

VIRTUAL TUTORING AND STUDENT SUPPORT SYSTEMS

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Virtual tutoring and student support systems may be pivotal in developing opportunities of equality and of outcome for students who study at a distance. Cookson (2002) mentions that it is important to assist students to have access to study programs. Cookson (2002) elaborates upon this and states, "If access is to be equitable, once they are admitted, socio-economically and educationally disadvantaged students require different forms of learning assistance" (p. 16). Disadvantaged students may include women, people with disabilities, those who live in rural and isolated areas, offenders and professionals who are experiencing stress and/or trauma. Many students need to be supported not only to have access to distance education and training programs but also to be successful in their studies. In this paper factors pertaining to virtual tutoring and student support systems will be appraised and secondary themes, such as the limitations and strengths of technologies and the contexts in which they occur are also covered. Some questions to be considered by professionals in the development of these virtual systems are raised. Perhaps as inquiry and practice associated with virtual systems becomes more informed professionals will be in positions to ask better questions than they may have done in the past. Finally the interdisciplinary and pioneering work of the Alberta Supernet Research Alliance associated with the development of broadband connectivity for Albertans is mentioned. The experiences and findings of the Alliance may have implications for the third world within and external to developing nations who seek to overcome challenges that are associated with the "digital divide".

The solutions associated with distance education and training may be developed when professionals identify and transform challenges associated with virtual learning environments. It may be that distance educators/trainers, online counsellors, mediators and supervisors may learn the most from their critics. I am reminded here of a statement by a moderator for a virtual conference that was associated with the Commonwealth of Learning, "Our

interests lie not in shutting down any conversations but opening up a range of them and bringing in the maximum number of participants." I envision that this paper will assist readers to develop an understanding about the potential and limitations of virtual tutoring and student support systems in their home, study and/or work related environments. These virtual systems can maximize returns for those who have invested in distance education and training initiatives. Virtual systems do not "fit all sizes" and cannot create Utopian solutions they can, however be a tool to assist students to develop aptitudes, skills and knowledge that will contribute to human resources in our world communities. Virtual systems can assist stakeholders such as the government, corporate and not for profit sectors to lessen attrition rates of students who study at a distance.

1 A Reflective Introduction

There can be high attrition rates for students who study at a distance and many students need to be supported through virtual tutoring students and support systems that include online counselling, mediation and/or supervision to succeed in their programs. Cookson (2002, p.4) suggests that "high attrition" rates for students who study at a distance may be associated with idiosyncratic factors associated with the characteristics of stakeholders and "institutional" variables. I have facilitated computer-mediated communication between postgraduate students in Australia, undergraduate students in Canada and lawyers in the USA and based on my experiences these are key factors that impact upon distance education. Some students may require a pedagogical approach to instruction, as they can be dependent especially when they are covering new materials. As students develop confidence with the curriculum they may be better served by an andragogical approach to pedagogy. Andragogy may occur when educators and trainers recognise that students have valuable lived experiences that can inform faculty and augment educator/student and "peer to peer" relationships.

2) Questions to Consider

To facilitate continuous change and to alleviate stresses upon professionals, students and/or other stakeholders' practitioners may need to look through a broad socio-economic lens to consider key questions about the roles and processes that are associated with learning. Competition in the pedagogical marketplace has placed educational and training institutions under pressure to develop a student focused approach to learning (Tinkler, Lepano & Mitchell, 1996; University of Southern Queensland, 2000). There are a number of questions to consider as professionals develop pedagogical and counselling approaches to support students who may be studying at a distance. The Australian National Training Authority (2004) mentions that one of its priorities is to "Improve the client focus of vocational education and training, particularly for individuals and small business". Firstly, how can professionals develop a student-focused approach to learning? One way to develop such an approach is through virtual tutoring and student support systems that are individualized and customized to address the diverse needs of students. There can be a mutually reinforcing relationship between pedagogy and counselling. Conceptual frameworks that are associated with being student- focused can overlap with the theoretical underpinnings of client - focused approaches in counselling. Counsellors, educators and trainers may have many idiosyncrasies and common experiences; one of the most important qualities that may bind these professions is the need to be genuine. Kottler (2002) refers to the work of Carl Rogers and writes - "Roger believed that it was critical for a helper to be real with a client, that is, to be authentic, congruent, human, and transparent. This sort of modeling makes it possible for the client to follow the therapist or teacher's lead and risk revealing himself or herself as well" (p. 83). Jeffrey Kottler PhD has published widely in the area of counselling and in some of his writing he includes revealing autobiographical accounts. Technologies such as computers and the Internet can augment pedagogical and counselling practices, however they should not determine the manner in which professionals engage with clients. To develop a student centered approach to pedagogy professionals need to understand the needs and situations of students in the third world within and external to Western nations.

Secondly, who might be involved in developing tutoring and student support systems? Professionals that have instrumental roles in developing virtual tutoring and student support systems include educators, trainers, subject matter experts, counsellors, mediators, supervisors, researchers and information technologists. Law related professionals would be important subject matter experts to involve in tutoring and student support systems that are linked with legal education. Cookson (2002, p. 1) suggests that information and research could enhance the life situations of "socially and economically disadvantaged groups". Finally, what groups of students may be educationally disadvantaged? According to Crittenden (1998), the Ministerial Council on Education, Employment, Training and Youth Affairs (1996), Parkinson (1995), Rimmer (1995) and the University of Southern Queensland (2000) three disadvantaged groups in education and training often include women (particularly in traditionally male dominated courses such as engineering). Women may be disadvantaged in the application and knowledge of technologies such as the computer. For example, The Gender, Diversities and Technologies Institute (2004, p. 1) states, "Girls display what one researcher calls [computer reticence] in part because culture and stereotypes steer them away from machines." Women can be disadvantaged due to such factors as gender stereotypes, being locked into "blue collar" positions in the work force associated with their roles as carers and they may not be able to afford to pay for education and training to improve their life chances. I have developed some of the issues that are associated with women and disadvantage in educational settings in Geary (2002). People with disabilities and people who live in rural and isolated regions are the second and third groups that are often educationally disadvantaged. Women may be placed into positions of triple jeopardy in that they may be people with disabilities who live in rural and isolated regions.

Education, training, counselling and vocational development can provide opportunities for people with disabilities to gain access to needed resources. As the erstwhile Disability Discrimination Commissioner of Australia stated to me legislation cannot change negative attitudes about people with disabilities not experiencing educational and other disadvantages. The Declaration of the Rights of Disabled Persons (1975) states, "6. Disabled

persons have the right to medical, psychological and functional treatment, including prosthetic and arithmetic appliances, to medical and social rehabilitation, education, vocational training and rehabilitation, aid, counselling, placement services and other services which will enable them to develop their capabilities and skills to the maximum and will hasten the processes of their social integration or reintegration." People with disabilities in Canada do not have the same degree of protection as their peers in Australia and the USA who are covered by such legislation as the State and Commonwealth Disability Discrimination Acts and the Americans with Disabilities Act. The principles associated with these Acts are directed towards helping people with disabilities not to be subjected to discriminatory practices in such areas as work an/or in educational settings. The Charter of Rights and Freedoms is relevant to the needs of people with disabilities and other disadvantaged groups in Canada. However, the Charter does not offer the same level of rights to people with disabilities as progressive legislation in Australia and in the USA. Information about the 1) Americans with Disabilities Act (1990) and the Australian Disability Discrimination Act (1992) can be located at 1) <http://www.legalfairnessforall.com/americans-with-disabilities-act-e.htm> 2) http://www.austlii.edu.au/au/legis/cth/consol_act/dda1992264/

My studies associated with the "digital divide" indicate that many rural residents including people with disabilities in Alberta do not have adequate access to the Internet. This situation can contribute to people in rural and isolated regions not having access to distance education and training opportunities that people in more populated centres may take for granted. A fourth group that experiences educational and vocational challenges are offenders. The British Open University (OU) assists offenders to gain access to open learning in the context of prisons. Worth (1996, p. 179) suggests that challenges for offenders associated with undertaking their studies in prison environments may include feelings of being socially isolated and of becoming scapegoats perhaps because of "anti-intellectual" cultures in institutions. Offenders may not be immune from event and situational crisis that could contribute to them dropping out of their studies.

Offenders can be assisted through vocational development to assume productive and worthwhile roles as citizens of the world and I have developed these themes

in Geary (2003, 2004).

A fifth group of disadvantaged students could include practitioners who experience cultural, social, political, professional, affective and/or spiritual stress and/or trauma in their work or life situations generally. For example, one PhD associated with education in Canada mentioned to me that it could be particularly stressful for teachers who come from Aboriginal communities to develop a balance between respect for their traditional ways of life and the demands of Euro-Canadian society. The informant states,

"Many of the staff there are struggling with a double role: that of promoting a culture which has been partially lost both to them and their students, and also trying to be [recognisable] to the main stream. I know several of the teachers there have voiced the stress from these seemingly impossible demands; both to be culturally authentic, but also to have their students succeed in the mainstream. One problem is how to reconcile different demands for behaviour."

For the purposes of confidentiality I have not mentioned the name of this informant.

Professionals may be called upon to address competing and overlapping demands from multiple parties such as students and their families, administrators, faculty and external partners such as funding bodies. This process can be quite stressful and can contribute to depleted biological, psychological and social health and it is important under such circumstances for professionals to maintain self care.

Professionals who participated in my doctoral study about the vicarious traumatization of professionals who work with domestic violence situations in justice systems did not place emphasis on the need for self care although once we discussed this concept participants felt that it could be an important issue to include in the area of professional development. Self care can be linked with a number of practices including research, virtual legal education, distance education and training, peer support, virtual communities, online counselling and supervision. A Vice President of research at a Canadian University states, "If we could provide ALL students with online mentoring and networking skills, they could be used to help other students and scalable learning systems could be built." For the purposes of confidentiality I have not mentioned the name of this academic, however his statement reinforces the

need for "peer-to-peer supervision" and building networked communities. The findings of my study suggest that it can be pivotal for professionals and/or other students to have access to "online mentoring and network skills". The virtual tutoring and student support systems that I envision maximize on this concept. Peer support features strongly in the suggestions of Pearlman & Saakvitne (1995, p. xvii, 274, 360, 379-387) & Stamm (2002, p. 109). Peer support and consultancy may be possible solutions to limit and avoid stress and/or vicarious traumatization of professionals. Coholic & Blackford (2003, p. 55) suggest that solutions for secondary trauma include training, supervision, peer support and virtual communities. Bernard & Goodyear (1992) state "Supervision is best placed between training and consultation" (p. 90). Supervision and other supportive processes may need to be based on the supervisees needs and learning goals. Bernard et al (1992, p. 91) suggest that structured supervision can be a form of training in itself.

From a summarising perspective, there will be individuals who may be women, people with disabilities, who live in rural and remote regions who may not be disadvantaged due to such factors as economic, political and civil status. These groups are not the only educationally disadvantaged peoples that there are, for example there are many offenders who experience vocational challenges. Patterns that have emerged in my doctoral study to date suggest that there are significant problems for many offenders in North America, New Zealand and Australia in being unemployed and under - educated. Many offenders do not have access to technologies to enable them to have the benefits of distance education and training that could enable them to develop prosocial life styles. The British Open University has undertaken some excellent work to assist offenders to gain access to education. To maintain competent practices professionals can be assisted through distance education/training and could be further helped through virtual tutoring and student support systems.

It needs to be borne in mind that that many men may also be disadvantaged due to cultural, social, political, economic and/or financial factors. Cookson (2002, p. 11) suggests that other disadvantaged students may include students who did not have the GPA necessary to enter further education and training on a face-to-face basis, those who cannot attend University on a full time basis due

to study commitments, "ethnic" minorities and students who are unable to pay for their education. Another educationally disadvantaged group is shift workers who may not be able to attend education and/or training initiatives on a face-to-face basis due to temporal challenges. Smith (1988, p. 5) mentions that shift work can place workers and their families under significant stress. In research and development it is important to understand what types of groups may be disadvantaged in education and training initiatives. It is essential for professionals to be aware of the stresses that groups of students may experience and in so doing not neglect individual differences that may be relevant to the student in a particular situation. It is timely for educators, trainers, counsellors, mediators and supervisors who are involved with pedagogy to "think outside the box" and to consider what students may be educationally disadvantaged due to factors such as social, cultural, spiritual, affective and professional stress. Disadvantaged groups can be assisted through virtual tutoring and student support systems, however they will need to have access to technologies and the appropriate skills and attitudes to apply them successfully. Some stakeholders may experience anxiety associated with the use of technologies, however without technologies virtual tutoring and student support systems could not be developed.

3) Virtual Tutoring and Student Support Systems

Tutoring and student support systems may include recruiting, marketing, fee collection, record keeping and maintenance, intake, financial, library, counselling, mediation and guidance services. Virtual tutoring and student support systems have the potential to meet the idiosyncratic needs of women; people with disabilities who may experience physical, learning and/or emotional challenges; people who live in rural and isolated regions; offenders; working parents and shift workers. Some professionals may live in rural and remote areas and may work night shift. Stamm (1999, pp. 187-188) and Williams and Sommer (1999, p. 241) suggest that professionals who reside in rural regions and who may operate in isolated conditions may be assisted through online support and education. Coholic and Blackford (2003, p. 43) mention that in "small communities" there is reduced privacy and a lack of support that can contribute to isolation. Under such circumstances professionals may have little opportunity to gain access to face-to-face education including support

and/or supervision. Stamm (1999, p. 180, 189, 193) and Williams and Sommer (1999, p. 241) suggest that Internet based technologies and the telephone can assist professionals to gain access to support, information and supervision that may not otherwise be available to them in part due to their busy work schedules.

Educators and trainers may apply broad and overlapping definitions of what is involved in tutoring and student support systems. For example, one motivated teacher who is also a graduate student in a distance education program in India mentioned to me that she linked support with cognitive and emotional help that is offered by educators, counsellors and/or professionals at partnering organisations. She also indicated that friends and family could provide valuable support to students. Virtual tutoring and student support systems may include competent supervisors, counsellors, educators/ trainers and partners in other institutions. To develop quality assurance in distance learning environments it is important to have effective communications between stakeholders, regular monitoring and evaluation of the virtual systems. For example, conflict and anxiety may arise if students, faculty and administration receive inadequate or misleading information. Cookson (2002, p. 2) links quality in distance education with "care" related principles, integration of pedagogical and "learning" experiences, attentiveness to the fluctuating "needs" of students, transparent "accountability", outputs and staff "performance", "effectiveness" and appraisal. Ideally professionals that are involved with tutoring and student support systems will clarify their roles and boundaries with students and be able to access adequate and appropriate resources, as and when required. Professionals ought to spend time with students to assess what types of supports learners may expect from the education or training institution with which they are enrolled. Support with the use of technologies for disadvantaged students ought to be flexible and centered around the strengths and challenges facing individuals and groups of students. Mehta (1993, p. 45), Venkaiah (1993, p. 55), Gautam (1993, p. 62) and Bhadane (1993, p. 70) refer to the need for flexible interventions in learning and the need for "counselling", "feedback", "information and guidance" and "evaluation".

Tutoring styles ought to be adapted to meet the needs of student/s in particular situations. Moore and Kearsley (1996) state, "While there has been ample theoretical discussion

about the significance of tutors (e.g., Baath, 1981; Holmberg, 1977), it appears that in practice many tutors are not very sophisticated in their capabilities (e.g., Murgatroyd, 1980), presumably because being drawn from the ranks of conventional teachers they find this different way of teaching to be unnatural" (p1). Tutors may engage with students through telephones, computer-mediated communication such as email and/or face-to-face sessions. During a virtual conference associated with the Commonwealth of Learning Ormond Simpson of the British Open University commented that institutions associated with distance education and open learning can develop buy in from "Senior Management" if they can prove there have been favourable financial outcomes for pedagogical initiatives. During the conference Mr. Simpson stated, "we recently investigated the effect of strategic timed phone calls on student retention in the OU. Using a control group we were able to show an increased retention of around 5% [nearly half the estimated maximum possible] but most importantly we able to cost the activity and show that there was a 'profit' to the University of around £0.5m." Mr. Simpson advised me that the statement was extracted from his work entitled - "Student Retention in Online, Open and Distance Learning" that is available through Routledge Falmer, Taylor and Francis Group at the following Web Pages www.routledgefalmer.com

Telephone calls can augment computer - mediated communication such as email to enhance quality-learning experiences for students who are studying at a distance.

Professionals that are involved with distance education and training may find that psychologist Dr. John Suler's article is beneficial to them. Suler (2003) analyzes structures and processes that are associated with effective email communication and relationship building through the Internet. He also covers the issues of "email stress" in this article and in related work he analyzes the "psychology of cyberspace". It can be stressful for students to develop relationships with tutors through the Internet and it is essential that professionals be aware of the psychological implications of computer - mediated communication. Moore and Kearsley (1996, p. 1) suggest that there may be a blurring of boundaries between tutoring styles in distance and face-to-face environments. Students, may require structured one-to-one attention; programmed tutoring

that involves realistic and tangible goal setting, personalized towards individual needs, skills and challenges and finally audio-tutorial systems. Various theories that range from behaviourism that includes token economies and positive reinforcement to analytical psychology may be applied to support students. It seems that the application of theories that are associated with pedagogy and counselling may be dependent upon a number of factors including the values, beliefs, needs and life experiences of the professionals concerned. For example, Kottler (2002, p. 82) indicates that Carl Rogers placed emphasis on "active listening" "valuing trust and authenticity above all else". These fundamental principles seem to be themes that are common to a constellation of counselling approaches including client entered, narrative, psychoanalytic theory, "brief psychodynamic", existentialist, gestalt, humanistic, cognitive behavioural, systemic, "Ericksonian hypnotherapy", solution focused, feminist, "computer assisted approaches" in counselling and/or psychotherapy (Kottler, 2002, iii-vi). Some conceptual frameworks that are associated with counselling may place less emphasis on the value of authenticity than others, however these are some of the tools that professionals may apply to develop rapport and ultimately supportive relationships with students. It is beyond the scope of this paper to identify and to provide commentary on the strengths and challenges associated with various counselling models. Virtual systems ought to be well planned and may include pedagogical styles that involve structured, programmed, personalized and audio-tutorial approaches.

Tisdell (1993, p. 93) suggests that with the support of peers professionals may be empowered to influence their own lives and the world around them. Professionals need to have support from peers and others to develop and maintain competent practices. Tisdell (1993, p. 98) mentions that professionals may build relationships by recognizing their peers' practical and personal strengths. Rudolph and Stamm (1999, p. 284) suggest that professionals will ideally work with their peers, interest groups and financial institutions that share a common vision. Human networks may be influenced by factors pertaining to place, interpersonal communication, contexts and structures. Tillman (2000, p. 1) suggests that in virtual communities individuals and groups may share common interests but may not meet face-to-face at regular

intervals. In some virtual communities individuals may not meet at all face-to-face but may share key interests. Tillman (2000, p. 2) mentions that individuals and groups who are connected to virtual communities may communicate through email, chat, instant messaging, Usenet and web rings. Donath (1996, p. 1) indicates that Usenet groups can assist individuals and groups to provide informational support to each other.

At times supervisees may attempt to be stoic and not to acknowledge trauma. Supervisors may have a role in gently reminding supervisees that they are fallible and imperfect beings. Bernard and Goodyear (1992, p. 127) indicate that supervision may help to lessen incidents of "burnout" and isolation. Bernard et al (1992, p. 126) mention that "peer group supervision" may be less formal and less hierarchical than other forms of supervision. Peer group supervision does not seem to fit tidily under the categories of either supervision or consultative processes. Peer group supervision may provide supervisees with opportunities to receive feedback from others about challenging cases, to exchange information and to explore various theoretical frameworks. This form of supervision may help to lessen supervisee stress, feelings of being isolated and burnout. Bernard et al (1992, p. 128) suggest that supervision may encourage supervisees to become reflective, involved with continuous quality improvement and to be aware of their biases. Challenges related to competition and conflicts may arise as each supervisee may seek to assert his/her position in the context of employment situations. Bernard et al (1992, p. 128) suggest that peer group supervision should perhaps occur outside of employment situations. Challenges associated with competition may arise in peer group supervision if supervisees do not have specified supervisors.

Educators, trainers, counsellors, mediators and supervisors ought to have empathy for students, to be effective communicators and to facilitate formal and informal learning experiences. Professionals will ideally respect the autonomy of students and encourage them to be self-determining. On Web Pages for education and training organisations it may be helpful to have a charter of student rights and attendant responsibilities and a clear statement about their right to access a conflict management system should concerns arise. These informational resources could assist students to develop confidence in the education and/or training organisations in which they are enrolled and

could lessen isolation in institutional settings. Professionals that are involved with virtual tutoring and student support systems ought to recognise that students may have their own aspirations, existing skills, aptitudes and previous learning experiences. As students progress in their studies mentoring support, regular and positive feedback from professionals can assist them to be successful in their studies. Individual differences in learning and teaching styles are likely to impact upon the form that virtual tutoring and student support systems ultimately take. Students who make use of distance technologies may have increased need for support as they transition from being novices to masters in working with computers and the Internet. Cookson (2002) refers to "the mastery learning principle that anyone who has the will and a reasonable modicum of intelligence, given the appropriate opportunities and sufficient time, can learn just about anything" (p. 5). To be emotionally and cognitively receptive to mastering the content of courses professionals may need to arrange for students to have online therapeutic services through competent counsellors that have a combination of life experiences, formal and informal education. The Canadian Professional Counsellors Association (2004) has developed a competency-based model and is in the process of establishing a College of Counsellors in British Columbia. The Web Pages for the Association are located at <http://www.cpcra-rpc.ca/>. Professionals who are involved with virtual mental health services can find a wealth of information through the International Society for Mental Health Online and the Web Pages for the Society are located at <http://www.ismho.org/>.

Education and training institutions are not homogenous organisations; there can be clashes in beliefs, values and needs between stakeholders. Tensions can be reinforced through miscommunication, inadequate information and there will be a need for online dispute resolution to limit and to transform conflict. The Centre for Information Technology and Dispute Resolution (USA) provides information rich data about resources including a regular ejournal, the "ODR Monthly". The Centre helps online mediators to develop their skills and knowledge and their Web Pages are located at <http://www.odr.info/index.php>. The Association for Conflict Resolution (ACR) (USA) also offers comprehensive data about dispute resolution and the Web Pages for the (ACR) are available at <http://www.acrnet.org/>. There is a role for online supervision to assist professionals who may provide support to students to help learners to meet

program requirements such as to have a specified number of hours of supervision. Online-supervision.net (UK) is a pioneer in the area of online supervision the Web Pages for the organisation are located at <http://www.online-supervision.net/>. If distance technologies did not exist then innovations such as online education, training, counselling and supervision could disappear.

4) Technologies: Friends or Dictators?

Technologies can be liberating for some individuals and can have also have negative dimensions. Based on my experiences, knowledge and understanding I believe that technologies have a tremendous potential. For example, with the development of computer-mediated communication information can be brought to students that is almost independent of time and space. Dr. Patrick Fahy of Athabasca University stresses that social relationships can be developed through computer-mediated communication and he has written broadly on distance education, education and technology (Fahy, 2001, p.11). McSwain, Robinson and Panteluk (1998, p. 5) suggest that through the Internet supervision, further education and networking can be established for groups of professionals. There is a mutually reinforcing relationship between technological and sociological factors. For example, during an international virtual conference associated with the Commonwealth of Learning Professor Mohanty from India stated, "As you know, Social Change is slow but Technological Change is very fast, but the Technological Change needs the support of Social Change to be accepted and absorbed in the Society." Naisbitt and Phillips (2001) doubt that the Internet provides a means to establish communities. Perhaps there is merit in professionals having the freedom to decide whether virtual communities and tutoring and student support systems have a role to assist them to develop pedagogical experiences. There seem to be no magic formulas to appeal to when one considers the appropriateness or otherwise of distance technologies. One size in distance education and training does not necessarily meet the learning needs of all stakeholders. Stakeholders may include students, educators, trainers, counsellors, mediators, supervisors, researchers and/or informational technologists.

One of the disadvantages of technologies is that they can lead to social isolation and destruction. Naisbitt and Phillips (2001, p. 19) indicate that in post-modern societies the

difference between the real and the imagined may not be clear-cut. Naisbitt et al (2001, p. 70, pp. 85-90) suggest that the blurring of boundaries between the real and fantasy may create an environment where our children are shaped by violence in the media and through computer games. This concept was reinforced in an Albertan Roundtable that I attended earlier this year on Family Violence and Bullying. Bullying behaviours can occur in educational institutions, in homes and/or in broader communities. Some proponents of computer games suggest that the violence that may be involved with games may have a cathartic value. Naisbitt et al (2001, p. 82) doubt that few academics or psychologists would support the concept that violent computer games are cathartic. Naisbitt et al (2001, p. 91, pp. 94-104) suggest that continuous violence in the media can desensitize professionals to the effects of violence and contribute to compassion fatigue. Naisbitt et al (2001, p. 107) suggest that one of the solutions to assist individuals who are subjected to violence through technologies is media literacy. Other solutions may include monitoring the quality of technologies to ensure that gratuitous violence and adult content is not available for children. Quality programs that have rich educational content perhaps should receive government and corporate sponsorship.

It can be challenging to regulate the content of materials that appear in cyberspace. Nevertheless, Naisbitt and Phillips (2001, p. 108) suggest that the producers of technologies that have violent content may soon be regulated by justice systems. Naisbitt et al (2001, p. 110) mention that the courts may need to hear matters pertaining to the dimensions and extent of "freedom of speech". Serious concerns about civil liberties may arise with the collection of DNA evidence. Naisbitt et al (2001, pp. 140 - 145) indicate that information that may be found in one's genes could lead insurance companies and employers to discriminate against individuals with questionable behaviours and medical problems. Suspected offenders may object to intrusive procedures to collect DNA evidence from them. Naisbitt et al (2001, p. 156) suggest that offenders may seek to mitigate the impact of criminogenic behaviour by arguing that the behaviour occurred because of their genetic make up. Naisbitt et al (2001, p. 146) suggest that some individuals may place more emphasis on protecting the public than on the privacy rights of suspected offenders. Naisbitt et al

(2001, p. 122) mention that one solution to this may be to uphold participatory decision making processes and to optimize opportunities for debating the issues that may surround the responsible use of technologies. Another solution could be to develop legal education so that individuals will be informed about key models that may be available to mitigate the shadow side of technologies. Possible solutions to mitigate the shadow side of the Internet may need to be based on the realities, strengths, needs and situations of students, educators, trainers, mediators, counsellors, researchers and information technologists.

There seem to be advantages and disadvantages associated with most therapeutic, law related and pedagogical approaches and this includes distance technologies. Casey (2000, p.19) refers to the interrelation between cybercounselling and cyberlearning and suggests that the advantages of technology may include -

- Enhanced access to communication;
- Participatory information systems;
- Information can be distributed instantly;
- Learning can be promoted through ready access to online information;
- Increased efficiency;
- Increased connectedness with others;
- Emotional support can become available online;
- Other.

Computers and the Internet may provide partial solutions for some who are experiencing stress or trauma. Perhaps we do not optimize the benefits of technologies if we try to make "one size fit all situations". Casey (2000, p. 20) suggests that the disadvantages of technology may include

- Changed social and economic environments that may compound inequities in the "global village";
- Organisational restructuring that can contribute to unemployment;
- Physical pain. This pain may include muscular, digestive and cardiovascular problems associated with sitting at keyboards for prolonged periods;
- Addiction to the Internet;
- Less time for leisure;
- Other.

5) Technologies and Broader Contexts

It is my position that multimedia can supplement distance-learning experiences, however technologies should not determine processes associated with curriculum design and the frameworks in which virtual tutoring and student support systems take place. I have found that the effectiveness of computer conferences, messaging, electronic polls, email, television, radio and fax can be augmented by the telephone. It can be helpful to meet occasionally face-to-face to develop pedagogical relationships, however there are times when it is not practical for stakeholders to meet face-to-face due to time and temporal constraints and a lack of resources. Groups of stakeholders may include the not for profit, government and corporate sectors. Specifically professionals that may have a stake in educational policy and practice may include students, educators, subject matter experts, trainers, researchers, mental health professionals including counsellors, mediators, supervisors and information technologists. Some informational technologists and educators that I have had contact with over the years have argued that video conferencing can distract students from participating effectively in learning experiences as learners may focus on a "talking head" rather than pedagogical content. Suler (2003, p. 1) mentions that the potential for end users to augment the telephone with video cameras has existed for some time, however few individuals have opted for this. Technological solutions can become overwhelming for users who are developing competency with computers and the Internet. Not all students who study at a distance will feel comfortable with the use of a video camera and may be overwhelmed by this particular technology. Brown (2000, p. 61) indicates that the application of video conferencing has been limited because of narrow band technology and challenges associated with down load and transmitting information. The process of being involved in education and training can become unnerving for students if they feel that they lack the necessary skills and knowledge to apply high tech instruments, however there are exceptions to this process. Fahy (1998) mentions that distance educators may have become interested in the role of high tech as a means to cut the costs involved in the development of educational services but that in the end, distance education may not be more cost effective than face-to-face instruction.

The effectiveness of technologies may be impacted by the pedagogical, emotional, cultural, political, social, demographic, economic and/or financial circumstances of stakeholders. For example, it can be demoralizing for professionals who work with students from the third world within and external to developing nations when they may be expected "to do more with less". In environments where social and cultural attitudes do not support education and/or training and there are inadequate finances to invest in needed technologies professionals can experience stress, burnout, compassion fatigue and/or trauma. There are clearly affective and attitudinal factors that need to be considered to develop technological solutions for challenges that exist in educational and training environments.

Stakeholders need to be supported to overcome challenges such as not having access to the Internet and in particular high-speed connections to the Internet. Based on my studies to date stakeholders who do not have access to high speed Internet can become frustrated by needing to delete spam mail and in maintaining software such as anti-virus applications due to the considerable time that can be involved in downloading these programs. It can be quite time consuming when connectivity is slowed down or breaks down because of multiple users that are linked to the Internet. I have experienced this phenomenon when I had a dial up connection to the Internet. I have known of some end users who have deliberately set time aside in the early hours of the morning so that they can use the Internet effectively as others are less likely to be using the technology at these times. Based upon my observations and experiences I have noted that some businesses have made immense investments in technologies only to find that the costs of upkeep are prohibitive for them as is the training needed to help workers to apply the technologies successfully. Casey (2000, p. 18) and Peterson (2000, p. 143) refer to the need to manage Internet tools prudently, because if high tech is not applied wisely the upgrade costs for the technology may be significant. Fahy (1998) and Materi and Fahy (2004, p. 2) refer to the need to plan the manner in which technology will be applied. Naisbitt and Phillips (2001) are concerned that the application of technologies can develop a damaging cycle where frequent upgrades are required to lessen obsolescence. Naisbitt et al state, "But like the Siren's song the call of technology can be

deceiving. It lures, then ensnares" (p. 36). As emerging technologies become available on the market some professionals may need to abandon high tech instruments of the past. Fahy (2002, p. 20) mentions that tools for communicating online need to be refined as bandwidth increases.

Distance technologies can enhance idiosyncratic, social and pedagogical experiences if they are managed effectively. Stakeholders ought to consider how the purchasing of particular technologies, will meet diverse needs and their broader mission, vision, values and strategic plans. Stakeholders may also be well served by including factors pertaining to the planned obsolescence of technologies into their purchasing and strategic plans. Many students need to be supported to maximize their pedagogical experiences whilst studying at a distance. Computers and the Internet can be excellent pedagogical tools to enhance learning experiences, however these technologies should not determine the curriculum, student support and more broadly matters pertaining to public policy.

The education and training sectors are being expected by some governments and others in positions of authority to develop emergent philosophies associated with pedagogy to address the multiple needs of diverse groups of students including those who may be educationally, socially, biologically and/or economically disadvantaged. Some governments and others in authority are demanding that these sectors assume additional social and economic roles, however educators may not be available to meet these expectations (Crittenden, 1998). Administrators and faculty may look for "quick fixes" for technological, political, economic, financial and demographic challenges and as a result place secondary importance on retaining students who are enrolled with them. Cookson (2002) states, "The challenge of open and distance learning institutions is to convince both internal and external stakeholders that to place priority on retention measures, while actually reducing efficiency in the short-run, may actually result in more favourable returns on investment in the long run" (p. 8). Educators and administrators need to plan for the future and support students to succeed in their studies. When educators and administrators are placed under immense political and economic pressure to cut costs in the short term the quality of pedagogy may suffer (Maxwell, 1996; Sturman, 1997).

Students, educators, trainers, subject matter experts, counsellors, mediators, supervisors, researchers and/or information technologists need to have social, political, financial, technological, economic and financial support to conduct quality-based inquiry. Qualitative and action based research can be excellent conceptual frameworks to develop participatory processes and to understand what the needs of students and other stakeholders may be (Wadsworth, 1991). Cookson (2002, p. 14) links action research with changes associated with policies, curriculum design, programming and systems. Allen (2002) states - "Action research comprises a family of research methodologies which aim to pursue action and research outcomes at the same time (PAR, action learning, soft systems methodology, etc.). It therefore has some components which resemble consultancy or change agency, and some which resemble field research" (p.1)." I have applied this conceptual framework in a qualitative study that I undertook with my colleague Linda McKay - Panos and we are about to publish a book entitled "Virtual Legal Education in the 21st Century". I am pleased to acknowledge the support of the Department of Justice Canada in funding the study that was a precursor to this book.

In my doctoral study I applied distance methods to connect with participants in four countries and I built on from the innovative practices that have been established by the Alberta Supernet Research Alliance. The Alberta Supernet Research Alliance (2004) states, "Alberta Supernet is a high-speed, high capacity broadband network linking 4,700 government offices, schools health-care facilities and libraries in 422 Alberta communities." I acknowledge the ingenuity of professionals involved with the Alberta Supernet Alliance and distance technologies generally. It seems to be important to enhance technologies through strategic planning and broadband development. Professionals may need to have a vision as to why, when, how and where to deploy certain technologies. Professionals in the Alliance have applied consumer driven frameworks to explore issues associated with crisis response services, distance education, lifelong learning, library and information resources, E-Health, community development, Aboriginal issues and business applications. I link E-Health with biological, affective, social and/or cultural factors that have an impact upon the well being of clients. The Alliance includes representatives

from Simon Fraser University, the University of Alberta, the University of Calgary, Athabasca University, Portage College and Red Crow Community College. These educational institutions are located in Western Canada. Municipal, Provincial and National governments, the corporate sector and interdisciplinary teams of professionals are also represented in the Alliance. Broadband connectivity can help to bring many pedagogical, therapeutic and law related supports to professionals who may be geographically and temporally isolated.

The Alliance has received funding through the Social Sciences and Humanities Research Council of Canada. Professionals have been afforded opportunities through the Allowance to learn from clients and the broader public. Professionals from across various disciplines have been given frameworks to develop knowledge-based economies. Professionals that are associated with the Alliance seem to strike a balance between diverse and shared interests with multiple stakeholders. Professionals that are connected with the Alliance have made an effort to understand the needs and realities of end users who may live in rural and remote communities. To develop strategic plans and exploratory research town meetings were conducted in various centres in Alberta. Professionals who are involved with the Alliance aim to provide social and economic support to end users in Alberta. End users may also include individuals and groups who may live in Aboriginal communities. Key principles such as, sustainability, accessibility and broadband community development seem to have been adopted by professionals who are connected with the Alberta Supernet Research Alliance.

In section two of this paper I asked how can professionals develop a student-focused approach to learning and I suggested that one approach of achieving this is through the development of virtual tutoring and student support systems that are focused on meeting the needs of students. The second question I asked was who might be involved in developing tutoring and student support systems and I indicated that professionals who have a stake in pedagogical or therapeutic services would have instrumental roles to support students. The third question I asked was what groups of students may be educationally disadvantaged and I mentioned that women, people with disabilities, people who live in rural and remote regions,

offenders and professionals who are under stress can lack basic pedagogical resources. These groups of students need to be supported through virtual tutoring and student support systems to succeed in their studies. In this paper I have discussed some of the challenges and strengths of technologies such as computers and the Internet. Technologies can be excellent pedagogical and therapeutic tools however curriculum design; tutoring and student support systems should not be determined by technocracy. Student support may include recruitment, marketing, recording, intake and/or library services. My focus has been on online counselling, mediation and supervision as pivotal components of virtual tutoring and student support systems. These systems would not exist in the form that they are currently if it were not for advent of technologies such as computers and the Internet.

5) References

- Alberta Supernet Research Alliance (2003). *Studying the Social and Economic Impacts On the Alberta Supernet. A SSHRC Initiative on the New Economy*. Calgary, Alberta Supernet Research Alliance
- Allen (2002). *Action Research. NRM Change Links Index*. New Zealand: Massey University <http://nrm.massey.ac.nz/changelinks/ar.html>
- Australian Disability Discrimination Act (1992). *Australasian Legal Information Institute* http://www.austlii.edu.au/au/legis/cth/consol_act/dda1992264/
- Australian National Training Authority (2004). *Planning Cycle*. Australia: Australian National Training Authority <http://www.anta.gov.au/vetPlanning.asp#anp>
- Bernard, J.M. & Goodyear, R.K. (1998). *Fundamentals of Clinical Supervision*. Boston: Allyn and Bacon
- Bhadane, N.R. (1993) *Yashwantrao Chavan Maharashtra Open University. Perspectives on Distance Education*. Vancouver: Commonwealth of Learning
- Brown, D. (2000). *The Odyssey of a Technologically Challenged Counsellor Educator Into Cyberspace*. In J.W. Bloom & G.R. Walz (Ed.), *CyberCounselling and Cyberlearning. Strategies and Resources for the Millennium*. USA: American Counselling Association; CAPS, Inc & Eric Counselling and Student Services Clearinghouse
- Canadian Professional Counsellors Association (2004). *Recommendations to the Health Professional Regulatory Advisory Council on the Regulation of Counselling and Psychotherapy in Ontario*. British Columbia: Canadian Professional Counsellors Association <http://www.cpcarpc.ca/>

- Casey, J.A. (2000). *Managing Technology Wisely: A New Counsellor Competency*. In J.W. Bloom & G.R. Walz (Ed.), *CyberCounselling and Cyberlearning. Strategies and Resources for the Millennium*. USA: American Counselling Association; CAPS, Inc & Eric Counselling and Student Services Clearinghouse
- Coholic, D. & Blackford, K. (2003). *Exploring Secondary Trauma in Sexual Assault Workers in Northern Ontario Locations-The Challenges of Working in the Northern Ontario*. *Canadian Social Work*, 5(1), 43 - 59
- Cookson, P.S. (2002). *Access and Equity in Distance Education: R&D and Quality Concerns*. Keynote address, XV Annual Conference of the Asian Association of Open Universities. New Delhi: Asian Association of Open Universities. [Http://cde.athabascau.ca/showcase/cookson4/cookson4_files/frame.htm](http://cde.athabascau.ca/showcase/cookson4/cookson4_files/frame.htm)
- Crittenden, B. (1988). *Policy directions for Australian secondary schools: A critique of some prevalent assumptions*. *Australian Journal of Education*, vol. 32, no. 3, 287 - 309
- Declaration of the Rights of Disabled Persons (1975). *Human Rights Library*. USA: University of Minnesota <http://www1.umn.edu/humanrts/instreet/t3drdp.htm>
- Donath, J.S. (1996). *Identity and Deception in the Virtual Community*. In Kollock, P. & Smith, M. (Ed), *Communities in Cyberspace*. London: Routledge <http://smg.media.mit.edu/people/Judith/Identity/IdentityDeception.html>
- Fahy, P. J. (2002). *Epistolary and Expository Interaction Patterns in a Computer Conference Transcript*. *Journal of Distance Education* 17(1) Canada: Canadian Association of Distance Education http://www.caded-aced.ca/en_pub.php
- Fahy, P.J. (2001). *Use of Linguistic Qualifiers and Intensifiers in a Computer Conference*. *The American Journal of Distance Education* (in press)
- Fahy, P. (1998). *Reflections on the Productivity Paradox and Distance Education Technology*. *Journal of Distance Education*, 13 (2) Canada: Canadian Association of Distance Education <http://cade.athabascau.ca/vol13.2/fahy.html>
- Geary, J. (2003). *Online Counselling with Women Offenders*. *The Distance* 12 (2) http://www.adeta.org/pdf/newsletter/2003/The%20Distance_July_2003.pdf
- Geary, J. (2002). *Women and Disadvantage*. *Alberta: The Distance* 1(3) <http://www.adeta.org/pdf/newsletter/2002/newsletternovember2002l.pdf>
- Geary, J & McKay - Panos, L (2004). *Online Counselling Support to Women Offenders*. *ODR Monthly* <http://www.odr.info/odrmmonthly.php>
- Gautam, K (1993) *Kota Open University. Perspectives on Distance Education*. Vancouver: Commonwealth of Learning
- Gender, Diversities and Technology Institute (2004). *Facts Newton, Massachusetts: Gender, Diversities and Technology Institute* <http://www2.edc.org/GDI/index.asp?index=5>
- Kottler, J.A. (2002). *Theories in Counselling and Therapy. An Experiential Approach*. Boston: Allyn and Bacon
- Materi, R.R. & Fahy, P.J. (2004). *Interim Report: A Case Study of Internet-based Distance Education Development in Vietnam*. *International Review of Research in Open and Distance Learning* 5 (1) http://www.irrodl.org/content/v5.1/materi-fahy_researchnote.html
- Maxwell, G. (1996). *Forum: convergence of general and vocational education: Overview and critique*. *Unicorn*, 22. (2) 4 - 13
- McSwain, K. Robinson, R. & Panteluk, L. (1998). *Annotated Bibliography on Vicarious Traumatization and Forms of Traumatic Stress in the Workplace of Psychiatric Nurses*. 2nd Annual Poster Session Competition April 17, 1998. Selkirk, Manitoba: Dr. Jontry <http://www.drjontry.com/handout/vicarious.htm>
- Mehta, P.K. (1993) *Indira Gandhi National Open University. Perspectives on Distance Education*. Vancouver: Commonwealth of Learning Ministerial Council on Education, Employment, Training and Youth Affairs
- (MCEETYA) (1996). *National Report on Schooling in Australia: 1994 (Extract)*. Melbourne: MCEETYA, 1 - 12
- Moore, M. G., and G. Kearsley (1996). *Distance Education: A Systems View*. Wadsworth Publishers: 146-51. <http://www1.worldbank.org/disted/Teaching/Instruction/tut-01.html>
- Naisbitt, N. & Philips, D. (2001). *High Tech High Touch. Technology and our Accelerated Search for Meaning*. London: Nicholas Brealey Publishing
- Parkinson, C. (1995). *Access and equity*. *The Australian TAFE Teacher*, 2nd Quarter, 31 - 33
- Pearlman, L.A. & Saakvitne, K.W. (1995). *Trauma and the Therapist. Countertransference and Vicarious Traumatization in Psychotherapy with Incest Survivors*. New York: W.W. Norton & Company

- Peterson, M. (2000). *Electronic Delivery of Career Development University Courses*. In J.W. Bloom & G.R. Walz (Ed.), *CyberCounselling and Cyberlearning. Strategies and Resources for the Millennium*. USA: American Counselling Association; CAPS, Inc & Eric Counselling and Student Services Clearinghouse
- Rimmer, S. (1995). *Attaining Equity: An assessment of federal government Programs*. *People and Place*, vol. 3, no. 3, 16 - 23
- Rudolph, J.M. & Stamm, B.H. (1999). *Maximising Human Capital: Moderating Secondary Traumatic Stress through Administrative & Policy Action*. In B.H. Stamm, (Ed), *Secondary Traumatic Stress. Self-Care Issues for Clinicians, Researchers and Educators*. (2nd Edition). Baltimore: Sidran Press
- Smith, M.L. (1988). *Social Work in the Workplace An Overview*. In G.M. Gould & Smith, M.L. (Ed.), *Social Work in the Workplace*. New York: Springer Publishing Company
- Stamm, B.H. (2002). *Measuring Compassion Satisfaction as Well as Fatigue: Developmental History of the Compassion Satisfaction and Fatigue Test*. In C.R. Figley, (Ed), *Treating Compassion Fatigue*. New York: Brunner-Routledge
- Stamm, B.H. (1999). *Creating Virtual Community: Telehealth and Self Care Updated*. In B.H. Stamm, (Ed), *Secondary Traumatic Stress. Self-Care Issues for Clinicians, Researchers and Educators*. (2nd Edition). Baltimore: Sidran Press
- Sturman, A. (1997). *Social Justice in Education (Extract)*. Melbourne: ACER, 34 - 54
- Suler, J. (2003). *Email Communication and Relationships*. In J. Suler, (Ed) *The Psychology of Cyberspace*. (2nd Edition) USA: Rider University <http://www.rider.edu/~suler/psyber/emailrel.html>
- Tillman, H.N. (2000). *Virtual Community Building Using Internet Tools*. USA: Babson College
- Tinkler, D., Lepano, B. & Mitchell, J. (1996). *The emerging new paradigm for the education industry. Education and Technology Convergence: A survey of technological infrastructure in education and the professional development and support of educators and trainers in information and communication technologies*. Canberra: AGPS, 67 - 92
- Tisdell, E.J. (1993). *Feminism and Adult Learning: Power, Pedagogy, and Praxis*. In S.B Merriam (Ed.) *An Update on Adult Learning Theory*, 57. San Francisco: Jossey Bass, 91 - 103
- University of Southern Queensland (2000). *Study Guide. Current Issues in Post - Compulsory Education and Training*. Toowoomba: University of Southern Queensland
- Venkaiah, V. (1993) *Dr. B.R. Ambedkar Open University. Perspectives on Distance Education*. Vancouver: Commonwealth of Learning
- Wadsworth, Y. (1991). *Do It Yourself Social Research*. Collingwood: Victorian Council of Social Service
- Williams, M.B. & Sommer, J.F. (1999). *Self-Care and the Vulnerable Therapist*. In B.H. Stamm, (Ed), *Secondary Traumatic Stress. Self-Care Issues for Clinicians, Researchers and Educators*. (2nd Edition). Baltimore: Sidran Press
- Worth, V. (1996). *Supporting Learners in Prison. Supporting the Learner in Open and Distance Learning*. R. Mills & A. Tait, (Ed), *Supporting the Learner in Open and Distance Education*. London: Pitman Publishing

