also stated that the number of individual courses that are available are growing in the training of professional psychology. The use of technology in graduate level psychology was evident by the fact that 8 of the 35 universities investigated by this body of research offered courses in psychology. Further, Murphy et al. stated that rapid expansion of distance education programs in Canada requires licensing bodies to determine the appropriate

use of distance technologies in the preparation of professional psychologists. However this investigation has some potential drawbacks. Namely, no actual questionnaire or survey was included in this investigation that would have more accurately highlighted the use of technology and the opinions of instructors that use the technologies in their teaching. Caution must be taken when considering the actual use of technology among counselling educators may not be positively or negatively accurately portrayed on the websites investigated. Future research comparing the efficacy of various technologies in counsellor education may be beneficial. Research aimed at obtaining counsellor educators feedback regarding their use of technologies may be beneficial for future research.

The influence of societal and technological change has altered the way psychologists and counsellors are trained in Canada (DeMars, Van Horne, & Rodolfo, 2008). The increasing number of World Wide Web based universities has made it increasingly difficult for licensing bodies to ensure quality psychologists and counsellors. Future program evaluation should concentrate on determining criteria that meet the standards for registration, while enabling various modes of program delivery.

There are a broad range of programs offering graduate degrees to prospective students seeking an advanced education. Achieving quality graduates for licensing begins with the implementation of program regulation ensuring applicants have relevant graduate degrees with a minimum grade-point-average from a regionally accredited educational institutional (DeMars et al., 2008). Given the diversity of graduate degrees, transcripts should not be taken as sufficient for registration with professional bodies. The implementation of national competency-based examinations and practical skill-based assessment would allow for quality control among

graduates across the country. Such requirements would place responsibility on the academic institutions to adequately admit and prepare their students for professional practice.

The globalization of education and changing expectations of a new generation of learners lead to questions about the responsibility of licensing bodies in Canada (Demars et al., 2008). The full-time residency requirements of the CPA and some provincial licensing bodies appear biased towards alternative delivery formats. It is the responsibility of the CPA and its licensing bodies to ensure that their criteria are not biased against a specific delivery format, but focus on common elements of educational excellence and professional competence. Accrediting and licensing bodies in Canada should develop a model that addresses the challenges presented by the innovation in graduate training like distance education (Demars et al., 2008).

A new generation of counsellor educators may be more likely to embrace technology enhanced learning. Rovai and Jordan (2004) suggested many graduate level counselling psychology professors have become set in their ways and new ways of teaching with technology has been met with resistance. Therefore, the real opportunity for adoption of further technology in graduate level counselling psychology programs is through creating new types of professors, new ways to use instructional technology, and new types of institutions. As internet bandwidth increases and technology becomes more efficient, the likelihood of increased usage of synchronous interaction in distance learning increases. Technology has the ability to enhance students' learning providing it is compatible within the framework of the selected pedagogy (Rovai & Jordan, 2004). Consequently, there is a heightened need for training educators in the use technology and pedagogy, which is contingent on administrators' awareness of its importance. Blended programs in Canada and other institutions clearly indicate the technology requirements for their students. Given what we know and observe in the current technology

trends, usage among today's generation hardly make those requirements difficult to achieve for most. The focus of these requirements may need to shift to the academic community to encourage informed, creative, and optimal use of technology in support of specific learning objectives.

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