Southern and East African Adult Learners Perceptions of a Canadian University Online Course: Application of Khan's Conceptual Framework

by

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ABSTRACT

The perceptions of Southern and East African learners of their experience in a continuing education were examined using select dimensions of Khan's e-learning evaluation framework as a theoretical one. This framework provided an evaluative frame in which to examine attributes of e-learning in the context of globalization, internationalization, and massification of education. This research provided a baseline of student perception about the utility and suitability of online education to meet the growing international demands for education. Technology has played a role in the delivery of education, such as that of recent emerging technologies, notably social media. Data included learner reflections and survey responses. A qualitative analysis methodology was used to analyze responses to the research questions. The findings from this research provided insight about student perceptions, engagement, and acceptance of social media as complementary tools in the delivery of educational programming for Southern and East African learners taking blended learning courses from Canadian universities with a proficient African facilitator. These findings permitted some understanding of the technological, social, cultural, and motivational challenges (Dimensions of Kahn's framework) associated with distance education for African adult learners to permit more nuanced course design and delivery.

Keywords: online learning, eLearning, distance education, African students, evaluating online learning, social media, globalization, education, Khan's e-learning framework.

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DEDICATION

To

Karen, Veda, Jediel, Zuriel

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CHAPTER 1: INTRODUCTION

Information and communication technology, particularly the Internet, has had a growing impact on social, economic, and political aspects of society. They also play a role in the context of education, as it concerns the delivery and distribution of content, and the facilitation of learning through the ways in which they facilitate knowledge sharing and collaboration.

Information and communication technologies, particularly the Internet, continue to play a significant role in shaping current and future social, economic, and political structures at all levels (Souter, MacLean, Akoh, & Creech, 2010). These technologies, among the many drivers of globalization, enhance communication, influence relationships, empower, as well as disenfranchise citizens. They are disruptive, and at the same time creative, in ways that challenge existing structures and causes us to rethink society and how we learn, work and play (Jiao & Miao, 2010; LeNoue, Hall, & Eighmy, 2011; Souter et al., 2010). Such technologies have become tools for mediating our human activities (LeNoue et al., 2011).

Broadband Internet has potentially contributed $500 billion to the GDP of the US and between $300 to 400 billion in Europe (Zhen-Wei Qiang & Rossotto, 2009). They play a significant role in research and development as well as innovation in fields of nanotechnology, biotechnology, and tele-health, and they foster the sharing and dissemination of knowledge. Information flows that such technologies support are increasingly used as a measure of wealth (LeNoue et al., 2011), and major financial investments consider them as essential factors that must be present in order that

investment decisions can be made in countries, particularly developing ones (Zhen-Wei Qiang & Rossotto, 2009).

Information and communication technologies and broadband Internet have also played an important role in education. Distance education delivered through broadband Internet on fixed, wireless, or mobile devices has replaced mail-delivered correspondence courses (Rudestam & Schoenholtz-Read, 2002). Globally, traditional institutions are increasingly offering distance courses in competition, with virtual institutions somewhat replacing past archaic and latent education delivery methods such as through CD-ROM or satellite. New forms of content distribution have emerged that use modern mobile devices to access content, and various forms of academic institutions chose different delivery methods to offer content to different varieties of learners using the Internet (Rudestam & Schoenholtz-Read, 2002).

The education landscape is changing broadly in recognition of these technological influences on education, but specifically, in order to meet the needs of working students, mostly adults with familial commitments who are responding to the growing demands from the industry for specialization and professional development (United States Government Accountability Office, 2002). However, socio-cultural barriers, economic constraints, institutional obstacles, political, gender issues, and personal factors contribute to some of the challenges of access to education in sub Saharan countries (Tanye, 2008).

Access to education is further constrained by the increasing enrolment rates into traditional universities, especially in developing countries, which are underfunded (Sall & Ndjaye, 2007, p. 45) and are unable to sustain increasing growth. Therefore, new

methods of delivering content, teaching, learning, research, and in administering schools and institutions, be they formal or informal, traditional or non-traditional, are required to address these growing demands. This is particularly important for developing countries and, more specifically, by Canadian institutions that continually seek to attract students in an increasingly globalized educational market.

Information and communication technologies and broadband Internet can play a role here. Matheos, Rogoza and Hamayil (2009) suggested that technology can assist educators and institutions tethered to first-generation (i.e., slow asynchronous) forms of teaching to leapfrog across to fourth generation forms that involve fast synchronous delivery methods of distance education even in difficult settings like Palestine. A shift in thinking and application within the entire educational eco-system may however be required, particularly as it concerns learning as a social process and how new forms of technology applications like social media can be useful in this context. These influences are important to education and cannot be discussed outside the context of globalization.

The concepts of globalization in the educational context were present in the delivery of the Introduction to Emerging Technologies course offered to three cohorts of over 50 adult learners from Southern and East Africa (University of Manitoba, 2010). In this thesis, I have examined their participation in the course delivered by myself, an African instructor through the University of Manitoba's Extended Education faculty distance education program.

This thesis contains six chapters. Chapter 1 examines education in a context of globalization, both from its enabling function of facilitating economic and intellectual growth, and its disruptive capability for creating inequality and discontent. Globalization

provides an opportunity to foster equality and rides on the back of information and communication technology, particularly the Internet. The chapter discusses the growth of ICTs in Africa in this context of globalization and, through this, draws outcomes from which Canadian institutions seeking to deliver content to developing societies can benefit. The chapter also highlights the problem with which this research was concerned, particularly in relation to the challenges of delivering education in the context of technology growth in a global economy. The chapter concludes with the research questions and purpose and a description of how I, as the researcher, addressed the question of bias in the particular case study that was examined.

Through an extensive review of literature, Chapter 2 examines the impact of the Internet on teaching and learning as it concerns the adult learner. It draws congruence between the characteristics that the adult exhibits and the potential that social media offers to teaching and learning. The section on e-learning highlights the different ways that distance learning has been conducted in recent times from the use of postal-mailed CD-ROMs to deliver content to the use of the Internet for more interactive forms. Although organizing courses and delivering them through an online platform, such as a learning management system, is essential to distance learning, it should not to be confused to mean e-learning. E-learning or distance learning means much more. The chapter also presents a useful theoretical framework for evaluating the effectiveness of e-learning—Khan's framework. The case of an e-learning course offered to students in East and Southern Africa is highlighted using this framework as an effective one for assessing the impact and perception of learners within their learning context. This framework was further used to structure the methodology for the research as described in Chapter 3.

Chapter 3 describes the methodology that was deployed in the research, the research team and their roles, how the participants to the research were recruited, and the method that was employed for data collection and analysis. A framework for validation of the research findings is also presented. At least ten students were purposefully sampled, seven responded to the survey questionnaire, and ten weeks of weekly reflection data, totalling over 70 reflections of quantitative text, made up the data set.

Chapter 4 concerns the presentation of the research findings using selected components of Khan's framework: namely, pedagogical, ethical, and technical. A data aggregation matrix was used to triangulate the data that resulted from the online survey/questionnaire and weekly reflections. Although interviews with the research participations was initially built into the research methodology as a backup in the case that insufficient data were returned from the survey/questionnaire, this approach was not necessary as the data received were sufficient.

Chapter 5 discusses the research findings, grounding the outcomes in the literature in adult learning and linking them to existing research on culture, self-development, and motivation. In the discussion on challenges to e-learning, the chapter describes several difficulties, including connectivity and technical challenges and the need to consider the learner's cultural context in the design and delivery of courses that will involve them.

Chapter 6 concludes and offers three specific recommendations that address some of the findings in the research.

Globalization

Globalization stems from much larger concepts and influences a broad sphere of society. Its application specific to education, among many, is a significant and an

important aspect of its dominance in today's society. Stiglitz (2002) described globalization as a phenomenon that is sweeping across the world and its people. It is a closer integration of the countries and peoples of the world, which has been brought about by the enormous reduction of costs of transportation and communication and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and (to a lesser extent) people across borders (p. 9). Information and communication technologies have played a significant part in these functions.

Globalization and the developing world context. Stiglitz (2002) painted a rather glum picture of the impacts of globalization to developing countries. In this context, and from the perspective of international financial institutions, he argued that those who make decisions for the developing world, "chosen behind closed doors", often reflect and make policy decisions from their own perspectives, which are only aligned with the commercial and financial interests of those like themselves in the advanced industrial countries (pp. 19-20). These decisions are not always in the best interest of those for whom they are made. These are not the only impacts that continue to challenge developing countries. Internal problems of governance, poor financial sector, economic insecurity, macroeconomic instability, low structural reform, and lack of local partnerships with relevant organizations are some of the challenges that impede developing countries' progress towards benefiting from globalization (Ouattara, 1997). As suggested by Altbach (2004), these factors heighten inequality in an increasingly globalized world.

Other factors that bind countries to certain globally accepted norms, principles, and standards are internationally defined treaties and protocols to which they must assent.

Protocols such as the UN Declaration of Human Rights (United Nations General

Assembly, 1948) and UNESCO's (1989) *Convention on the Rights of the Child* place a

demand on countries to elaborate national-level principles that demonstrate their

commitments to these global agreements to which they signed. Developing countries are

not exempt from domesticating global treaties, even though they may lack the resources

to execute them completely. These agreements cause them to develop targets and provide

resources to meet them, some of which may be unavailable. By agreeing:

> to undertake the obligations of the Convention (by ratifying or acceding to it),
>
> national governments have committed themselves . . . have agreed to hold
>
> themselves accountable for this commitment before the international community .
>
> . . and are obliged to develop and undertake all actions and policies. (UNICEF,
>
> n.d., para. 5)

Sometimes, funds from international institutions are required to meet these

commitments most of which do not come without strings attached in order to replicate

globally defined and sometimes locally inappropriate standards and norms (Stiglitz,

2002*).* As a result, development aid that address social, economic, and political

challenges continues to flow to many developing countries with conditionalities.

Education is not exempt.

Globalization and its impact on education. Globalization is characterized by

internationalization, the proliferation of the English language in teaching and research,

and information technology. These are contributing factors to the substantial changes

currently taking place in education, particularly at the post-secondary level, and in

complete alignment to Western education, strategies, and norms. Altbach (2004)

described globalization and its impact on education as:

> The broad economic, technological, and scientific trends that directly affect
>
> higher education, and are largely inevitable. Politics and culture are also part of
>
> the new global realities. Academic systems and institutions may accommodate
>
> these developments in different ways, but they cannot ignore them. These
>
> phenomena include information technology in its various manifestations, the use
>
> of a common language for scientific communication, and the imperatives of both
>
> mass demand for higher education (massification) and societal needs for highly
>
> educated personnel. (p. 5)

Egbo (2009) also supported the influence that globalization has had on education

by stating that ethno-cultural diversity is a function of global forces that fuels

international population movements, and that is influenced by progressive immigration

policies (p. 58). This was more so in Canada, whose ethno-cultural makeup has been

significantly influenced by immigration attributed to the entry of displaced persons

(Egbo, 2009). These are important influences on education that call for adjustments in

educational policy in order to accommodate this changing landscape, both for

international students in Canada and for Canadian institutions offering education

internationally to students in their countries.

Globalization has also brought about inequalities (Altbach, 2004; Round, 2007)

and discontent (Stiglitz, 2002), with unequal gains to those in developed countries and

marginality to those in developing countries. In spite of these disparities, it cannot be

completely avoided. According to Altbach (2004), globalization continues to influence

knowledge, its production, and distribution; creates *centre* status for certain institutions; and leaves others on the fringes (pp. 6-8). Globalization also generates interest in multinational corporations and media institutions that have become powerful and influential in deciding the structure of education by creating losses in intellectual capacity and culture and replacing them with new cultures, norms, and values. It creates migration, sometimes referred to as brain drain of intellectuals across countries, usually from developing to the developed where salaries and conditions of services generate a *pull* factor (p. 14). How countries balance globalization and its effects will be determined by how they recognize its complexities and nuances within their context (p. 24) and in how they create an academic environment that recognizes how to best leverage its benefits.

Meeting education objectives for such developing countries is not easy. Achieving these obligations is further complicated by more recent calls to meet newer agreements such as the millennium development goals (United Nations [UN], n.d.). Realizing the second goal that calls for achieving universal primary education by 2015 has proven quite difficult for most countries, especially those in sub-Saharan Africa and Southern Asia, which is home to a "vast majority of out-of-school children" (UN, n.d., para. 2). Inequality remains a challenge to attaining this objective (UN, n.d., para. 3). There are also national or regional-level commitments that countries have subscribed to. The African peer review mechanism, for instance, is one such commitment in which several African countries have agreed to the principles of openness in which their governance reform processes can be reviewed by another country. Education commitments have met stiff challenges in this area.

The commitments to advance education in a number of developing countries have been narrowed to the primary and, in some cases, secondary school levels (or K-12). Funding for post-secondary education remains the prerogative of students and the innovative strategies of existing publicly owned or emerging private post-secondary institutions. As a result, a number of private universities have emerged to fill the gaps in declining quality of education resulting from public institution's inadequacies. This is only one of the many reasons for the emergence of private post-secondary institutions, most of which demand more tuition from students. A most compelling reason for private institutions to advance education in developing countries is the inabilities of public institutions to meet growing enrolment rates. The situation in Nigeria, as described in Box 1, emphasizes this point (National Open University of Nigeria [NOUN], 2006).

Clearly, governments have to define new ways of meeting these increasing demands: not only in Nigeria, but also in most developing countries, especially in Africa, as the demand for education is out stripping existing capacity. Along with these challenges of globalization, education in developing countries, and in particular at the post-secondary level, continues to be pressured, both internally to meet growth demands and externally to address the onslaught of globalization, which is facilitated by growth in information and communication technology.

Box 1:Growing enrolment rates in Nigeria

According to the 1959 report by the Ashby Commission, authorized by its previous colonial administrators, Nigeria's post-secondary student population post-independence (1960) would increase to only 7,500 students by 1970 and to 10,000 students by 1980. By the mid-1970s there were already 13 Federal universities with a total of over 400,000 students and by 1999, between 16,000 to 30,000 students in the six first-generation universities, to address the growing population of post-secondary enrolment. The reality totally undermined the projections of the Ashby report. This number has continued to increase today with approximately 7.5 million new applications by 2010 to the National Open University of Nigeria (NOUN) alone, a non-traditional university (NOUN, 2006, p. 9).

Since then, there are over 75 private, public, and state universities that have emerged to cater to the increasing population of students in Nigeria. Nine national and three private universities had been created by the end of 2011 (National Universities Commission, 2008). To meet the actual admission requirements in Nigeria, current admission factors must be multiplied by a factor of 10 or current number of universities must be expanded by 10 (NOUN, 2006, p. 9). Early projections such as those made by the Ashby Commission, which would have helped with future resource planning requirements including growing enrolment numbers, only served to achieve the opposite.

Growth of information and communication technologies in Africa.

Telecommunications infrastructure deployment and use globally and, specifically, in

Africa has continued to grow to where more than 8% of its population use mobile phones, with a projected reach of 41% at the end of 2010 (International Telecommunication Union [ITU], 2010). Over 65% of the continent lives under the footprint of a mobile network that has stimulated about $56 billion in private sector investments between 2004 and 2008 (World Bank, 2012). The Internet penetration of Africa is projected to reach 9.6% by the end of 2010—although showing growth, it is still a far cry from global averages. Broadband penetration has grown, but remains low at 1.0% compared to 24.6% in developed countries and 8.0% globally by the end of 2010 (ITU, 2010). The expansion of telecoms has implications for education in a globalized world, where opportunities for outsourcing have continued to emerge and more technically savvy professionals are required to fill positions. Information technology has enabled a global market. It has also facilitated the training and education of globally certified or accredited professionals that this market requires. A growing number of academic publications have explored the role of online education or e-learning in developing countries (Ayadi, Adekoya, & Ikem, 2005; Boadi & Letsolo, 2004; Kwabena Ayeh, 2008; Perkins, 2007; Uys, Nleya, & Molelu, 2004)

Countries such as Canada have to position themselves to take advantage of the growing international education delivery opportunities that have been facilitated by globalization and technology. How Canadian institutions do this will determine the scope of their influence in the international education market, the strategies for attracting international students to Canadian universities to fulfill their growing resource needs for highly skilled professionals, and the mechanisms for increasing business investments and for developing global opportunities. This should be done, however, with a consciousness

of sustainable development and with an intention to right the wrongs of colonial

influences, especially in the developing countries it seeks to engage.

Statement of the Research Problem

Through the research for this thesis, I explored information and communication

technologies (ICTs), specifically social media, and its influence on teaching and learning,

particularly in programs delivered to developing countries. I also explored the roles that

ICTs play in influencing the culture of learning and, conversely, how culture can

influence the use of ICTs. This was examined through a distance education course

delivered to a cohort of adults from eleven East and Southern African countries.

This study will contribute to the literature, in presenting a practical experience of

the University of Manitoba's own use of social media as an important input to facilitating

teaching and learning through online or distance education to learners in the developing

country context. The research was particularly focused on social media use as an

important part of technology assisted learning, e-learning, or online learning. Khan's

(2011) framework was employed to examine the effectiveness of the course delivery. The

discussion explored the opportunities that the use of social media for teaching and

learning offered to Canadian schools in an increasingly global context and how they can

further investigate growing global teaching, learning and research opportunities. The

research also examined the growing importance of culture and social implications and

how their understanding could benefit future course designs in such a way that they

sensitive and relevant to international students.

The University of Manitoba's Extended Education department delivers online

courses to a broad range of students, mostly individual adult learners in Canada and the

US, but also to individuals and institutions in the developing world, specifically Africa.

The University of Manitoba continues to evolve and innovate ways and means whereby it

can deliver teaching and learning such that student learning outcomes and objectives can

be met. Developing and delivering courses that make use of information technology is

one of such ways.

      Among the different ways of delivering distance education and online courses,

two approaches are most predominant. One is a blended approach where face-to-face or

traditional teaching methods are combined with online delivery methods as described by

Garrison and Vaughan (2008), which involves the "thoughtful fusion of face-to-face and

online learning experiences" (p. 5). They suggested:

      The basic principle is that face-to-face oral communication and online written

      communication are optimally integrated such that the strengths of each are

      blended into a unique learning experience congruent with the context and

      intended educational purpose. (p. 5)

      Garrison and Vaughan's (2008) use of the term thoughtful suggested an

application of technology to learning in a way that does not involve a mindless

introduction or application of a piece of technology. Rather, it "represents a restructuring

of class contact hours with the goal to enhance engagement and to extend access to

Internet-based learning" (p. 5). In this regard, Garrison and Vaughan implied that

technology is considered from the point of designing the learning objectives right through

to delivering the course. Where necessary, and only in aspects where technology will add

more value, is it introduced.

This blended approach has been used to transform the traditional Introduction to Psychology course, offered to over 2,500 students; more students compared to its fully traditional equivalent taken by approximately 200 at the University of Manitoba, according to a recent report on Blended Learning presented by Canada's Collaboration for Online Higher Education and Research (2011, p. 8). This approach made use of a learning management system called Angel, which allowed for the provision of multimedia content, online resources, and links and offered communication platforms such as emails and discussion forums to the learners. An initial review of the project showed gains in retention data equivalent, similar, and not too different from its traditional offering

The second approach is a fully online offering, which is employed for the delivery of courses in the Continuing Adult Certificate in Education program offered by Extended Education Faculty of the University of Manitoba. One such course is an emerging technologies course delivered to at least 20 students in every single offering within an academic year, of which there have been at least three offerings in the past two years, 2010 to 2011. It is fully online, hosted, and delivered also using Angel as the learning management system. The course has also been offered to learners in Asia and Africa who either register individually or collectively as a cohort. Sometimes, cohorts are organized in agreement between the faculty and the requesting institution. In some cases, programs are redesigned and specifically tailored to meet the requirements of the requesting institution while maintaining the accreditation standards of the university. The university accredits all courses offered by Extended Education.

In 2010, the faculty of Extended Education at the University of Manitoba entered into a partnership agreement with a the Regional Aids Training Network (RATN) based in Nairobi, Kenya to deliver a series of courses in a certificate program to over fifty adult learners spread across several countries in East and Southern Africa. RATN is a multi-country, membership-based institution composed of over 29 member institutions in eleven East and Southern African countries. Its function is to strengthen individual and organizational capacity to respond to reproductive health concerns. The learners in the course are full-time employees working as training coordinators or facilitators of reproductive health programs for their various organizations. They were enrolled into the distance education program by their institutions: (a) to develop and improve their capacity on reproductive health issues and (b) to develop the skills required for the design and delivery of online or distance health-related education to their students. The learners and their students live in often remote and rural parts in Kenya, Zambia, Malawi, Zimbabwe, Lesotho, Swaziland, and South Africa, where access and connectivity are not readily available or affordable.

Along with three other organizations, namely: the AIDS Support Organization, Uganda (TASO); Mananga Center for Regional Integration and Management Development, Swaziland; and IDM Swaziland, Swaziland (IDM), the University of Manitoba and RATN collectively designed and delivered a program of thirteen courses in the certificate program, which included courses in management, the human resource function, HIV/AIDs policies, gender mainstreaming, resource mobilization, and the Introduction to Emerging Technologies course. Through this course, the opportunities offered by technologies, such as social media for educators, to increase their learner

engagements and improve the overall value of their learning are explored. Facilitators of the course recognize the recent growth in new technologies and the introduction of numerous tools and approaches, such as blogs, wikis, podcasts, social bookmarking, virtual worlds, and social networking services, and how these can be used in teaching and learning. In delivering the course, instructors further explore the development of these different technologies, indicating the opportunities and the potential impact that they could have on teaching and learning, and they direct students to focus on tools that increase learner control over content, interaction, and the formation of learning networks with peers and experts outside the online classroom. It is taught over a 12-week period.

Prior to the online course offering, Dr. Kathleen Matheos, Associate Dean of the Faculty of Extended Education and I offered a one-week face-to-face delivery to a cohort of over 30 learners in Nairobi mostly comprising those who would participate in the subsequent online delivery. The one-week face-to-face session was intended to set the tone for the online course, elicit the level of preparedness of the students, highlight the elements of the online course requiring particular attention by the learners, and to establish a common understanding between the learners, the course facilitator, and the requirements of the course as defined by the university. This face-to-face cohort constituted the broad research group discussed in this thesis, consisting of those who were originally intended to participate in the online delivery. The component was a compressed version of the entire course, so that it anticipated and addressed potential students' concerns that might result during the follow-up, fully online component. Learning theories, such as Bloom's (1954) taxonomy, were taught so that learners could use these principles to design their own online learning modules. This face-to-face

component helped them to identify administrative aspects of teaching and learning, such as designing course outlines, articulating course objectives in a clear manner, designing and seeking online and print resources for different modules, and creating a rubric in which students will be graded.

By the time the learners were eventually registered for the online delivery, the list had been doubled, with a majority consisting of those who had not participated in the face-to-face session. To keep class size small in order to improve administration and the level of interactivity between learners, this new registered list of nearly 53 learners was separated into two cohorts of 25 and 28. A later additional list of registered students was created as a third cohort. Three online modules were created in Angel and administered and delivered at the same time to all cohorts from January 10 to April 10, 2011 after the one-week face-to-face session held in the previous year. From these cohorts of over 53 students, 10 students were purposively sampled and selected to participate in the research, out of which only seven students responded. The criteria for inclusion in the sample size included those who completed the program, scored high marks, and submitted the required number of tasks in a timely fashion throughout the course.

The combined one-week face-to-face session and the follow-up 12-week online session thus resulted in the delivery of a course using a blended learning method. The course, hosted using the Angel learning management system, provided access to blogging, emails, and synchronous and asynchronous chat functions. In addition, it was delivered using social media tools that are external to Angel, such as micro blogs, screen sharing, online conferencing, and multimedia tools. Links in Angel directed learners to appropriate resources and to these external tools. Angel was further used to provide the

administrative function of the course, including grading, messaging learners, and measuring their traffic volume and usage rates.

It is important to mention that the Introduction to Emerging Technologies course is a part of a larger certificate programme delivered in collaboration between RATN and the University of Manitoba. Consultants from the African Virtual University evaluated 13 courses previously offered in the certificate in September 2010 and prior to the delivery of the Introduction to Emerging Technologies course. The objective of the evaluation was to understand the experiences that RATN has acquired in the design and delivery of the certificate program, to document the findings and lessons learned, and to present the evaluation report for debate at an upcoming workshop. The evaluation was conducted through surveys, focus group activities, and interviews with participants from the University of Manitoba, RATN, and the students. Five broad areas were covered in the evaluation: (a) rationale and accreditation of the course; (b) course design, development, and delivery; (c) learning management system; (d) quality assurance; and (e) the management, administration, and sustainability of the program. The evaluators affirmed and commended strong aspects within these broad areas and made recommendations in those where attention is required.

In relation to the rationale and accreditation of the course, the evaluators expressed strong affirmation and suggested a blended approach rather than a fully online model. The subsequent Introduction to Emerging Technologies course was delivered using a blended approach. As it concerns the course design, development, and delivery, the decision to work with an established university such as the University of Manitoba was affirmed. The availability of staff to provide orientation support to learners was also

commended, while a recommendation was made for a more efficient student tracking system, which could include constant follow-ups, prompt feedbacks to students, and the monitoring and moderation of online chats and discussion forums. In relation to the Learning Management Systems, the evaluators affirmed and commended the University of Manitoba for providing adequate orientation and up-front instruction on the technical requirements of the course including the use of the Angel learning management system (LMS). However, evaluators recommended that (a) basic ICT skills assessment of the students should be performed prior to taking the courses; (b) employers should commit to supporting their staff by giving them access to required technologies and uninterrupted power supply in the case of blackouts; and (c) delivery of the course allow for student mobility of course materials including printing sections and downloading materials off the LMS.

In relation to quality assurance, the accreditation procedures of the university and the collaborative process between it and RATN was affirmed and commended. Evaluators, however, recommended that (a) much more frequent feedback should be provided to students, (b) much more frequent learner-instructor interactions established, and (c) a more stringent and rigorous monitoring and evaluation of students process should be introduced. As it concerns the management, administration, and sustainability of the program, the evaluators commended the clear definition of roles for the different institutions in the collaborative engagement; they also recommended the establishment of clear lines of communications between the institutions and for the introduction of mechanisms to ensure higher retention rates in the program.

On the overall, the evaluators recognized the oversight role that the University of Manitoba played in the accreditation of the program and those of the other partner institutions in monitoring and implementing the program. They recommended that other mechanisms beside the Angel LMS should be used to serve content to learners because of its licensing costs and that computer and Internet access should be made available to all learners throughout the duration of the program. The recommendations and outcomes from this evaluation influenced components of the design and delivery of the Introduction to Emerging Technologies course, such as the use of social media as an alternative to certain functions of the LMS, the implementation of motivation mechanism and follow-up to ensure retention rates, and the design and delivery of the course.

Through this research, I examined the Introduction to Emerging Technologies course offered to these cohorts of students, and the perceptions of seven students among the cohort who responded to the invitation to participate through a purposive sampling method. Of these seven, four of the participants were directly associated with the partner institutions suggesting their interest in the outcome of the research, particularly in aspects in which the program could be enhanced. Khan's (2000) framework for e-learning, which contains essential dimensions for an online course, was applied to examine the online delivery of the course. This framework, described in further details in Chapter 2, contains eight important and essential dimensions that must be present in order for an online course to be effective: pedagogical, technological, interface design, evaluation, management, resource support, ethical, and institutional.

In examining the delivery of the course, three dimensions of the eight were used, namely: (a) pedagogical, (b) technological, and (c) ethical. A fourth dimension, namely:

(d) interface design, was discussed in this research as an integral part of the technological

dimension. These three dimensions focused on the learners' perspective of social,

economical, and cultural aspects of online learning. The other dimensions, though equally

important, examine online learning from the perspective of the institution delivering the

learning, which this research did not examine. In describing the methodology used, I

examined the constraints of delivering online learning and why learners' perceptions are

important in this context.

        Constraints of delivering e-learning and learner perceptions. The constraints

to delivering distance education or courses online are many and very complex: from

loneliness and isolation of the distance education student and the complexity associated

with the design of relevant learning spaces (Lee & McLoughlin, 2010) to challenges of

transition from traditional teaching practices to online methods and policy constraints at

the institutional, federal, and policy levels, as suggested at the Collaboration for Online

Higher Education and Research 2011 conference. These are further compounded by

technological, social, and cultural constraints and challenges which are sometimes

personal or motivational. Technological constraints include accessibility to stable Internet

and, where available, the prohibitive cost of access. Social and cultural challenges that

should be taken into consideration for learners who may not be particularly familiar with

distance education courses or the way teaching and learning is delivered in the Canadian

context. Usually, several aspects of culture influence the teaching and delivery method,

often heavily influenced by the institution's own culture. For instance, the concepts of

instructor-led versus student-centred or self-directed learning may be understood

differently across cultural contexts. These are even further complicated by factors such as the socio-economic status, gender, or even the motivational dispositions of the learners.

To further understand these constraints, the researcher who is African, employed a means of addressing bias through a process called bracketing. Here, I, as the researcher, objectively embarked on an understanding of the phenomenon to be researched by setting aside my own context through an explicit declaration. This was in accordance with Gearing's (2004) warning that "bracketing should not be merely a term used in a study to justify or validate an individual's approach or researcher's method but, rather, a rich concept that can facilitate effective and needed qualitative research" (p. 1432). He further suggested the importance of reflectivity in bracketing and defined it as a setting aside of one's cultural context:

> In reflexive bracketing, the focus is to make transparent, overt, and apparent the researcher's personal values, background, and cultural suppositions. . . . The researcher identifies his or her personal suppositions and ideas about the phenomenon prior to investigating the phenomenon in an effort to minimize their impact on the phenomenon under investigation. . . . Reflexive bracketing demands the researcher to develop a "thoughtful, conscious self-awareness." . . . In essence, the researcher is attempting to bracket out, or at least identify, his or her personal suppositions. . . . This potentially allows him or her to reduce the influence of his or her lived experience on the phenomenon under investigation. (p. 1445)

In the sections that follow, I describe my cultural context and experience and how they are situated within the context of this research. I bracket my personal experience so that I can objectively understand the phenomenon of online learning in a context where

rote and face-to-face learning subsists and one which is different from the self-directed and infrastructure-available education context where I presently live and from where I interact with other learners in other contexts similar to those of the research participants.

Delimitations and limitations: situating the researcher in e-learning. As a five-time facilitator of the emerging technologies course offerings to different cohorts over a two-year period of about 100 learners spread across North America, Canada, Asia, and Africa; the most intensive, demanding, and difficult offering was the one offered to the cohort of African learners. This offering was different because it required my constant engagement, participation and oversight of the learners, more than I had envisaged or provided to other learners from other countries or continents. Large quantities of motivational emails were sent out, which were often followed by voice conversations and email prompts. Often times, learners would not engage with others, and submissions were isolated, did not reference other comments made by classmates, and often did not present any critically thought-out response. My observation triggered some questions: Why was this so? Why was the African cohort different from the others? Was this as a result of their social, economic, and cultural backgrounds? If so, why so? What was responsible for this phenomenon?

My quest in trying to understand this led me to engage with the learners by seeking responses to motivational prompts and probes through requesting more comments than the single responses they often submitted. I encouraged multidirectional dialogue between the learners, rather than the bidirectional discussion they often initiated with me. On my part, I was in a process of constant reflection on how to best motivate learning in ways that were more active and engaging for them and me. I have further

elaborated these experiences as a reflection of my own background as an African

instructor and educator in Chapter 5, where the results of this research are discussed.

Prior to becoming a graduate student at the Faculty of Education, University of

Manitoba, I worked in Africa as a social development worker in the area of media and

technologies, involving a broad base of stakeholders such as governments, academia,

civil society, and the private sector. My responsibilities involved defining policies that

were humanely just and transparent across various sectors of society and those that

promoted affordable access to telecommunication service as an approach; the intent was

to give voice to citizens in order that they could embrace the rights to free speech and,

consequently, participate in the creation of more transparent and open societies. This was

done through research, workshops, advocacy meetings, petitions, and actions that

targeted mostly telecommunication incumbents who were custodians of

telecommunication infrastructures that they managed rather monopolistically. I was of

the view that these tendencies contributed in creating hierarchies and socio-economic

stratification of societies that resulted in fracturing societal cohesion and expanding the

gap between the poor and the rich.

Research by Gillwald and Stock (2009) tended to support this assertion when they

suggested that over 70% of Africans use their disposable income to pay for mobile

telephone services, which they could have expended on other appropriate requirements

and activities of worth. As a result, it was important to focus advocacy efforts in order

that telecom operations would consider restructuring their price points in relation to the

purchasing power parity of the majority of their clients so that they may be able to use

their disposable incomes for other, more useful purposes. This and other activities, such

as those that involved strengthening the oversight role of regulators to define and create appropriately regulations in which they would price-regulate the markets, constituted some of my interests.

In other initiatives, through consistent discussions with school administrations, I worked with universities and the private sector in Africa, where I was able to provide affordable technology to 10 universities in an era where access to the Internet was largely constrained by very prohibitive cost. Access, which was mainly through satellite, was overly expensive and beyond the budgets of several academic institutions. The approach involved the provision of devices that students could use to access online content and a year's Internet access. Subsequently, a consortium of university libraries was created to allow collective negotiations for access to international electronic journals for research purposes. Universities lacked access to research materials, books were often out-dated, and students depended on each other and photocopies to access up-to-date materials for courses and researches.

These initiatives reflect my attempts at contributing small changes within my cultural and educational context. I was often constantly reminded of my roots and the need to reflect on the social, economic, political, and cultural context from which I originated and how they affect our wished-for learning. Even though I have been fortunate to travel widely and to interact with others globally, I had to remember that these were temporary, as I have to return to the reality of my home situation. In this way, I was also aware of the lack of educational opportunities to a large proportion of Africa's population, most of which remain unchanged. The infrastructural challenges are still very much evident now as they were back then, even though there appears to be some

considerable development in the provision of affordable access. Other aspects of teaching

and learning, such as learning by rote, teacher-led instruction, lack of access to reading

material and research, and often obsolete and unrevised curriculum, and the non

application of technologies such as the Internet to facilitate teaching and learning

continue to plague academic institutions from primary to tertiary levels.

I was fortunate to be offered the opportunity to facilitate online courses with the

University of Manitoba, which has plunged me right into the mix of broadly

understanding the role that technology can play in teaching and learning. Specifically,

this included how technology-enabled learning is quite different from my previous

technology-deficient origin, characterised by: (a) purely rote and instructor-led

background versus my present one, which is a blend of student- and instructor-led

pedagogy; and (b) a cultural context in which respect was paid to elders and instruction

had to be clearly articulated and repetitive until imbibed and performed, which was

different to my present context where instruction is *suggested* only once. My new context

is very different from the old.

As a course facilitator, I have learned to put on a cloak and an identity of my new

cultural context in order to learn and to fit into my present society and culture. I have

been able to wear this identity in facilitating courses with learners in my present context,

but came to observe that this new identity does not relate well with learners from my

original context. In order for learners from my original context to benefit from the

courses I facilitate, I would have to either facilitate the course using the methods of

learning in my original context or do so using methods that require the learners to do

something different from the way they have learned all their lives. I could turn a blind

eye to their challenges and expect that somehow they would be able to navigate, overcome, and work their way through them, or I could give some due consideration and recognition to their cultural context and background as a way of having them learn. For the application of a different and efficient approach, a number of factors come into play: (a) the ability and willingness of learners to adapt to new forms of learning that I introduce; (b) my ability to reflect and inform my facilitating role and practice, and to adapt the course to respond to the challenges experienced by the learners; and finally, (c) the ability of both the learners and I to accommodate these factors. A response must be mutually constructed and implemented, and trust plays an important role here.

Some limitations are evident. In spite of how I attempted to systematize the course environment and to manage the uncertainties of each course, the conditions and circumstances would always be variable. For instance, the socio-economic conditions of all learners and cohorts are different and so are the learners themselves and their experiences in the use of online emerging technologies. As a result, the course offering would likewise be different. Generalizing this experience for e-learning processes became difficult in this context. While the sample size in this research was not large enough to generalize the findings, nor was it intended to, the research results did offer certain outcomes that could be useful in how teaching and learning could be defined for maximum impact. In this section, I have bracketed my experience and background so that I can focus on the phenomenon that I have experienced with the learners involved in this research (Gearing, 2004). I shall return again to reflecting on this in Chapter 5

Research philosophy. This research took on a phenomenological approach as described by Creswell (2007): a narrative study that reported the life of a single

individual and described the meaning for several individuals of their lived experiences of

a concept or a phenomenon (p. 57). Phenomenology emerged from the work of Edmund

Husserl, Heidegger, Sartre, Merleau-Ponty. According to Creswell,

> The basic purpose of phenomenology is to reduce individual experiences with a
>
> phenomenon to a description of the universal essence. . . . The researcher
>
> identifies a phenomenon, collects data from persons who have experienced the
>
> phenomenon, and develops a composite description of the essence of the
>
> experience for all of the individuals. This description consists of "what" they
>
> experienced and "how" they experienced it (as cited in Moustakas, 1994). (p. 58)

In describing the procedures for conducting phenomenological research, Creswell

(2007) suggested: (a) determining if the problem is best examined using a

phenomenological approach; (b) ascertaining that it is a phenomenon of interest to study;

(c) ensuring the researcher recognizes the broad philosophical assumptions of

phenomenology (such as bracketing); (d) performing data collection from persons who

have experienced the phenomenon; (e) asking two broad general questions: What have

they experienced in terms of the phenomenon, and what context or situations have

typically influenced or affected their experiences of the phenomenon; (f) conducting data

analysis from the broad research questions; and (g) writing the research narrative from

themes that emerge from the data collected. These concepts are described in detail in the

methodology section.

The research involved the reflective process of (a) looking, through gathering

information (i.e., data) by careful observation, listening, and recording; (b) thinking,

through analyzing the information to identify significant features and elements; and

(c) acting, through using the newly formulated information to devise solutions to the issue investigated (Stringer, 2008, p. 9).

The emerging technologies course has been offered several times since this initial offering to the African students. The lessons that emerged from these offerings have continued to shape how the course is delivered, although no new offering has been made to purely African students since the one described in this research. Any new offering to a cohort that exhibits similar traits will definitely benefit from the lessons learned from this research.

Immediately following is the description of the research question. As suggested by Creswell (2007), two broad overarching questions leading to more specific research questions guided the data gathering process. In the literature review section, I focus on distance education, highlighted the concept of culture within a context of learning, and explored technology such as the Internet's role in facilitating online learning. A theoretical framework for evaluating the effectiveness of the course is also discussed in the literature review. In Chapter 3, I describe the methodology used throughout the research, which also contains a section on ethical considerations.

Research Question and Purpose

A number of questions emerged that call for deeper inquiry into how quality can be maintained in the delivery of the course to African learners who are faced with technological, socio-cultural, and motivational challenges. This was examined using an already established framework developed by Khan (2011), which is described in the literature review section. The research examined how African learners are able to adapt

socio-culturally in order to participate in an online course. The following overarching

question guided the research:

1. What were some of the physical, technical, social, and economic challenges

   that you experience during the course? How did you overcome them?

2. How would you describe the value that this course has on your life?

3. How did you manage to stay motivated?

These are opening questions that led to further exploratory discussions on the student's

perception of the Introduction to Emerging Technologies course. The research used

Khan's (2000) framework to explore the challenges associated with this course offering.

The central phenomenon has been generally defined as the psychological orientation and

preparation that students have to go through before and during the process of undertaking

an online learning course. This understanding informed the research practice, particularly

stressing the conditions that are required for effective delivery of similar online courses.

Using a qualitative analysis methodology, data were analyzed based on

(a) students' response to the research questions, (b) their perceptions of online learning,

(c) their experiences in formal and structured online learning, and (d) the impact that their

cultural background and social context has had on their choice of online learning. An

investigation into these questions led to outcomes that define what considerations

universities in Canada could take before and during future offerings of online distance

education courses, particularly to students from developing countries or those in First

Nations communities with similar constraints and challenges.

Summary

In this chapter, I have highlighted the impact that information and communication technology has had on our political, economic, and social landscape. I have underscored the effects of globalization as a significant factor in creating global inequalities and also for fostering opportunities for the delivery of education, particularly in African. I have bracketed my own experience, an important activity that helps me to better analyse the phenomenon being researched. It has been suggested that the lessons learned from here could be useful to Canadian universities offering distance and online courses to learners in African or First Nations communities that have similar attributes and constraints. In the next chapter, I further examine online learning and how this relates to the adult learner.

CHAPTER 2: LITERATURE REVIEW

In this chapter, I examine the impact that the Internet has on teaching and learning and how it relates to the adult learner. Through a review of literature, I examine the concept of affordance or agency of technology tools or social media for teaching and learning, such as presence, access, expression, and aggregation; and explore their relationship to the adult learner. I examine e-learning and the challenges of arriving at a definition that is commonly accepted, its various forms and how it has been deployed in the past few years, new and emerging forms of online and mobile learning such as iTunes-U, and the opportunities that the collaborative and semantic web offers to online education. I also examine three frameworks for online learning and finally settle on Khan's (2011) framework for e-learning as a useful one for examining the perceptions of African adult online learners in East and Southern Africa. I conclude this chapter with the challenges of online learning approaches such as connectivity difficulties and cultural differences in online learning.

E-Learning and the Adult Learner

The attributes of social media that may be useful and applicable to the adult learner are described in this section. I also examine the characteristics of adult learning, and then establish connections between both in a way that may be useful for drawing lessons for teaching and learning. Technology or social media needs humans to propagate its good uses, and humans can conversely leverage its services, and affordances described in more details in this section, in many areas, including education.

One way of examining the interrelationship between technology and humans is through the concepts of the "laws of media" as defined by McLuhan (1975), in which he

suggested the existence of an interface between "figures . . . [and the] ground upon which these [figures] stand, and against which they [figures] bounce" (p. 75). He argued that his "laws of media" is an intermediary, or interface, between the figure and the ground and, by extension, is mutually co-beneficial to both. In the same way, the laws describe the interface or the medium between the learner and the subject. This interface is illustrated through four laws (as cited in Hlynka, 1990):

> The law of enhancement [which] asks, "What does the medium enhance or intensify?" The law of obsolescence [which] asks, "What does the medium render obsolete, or what does it replace?" The law of retrieval [which] asks, "What does the medium retrieve that was previously obsolete?" And last, the law of reversal [which] asks, "What does it produce or become when pressed to its extreme? (p. 87)

These laws can also be applied in order to gain a better understanding of the interface between the adult learner and the characteristics of social media that may be useful for teaching and learning. Using McLuhan's inquiry method as described by Hlynka (1990) in the context of adults and the use of social media for teaching and learning, we could ask four questions:

1. What does social media enhance and intensify?

2. What does social media render obsolete?

3. Does social media retrieve that which was obsolete?

4. What does social media produce or become when pressed to the extreme?

Firstly, a useful response to the question of "What does social media enhance and intensify" suggests that the inherent social nature of learning is historically present in the

classroom or in many forms of learning, including e-learning. Learners socialize with themselves, among themselves, and between themselves and the instructor. Learning, in a highly enhanced and intensified social context, does away with instructor-led concepts and attempts to replace them with a balance between instructor-led and student-led, even more so in an adult learning context.

Secondly, as it relates to what social media renders obsolete or replaces, old technology such as emails, content-management-only delivered learning, CD-ROMs, and some of the older and even presently used forms of delivering learning could be replaced with some of the new forms of learning. The centralized form of social media creates a convergent point for learners in such a way that learning is both socially adapted to their lifestyle and also responsive to the ways in which they choose to learn; characteristics that are inherent in adult learners. Social media, in this context, also makes learning individualistic, personalized, but communal, rather than the collective, centralized, and independent forms with which we are presently conversant.

Thirdly, does social media retrieve that which was obsolete? A useful outcome of the current forms of social media use is that it has enhanced and increased the quantity and flow of communication as opposed to the present perception in which it is viewed to have disintegrated the values of interpersonal communication.

Fourthly, in relation to the capability of social media to evolve when pressed to the extreme, we could view the controlling nature of social media in a way that it influences and defines how communication will be shaped in the near future. For instance, its semantic nature, a state in which social media use on the Internet assumes a certain control over how knowledge and information flows to us and between what we

seek and what is presented, especially during searches, will contribute to shaping the way

we learn in the future (Wesch, 2007). McLuhan's (1975) laws of media present an

interesting approach through which social media use in teaching and learning can be

examined, a detailed description of which would be worth exploring in another research.

Yet a second way of examining this relationship between adult learners and social

media is by exploring the context of tools and their applications through what is known

as Gibson's affordances (Greeno, 1994). Affordance relates "attributes of something in

the environment to an interactive activity by an agent who has some ability, and an ability

relates attributes of an agent to an interactive activity with something in the environment

that has some affordance" (p. 338). In describing Gibson's concept of affordances,

Greeno (1994) argued:

> Is the affordance that a chair provides for sitting a property of the chair, a property
>
> of the person who sits on it or perceives that he or she could sit on it, or
>
> something else? . . . affordance is a property of whatever the person interacts with,
>
> but to be in the category of properties we call affordances, it has to be a property
>
> that interacts with a property of an agent in such a way that an activity can be
>
> supported.

By this, Greeno (1994) argued in support of "presence", which he defined as a

"property" of the chair (pp. 339-340), and "agency", which he defined as a property of

the agent or person (p. 340), as essential ingredients for an activity to occur between

them, in this case, the act of sitting. However, the presence of agency and affordance

alone are insufficient for the act of sitting to take place. Additional elements may be

required, such as the motivation to engage in the activity, which in turn results in

satisfaction after that activity has been successfully and satisfactorily executed; in this

case, the use of the chair. Greeno suggested that affordances are preconditions for an

activity to occur.

Similarly, the use of technology for teaching and learning requires (a) various

affordances including that of presence of the tools, in this case, technology for teaching

and learning; and (b) of the agents, in this case, educators who must apply these tools in

order to produce learning. Besides, presence, Gibson (as cited in Greeno, 1994) described

other affordances such as (a) "access" that is available because the chair is "present";

(b) "expression" or the intention of the proposed action; (c) "creation" referring to the

energy dissipated and required for the action to take place; (d) "interaction" between the

chair and the agent; and (e) "aggregation" of various "presences" or preconditions

required for the singular action of sitting (pp. 340-341). Social media offers similar

affordances, which will be discussed in more details later in the section on the semantic

and collaborative web. Defining e-learning and the appropriate technology that can be

used for e-learning can also help our understanding of these affordances; they are

discussed in the following section.

Defining e-learning. There is no single definition of e-learning that embraces the

broad and varied forms in which technology has been applied to teaching and learning.

Commencing with what used to be called distance education, which describes a

technology-facilitated relationship between teachers and students spread across

geographic locations (Rudestam & Schoenholtz-Read, 2002, p. 5) to computer-mediated

learning as the delivery of coursework and degree programs over the Internet (Stevens-

Long & Crowell, 2002, p. 151), or blended learning, which is the "thoughtful fusion of

face-to-face and online learning" (Garrison & Vaughan, 2008, p. 5), or simply e-learning "which describes a wide set of applications and processes which use any available electronic media in the pursuit of vocational education and training [and] includes computer-based learning, web-based learning, virtual classrooms and digital collaboration" (Mason & Rennie, 2006, p. xvi). No single term captures all of the various contextual concerns. The evolving nature of the English language and the Internet and the availability of different delivery methods of computer, technology, and Internet use for education make a single all-descriptive term nearly impossible. For the purposes of simplicity, the term online learning or e-learning is used interchangeably in this paper to capture these broad applications and definitions.

A number of different forms of distance education exist within the post-secondary level. Universities such as Athabasca in Canada employ an Open University format that allows individualized or group study at the student's pace, or a student support format that allows for group interactions among students, faculty, and staff in a physical location at one of its partner institutions (Athabasca University, n.d.). Through its Extended Education department, the University of Manitoba also employs a format that allows for purely distance education or a combination of both distance and face-to-face instruction, often described as blended learning (Collaboration for Online Higher Education and Research [COHERE], 2011). Most of these formats have become possible with the use of the Internet as the medium through which content is delivered. Historically, and even presently, different types of institutions and various forms of partnerships have characterized the landscape of online learning. Rudestam and Schoenholtz-Read (2002) described the following types (pp. 10-12):

- Non-traditional distance learning universities who have ventured from the traditional delivery of distance education courses by correspondence to a combination of face-to-face and distance modalities or fully online. Examples are Athabasca University, Canada, and the United Kingdom's Open University.

- Traditional university and e-learning partnerships that have mostly resulted in the creation of a for-profit institution that delivers online learning. Examples include UNext.com, which sets itself up as a link between individual learners and Fortune 500 companies.

- Traditional universities offering free online learning curriculum and content have emerged in recent times. Examples include MIT with its open courseware concept.

- Organizations representing e-learning for profit that sell online courses or via CD-ROM. Examples include the Global Education Network (GEN).

- New for-profit universities that deliver both campus-based and online programs including corporate certificate programs. Examples include Phoenix University, Jones International, Strayer University Online, De Vry's Keller School of Management Capella University, Argosy University, and Walden University.

- For-profit e-learning organizations or commercial learning companies who use technology such as video lecture, chat, and asynchronous formats to deliver professional training career courses. Examples include Kaplan College (Information Technology and Law programs) and Sylvan Learning Center.

- Corporate online universities developed by large corporations to produce and deliver corporate information. Examples include McDonald's Hamburger University, Motorola University, Daimler Chrysler University online, General Motors University, NCR University, and Shell Open University.

- Non-profit online learning efforts spearheaded by institutions promoting free online courses, content, and various educational resources. Examples include Sloane Foundation's Asynchronous Learning Network and geteducated.com.

Another form not described by the authors but emerging is:

- Combined formats delivered using new and emerging technologies such as iTunes-U, which enables universities and corporations to produce and deliver podcasts of contents to individuals through mobile devices.

These varying definitions of online learning, the institutions, and forms of partnerships that have characterized distance education all agree to the importance of the use of technology, specifically the Internet, for teaching and learning.

The Internet has been employed to deliver content using four primary models: (a) the naïve delivery model of posting lecture notes via email without the opportunities for interaction; (b) the standard model, which draws on web technology to encourage interaction; (c) the evolutionary model that allows for the fluid delivery of course materials throughout the learning; and (d) the radical model, which dispenses with lectures and relies on interactive groups of students (Rudestam & Schoenholtz-Read, 2002). These methods substantially differ from one another in the quantity and quality of the technology that is used and the point at which technology is introduced into their forms.

Appropriate technology for e-learning. Online learning, e-learning, distance education, and distance learning all constitute words that have been used to describe the process of learning and teaching of both student and teachers taking place at different locations or times (Ayadi et al., 2005). Distance learning, in the recent past and prior to the Internet, involved the asynchronous delivery of courses via correspondence. The Internet has, in recent times, allowed for the synchronous delivery of learning instruction, allowing interactions between students and teachers to take place at the same time from different locations. In this case, communication and interactions take place electronically over a medium (Ayadi et al., 2005). The growth and proliferation of Internet technologies has enabled the delivery of online courses and increased interest in distance education settings. Chaney et al. (2009) argued that:

> distance education programs allow (a) students easy access to courses, which has the potential to decrease time to graduation; (b) provide opportunities for increased diversity and internationalization in terms of attracting students from different parts of the country and world because they can access the materials for the course from anywhere; (c) ease built environment constraints because classroom space is not needed in a distance education course; (d) create a new market of time- and location-bound students; (e) and increase revenue generation for the university or college. (p. 223)

The revenue-generating potential for the delivery of online courses has been quite attractive to many universities as they adapt to address the education and training demands for an increasingly working population, while they compete with brick-and-mortar universities for students. Admission rates continue to drop in societies where

access to conventional universities is limited and where the "population of candidates

seeking admission continues to increase astronomically" (Ayadi et al., 2005, p. 767).

Institutions in North America, particularly in Canada, and Europe have

recognized ICTs and the Internet's transformative and enabling potential to education. A

recent study of over 2,500 US colleges and universities in fall 2008 showed that online

enrolment growth rates superseded higher education enrolment by 15.8% and over 4.6

million students took online courses (LeNoue et al., 2011).

McKeown and Underhill (2008) suggested that approximately 71% of Canadians

use the Internet for education-related reasons, spending more than five hours or more

online compared to other types of uses and users. They further asserted that distance

education is more prevalent in smaller and more remote communities. The growth in the

distance education sector has spurred increased repurposing of courses for online learning

or e-learning by Canadian institutions, particularly those seeking to gain international

presence or attract students from other countries. Courses have been offered using

blended approaches to remote and small communities within and outside North America.

However, this growing trend needs to be examined from the specific perspective

and the context of the students embarking on these courses. For instance, online delivery

of business courses was found to be most suitable to students who fitted the "graduate,

married, residing off campus, and male" profile (Beqiri, Chase, & Bishka, 2010, p. 99).

These authors argued that

> the student for whom the idea of distance learning is appealing, who perceive
>
> online instruction to be an appropriate way of learning in universities, and who
>
> has some background regarding the course he or she decides to take online is the

type of student who would likely be more satisfied with the online delivery of

courses. (p. 99)

While the outcome of Beqiri et al.'s (2010) study provided an interesting insight

into the profile of students who might find a distance education course less stressful, it

did not address the effort that other students who do not fit this profile make to complete

their online education. In spite of these, there is still a growing use of technology for

online education, accompanied with efficiencies in time, facilities use, and marketability.

Institutions are having to increasingly offer fully online, blended, or hybrid courses.

Price-per-student is lower, while access to quality educational resources has improved.

One area where online education has been applied is in adult and post-secondary

education, through informal, non-formal, and formal settings. Adults seek additional

training to meet the growing demands for their work and to support their quest for

continuing education throughout the lifespan (Rudestam & Schoenholtz-Read, 2002).

Besides allowing students more time to study at their pace, other motivational and

power levelling benefits have been accrued to the use of technology for distance

education. Ayadi et al. (2005) argued that:

> Technology is said to appreciably improve student motivation, and motivated
>
> students are more receptive, more engaged, and more likely to learn. Moreover,
>
> technology promotes cooperation and collaboration among students, providing
>
> real opportunities for good teachers to capitalize on. The use of technology often
>
> changes the role of the teacher to that of a facilitator. The "balance of power"
>
> between the instructor and his or her students is promoted with the use of
>
> technology. Oral and written communication skills are improved through

technology use. More important, it provides increased opportunities for thematic, interdisciplinary explorations and makes classroom activities feel more real and relevant. (p. 767)

Adult learning is usually voluntary, undertaken under complex circumstances and with multiple commitments to work, family, and friends, while meeting multiple demands for time and energy. Courses are conducted in recognition of the adult need for flexibility and individuality of the learning experience. As a result, adult programs are centred around their lives and life experiences, and they must (a) include them in the design, direction, and implementation of the learning experience; (b) offer flexibility to them in time, place, and mode; (c) recognize mutual respect between them and the teacher; and (d) provide them with a positive learning environment with regular and constructive feedbacks (Rudestam & Schoenholtz-Read, 2002).

Learning methods that amplify the professor (as the expert) over the student (as passive and naïve) do not apply well to the average adult learner. They would rather be collaborative partners in the learning process because the adult brings in a mature perspective to the class (Rudestam & Schoenholtz-Read, 2002, p. 7). Structured online learning tends to accommodate these needs of the adult learner: for flexibility in time and space and for the shared collaborative nature that it provides. My research returns to the application and interrelation of Internet concepts to the adult learner, after examining aspects of social media and its relationship to teaching and learning.

Collaborative and semantic web: Social media and education. Earlier on, I had referred to the importance of affordance as a useful way of examining the characteristics of social media that are similar to adult learning. This concept is examined further in this

section. It is important to define some of social media attributes in order to link it to Gibson's concept of affordance and to do this within the post-secondary education setting (as discussed in Greeno, 1994). ICTs and the Internet applied to any field, and particularly to the field of education, foster innovation that is radical, evolutionary, and sometimes revolutionary, as highlighted during the COHERE conference (COHERE, 2011, p. 2). Cross-border distance education, e-learning, or blended learning resulting in shared curriculum, and delivery methods (for example, iTunes-U) have continued to emerge and to cause shifts from older forms of teaching and learning to new and more socially relevant forms that explore the contributions of new collaborative technologies called Web 2.0 and 3.0 (Jiao & Miao, 2010; LeNoue et al., 2011). Teaching and learning institutions or post-secondary institutions that want to remain relevant in a globalized context and within a newly reconstructed context of social relationships must address how they recognize and apply ICTs and the Internet, particularly social media, in their teaching and learning strategies.

The collaborative web, often described as the second generation of Internet-based services, emphasizes collaboration and sharing among users, while the semantic web, considered to be the integration, combination, and meaning-making of Internet data for the purposes of creating better understanding, draws attention to more efficient uses of Internet information (Lytras, Damiani, & Ordóñez de Pablos, 2009; Wikipedia, n.d.; W3C, n.d.). They both represent a category of tools and a way of working that is collaborative in nature and that provides an open means of sharing information and knowledge (Donston, 2008). Social media tools used for crowdsourcing, video and voice streaming, collaborative content creation, and shared knowledge spaces offer exciting and

innovative ways of teaching, researching, and learning. For instance, open source

technologies and its philosophies have changed perceptions of teaching and learning, in

how collaboration is achieved through shared development and in how knowledge is

shared online for increasingly mutual benefits of all involved. Outputs from the open

source philosophy are evident in emerging trends such as open educational resources,

open online textbooks, open journals, open research, and even open knowledge. Other

aspects of social media align with Gibson's concepts of affordance (as discussed in

Greeno, 1994).

Social media in the form of collaborative (i.e., Web 2.0) and semantic (i.e., Web

3.0) webs exemplify attributes of Gibson's concept of affordances (Greeno, 1994). Some

examples include tools that (a) provide access to resources such as information (e.g.,

Google) or people (e.g., Facebook); (b) declare or state presence (e.g., most instant

messenger status); (c) encourage expression (e.g., Second Life); (d) create new content

and resources (e.g., blogs, wikis, and podcasts); (e) enable interaction with others (e.g.,

Twitter, Skype); and (f) provide an aggregation of resources (e.g., RSS feeds). These

functions and attributes, or affordances, now inform how content should be delivered and

how older forms of content delivery described earlier should be reconstructed if they are

to remain relevant.

As it relates to the adult learner, social media tools can contribute to narrowing

the gap between the haves and the have-nots because of their minimal cost for entry and

use. They leverage the new and essential elements of the Internet for the delivery of

content, for research, and for sharing knowledge. These are the factors that make learning

useful and contribute to narrowing the gap and levelling the playing field. They facilitate

self-directed learning, allowing access unencumbered by time and location (LeNoue et al., 2011), and they favour a constructivist approach where students are active participants and co-producers of knowledge rather than passive recipients and ordinary consumers that traditional teaching practices make of them (Golding, 2011; LeNoue et al., 2011).

Experience and prior learning; their ability to be autonomous, self-directed, and demand driven; and their ability to interact and collaborate with others are elements that adults are conversant with. These are functions that are already inherently supported in collaborative and semantic webs and which can be enhanced through social media use. Teaching and learning framed in this context, therefore, require a re-thinking in many areas: in the role of the student, the teacher, and broadly across academic communities (LeNoue et al., 2011), and they call for embracing philosophies that are sometimes characterized by radical paradigm shifts.

This shifting role is not about the direct and mindless application of new technologies to existing learning practices without carefully rethinking strategies for best fit (Wallace & Young, 2010). Neither is it about the introduction of automated administration or an LMS such as Angel to the school environment. ICTs and the Internet in teaching and learning transcend the use of LMS. Current LMSs approach collaboration through applets, such as chat facilities, blogs, and collaborative discussion tools, which simulate similar functions of social networking tools. While this integrated platform provides some level of security and content control, learners may find them insufficient and their independent social media counterparts more appealing: for their ease of use, from the inherent value gained from social interactions, because of their low bandwidth

requirement, and in most cases, the availability of low-cost data bundles on mobile devices. Learners may be willing to compromise the access that social media tools provide rather than those offered by the LMS.

My experience in the use of social media tools for teaching and learning in delivering a fully online course for the University of Manitoba, Extended Education faculty, has been consistent with this description. Most learners on the course expressed pleasure in using social media tools, such as third-party wikis or blogs for online collaboration, group interactions, and class discussions, instead of the applets in the LMS that provide similar functionality. The LMS increasingly plays a centralizing function through which administrative tasks are posted, like providing assignments and notices such as assignment due dates, and where shared content can be found. Learners are less appreciative of the LMS as a content delivery and distribution tool, nor for its function of providing a platform for participation.

It is this position, one that school administrations have come to settle on (i.e., that an LMS is the central convening point and the anchor for an online learning experience) that often creates the perception of the unsuitability and un-usability of technology for teaching and learning or, specifically, of social media tools and its applications to help learning. This misconception has contributed to a view that construes technology use, or social media and their potential contributions, as inherently insecure and intrusive of privacy, which are thus viewed as tangential to achieving learning outcomes and objectives. Administrators may not have considered their use as much or allowed for a position to be taken that is informed by rigorous research and empirical studies. Indeed, more action-based research is required that would draw out the best and worse practices,

from which lessons can be learned and through which practice can be improved; however, until then, administrative procedures should accommodate their use and abhor the standard denial approach that social media, specifically, and technology, broadly, have been greeted with. These technologies are already here; we should there fore seek ways of leveraging its affordances.

Challenges of social media use in teaching and learning. Having said this, and to establish a sense of balance, it is important to state that these tools are not a panacea to existing challenges in delivering quality education. Indeed, there is no silver bullet to the growing difficulties facing education in the developed or developing world and globally. Technology or Internet use for distance education, seen as a panacea, should be viewed with caution (Chaney et al., 2009). Issues of (a) access to infrastructure, electronic journals, research funds, and libraries; (b) availability of appropriate physical environment conducive to research, teaching and learning; and (c) resources, both human and material, constitute areas where there are some challenges to higher education. These should be addressed using a holistic approach and should involve collaborative strategies with stakeholders from all sectors, including: (a) private, government, and civil society; (b) those working in the area of research, education, and knowledge production; and, of course, (c) academia itself.

Social media use in administration, teaching, and learning presents new sets of challenges at the conceptual and personal level. For instance, questions of standards and their harmonization across institutions of higher learning (see section on Frameworks for online learning), plagiarism, and intellectual property rights are conceptual challenges that need new approaches and more systematic ways to address. Physical challenges

allude to the willingness, or the lack of one, towards the use of technology for research, administration, and teaching and learning even when appropriate tools are available.

Further, a lack of experience and skills to use social media constitute other difficulties and may also expand the gap between the technology savvy and technophobes. Privacy and online security pose new sets of challenges that institutions, governments at the provincial and federal levels, academic bodies, and teachers should consider as they institute policies, design learning outcomes, and develop curriculum at various educational levels. Frameworks that could be useful for examining online learning are examined in the next section.

Frameworks for Online Learning

This enormous potential of instructional technology and distance education should be examined under the spotlight of quality: How can one ensure that distance education coursework and degrees are of high quality? In their study, Chaney et al. (2009) examined a series of publications and research in order to identify quality indicators of distance education and to provide the implications of their use specific to health education researchers and practitioners. Their research raised important questions on the efficiency and quality of online delivery methodology and perhaps the future of online learning. Certain frameworks have been developed to respond to concerns of quality with the intentions that their proposed formats could, in the least, guide in the quality design, delivery of online content, and help in evaluating their effectiveness. Three of these are discussed in this section.

The first framework is the community of inquiry model designed by Garrison and Vaughan (2008) to guide the delivery of blended learning courses; the second is the

WebSQu model developed by Silius, Kailanto, and Tervakari (2011) to evaluate an e-learning tool in the context of post-secondary education; and the third is Khan's (2011) framework, which provides guidance in the design, development, evaluation, and implementation of online courses, e-learning environments, distance education programs, virtual universities, and LMSs.

Garrison and Vaughan (2008) presented a community of inquiry framework (COI), which they described as being in the centre of evolutionary transformation of teaching and learning in higher education (p. 8). According to the COI framework, three essential elements must be present for an online course to lead towards its intended learning goals and outcomes: social, cognitive, and teaching presences (see Figure 1). Social presence concerns the availability of a platform in which open communication can thrive, in a way that it enables learners to (a) freely express themselves openly in a risk-free manner; (b) develop personal relationships necessary to commit to, and pursue, intended academic goals; and (c) gain a sense of belonging to the community (p. 19). The social presence aspects of the COI framework suggest recognition of the communal nature of learning that is present in most cultures. Cognitive presence concerns the integration of reflective and interactive processes to the learning environment (p. 21), and teaching presence brings all the elements together and provides the design, facilitation, and direction that are needed for a worthwhile educational experience (p. 24).
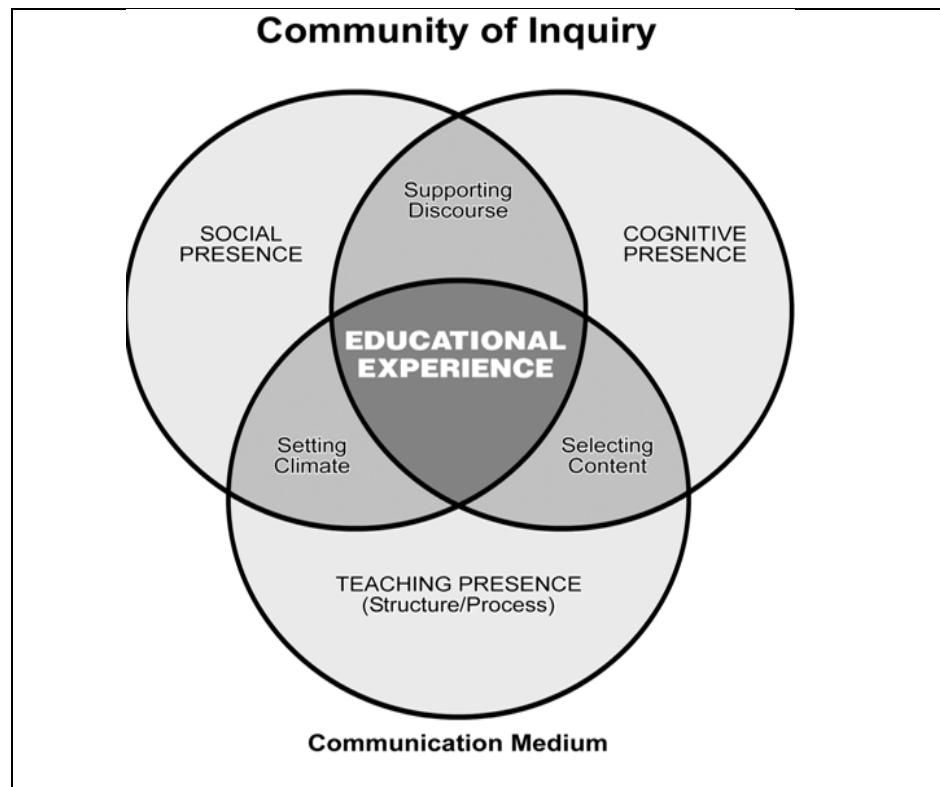
Figure 1. Community of inquiry framework.

Note: From *Blended Learning in Higher Education: Framework, Principles, and Guidelines* (p. 18), by R. D. Garrison & N. D. Vaughan, 2008. San Francisco, CA: Jossey-Bass. Copyright 2008 by R. D. Garrison & N. D. Vaughan. Reprinted with permission.

Another model was used for evaluating an e-learning tool in the context of post-secondary education was the WebSQu model developed in Finland and implemented at the Tampere University of Technology (Silius et al., 2011). It was intended to gauge the expectations of students' use of social media services in a higher education context and to identify important features and factors of social media-enhanced learning systems.

Silius et al.'s (2011) project categorized social media as follows: content creation and publishing, content sharing, social networking sites, collaboration productions,

virtual worlds, and add-ons (p. 505). These types offer students the ability to participate

in learning, communication, information exchange, and connectivity and to create

communities for different needs. Their research suggested that feelings of membership,

influence, reinforcement of needs, and shared emotional connections are essential

ingredients to enhance students' abilities for interaction and collaboration within an e-

learning space.

The Silius et al. (2011) framework has ten categories of 400 questions developed

following a research of several scientific databases on human computer interaction,

psychology, and pedagogy. Their initial testing outcomes helped to narrow the evaluation

criteria to five, namely: privacy and security, information reliability, supporting

navigation, accessibility, and motivating the user; this was later extended to include

presenting information, visual design, readability of text, media elements, and technical

implementation. The research questions were first tested with 34 students, and their

responses were analyzed. The outcome showed that the tool was self-sufficient, but

lacked certain elements related to security and privacy, and implementation.

Similar frameworks, along with other quality assessment methodologies, should

define benchmarks against which distance eduction practices can be assessed. The growth

of the Internet will certainly have a bearing on how education is done. More people are

increasingly using the Internet for learning. Therefore, standards and frameworks for

measuring quality would have to be developed to guide and ensure the presence of

quality in online delivery methods.

The COI and the WebSQu models can be used to provide detailed examination of

technology's use to teaching and learning in relation to the learning experience; however,

a third framework allows for broader examination of technology's use covering a wider range of issues. Khan's (2011) framework for e-learning is described in the following section.

Measuring the Impact of E-Learning: Khan's Framework for Evaluating Distance Education

A useful framework for evaluating distance education is Khan's (2011) framework for e-learning (see Figure 2).
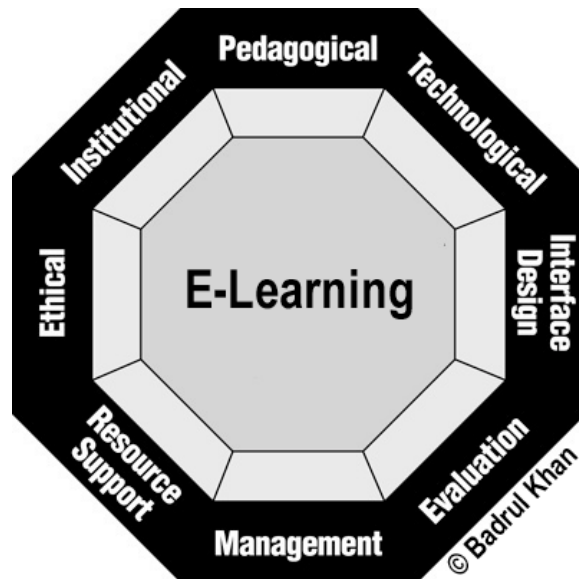
Figure 2. Khan's framework for e-learning.

Note: From *eLearning Framework* (framework image), by B. H. Khan, 2011. Retrieved from http://asianvu.com/bookstoread/framework/ Copyright 2011 by B. H. Khan. Reprinted with permission.

The framework is described as an integrated shape of interrelated dimensions that addresses pedagogy, technology, user interface design, evaluation, management, resource support, ethics, and institutional support. Each dimension further includes several sub dimensions (see Table 1).

Table 1.

Sub Components of Khan's E-Learning Evaluation Framework

Evaluation Framework	Components
1. Pedagogical	1.1 Content analysis 1.2 Audience analysis 1.3 Goal analysis 1.4 Medium analysis 1.5 Design approach 1.6 Organization 1.7 Methods and strategies
2. Technological	2.1 Infrastructure planning 2.2 Hardware 2.3 Software
3. Interface Design	3.1 Page and site design 3.2 Content design 3.3 Navigation 3.4 Accessibility 3.5 Usability testing
4. Evaluation	4.1 Assessment of learner 4.2 Evaluation of the instruction and learning environment
5. Management	5.1 E-Learning content development 5.2 E-Learning maintenance
6. Resource Support	6.1 Online support 6.2 Resources
7. Ethical	7.1 Social and political influence 7.2 Cultural diversity 7.3 Bias 7.4 Geographical diversity 7.5 Learner diversity 7.6 Digital divide 7.7 Etiquette 7.8 Legal issues
8. Institutional	8.1 Administrative affairs 8.2 Academic affairs 8.2 Student services

Note: Compiled from Khan (2011).

According to Khan (2001), these components are essential to (a) provide the best and most meaningful flexible learning environments for learners worldwide (p. 356), and (b) to provide some guidance on addressing critical issues for creating meaningful learning environments (p. 94). The framework can scale from a one-person operation to a complex and large-team effort as the scope expands (Khan, 2000). It "provides guidance in the design, development, evaluation and implementation of online courses, e-learning environments, distance education programs, virtual universities and learning management systems" (Khan, 2001, p. 498). Only the pedagogical, ethical, and technological sub-dimensions of the framework are described in this section.

Pedagogical sub-dimension. The dimension is concerned with the combination of the content that has to be delivered, the learner needs, and the learning objectives (Singh, 2003). It encourages an analysis of the content, audience, goals, and objectives of the program; the medium used in delivering content; the design approach; how it is organized; and the methods and strategies for its use.

Content analysis. As it concerns content, a guiding question relates to how up-to-date it is (Khan, 2000). Technology, including the Internet, is in a state of constant evolution that affects the devices we use to access content, the protocols or languages in which those content exist, and the content itself. Computer manufacturers continue to improve on the design and power of processors and to increase storage capacity. It is a known fact, in what is now called Moore's law, that today's devices are more powerful than previous ones (Moore, 1998). The formats of the content stored on these devices are determined by the growth and innovation of the devices themselves. For instance, where content was previously limited by the size of the storage capacity in which they were

kept, today's multimedia contents are maintained in much larger storage spaces. As technology continues to evolve, the format of this content continues to change. Rich online content such as video, voice, and images are examples of the growth in storage and processing power of computing devices, which did not exist in the past decade. These evolutions also affect teaching and learning, in that content that may have been relevant a few years ago may no longer be useful in this present state of evolution.

Another useful example is the role that social media is playing in society in fostering new forms of relationships. Today's channels of communication are vast, but integrated. Users in social media sites are interrelated to others in a complex weave of sub networks and communities. The evolution of new social paradigms affects teaching and learning through the forms of relationships that can be fostered between learners and teachers. This evolution of social relationship can affect how content is delivered.

As it relates to the protocols or languages of the Internet, and how they contribute to changing content, Internet protocol, and the language of communication is also in a constant state of evolution. Internet protocol, which is a set of standards and rules that guide how devices connect and share information between and among themselves, is comprised of unique numbers called addresses that are assigned globally to regional institutions; they are subsequently assigned to national registries for final deployment to users and businesses. Internet Protocol version 6 (IPv6) is the new protocol developed by the Internet Engineering Task Force and supported by the Internet technical community and by global Internet institutions such as the Internet Corporation for Assigned Names and Numbers. The older protocol, IPv4 (Version 4), currently in use has been completely exhausted as of the first quarter of 2011. IPv6 provides a broad range of benefits to

Internet connectivity and the future growth of communication. For instance, it offers a large pool of addresses sufficient to accommodate many unique devices concurrently connected to the Internet. For teaching and learning, this implies a great amount of mobility to the learner who can connect to course content and materials using many unique devices, including handheld ones. As protocol evolves, access devices and tools that users, including the learner, would need and use to connect to resources would have to evolve to the standards defined by these new protocols.

For the content creator, e-learning expert, and institution delivering e-learning, the fundamental answer to the question of *dated relevance* becomes extremely important. The content developer should, therefore, ensure that a meta-process for analyzing content for dated relevance and subsequently for updating the content itself has been defined.

Audience analysis. As it concerns the learner, the questions of who they are and the information that the institution has about them become very important. Khan (2011), through his framework, suggested that for the learning experience to benefit the learner, the institution or instructor that delivers content must know the learner. While some of this attribute is synonymous with the learner, it is the role of the teacher to facilitate the learner, consistent with this attribute, by pointing towards appropriate and relevant knowledge sources. For this to happen, the teacher or institution must have sufficient information about their learners, understand their needs, and in collaboration with them, design techniques and tools that will meet these needs. Some useful information includes learner's understanding of the learning concepts, issues of culture as it relates to how teaching and learning is done, and the socio-economic status of the learner.

Goal analysis. Khan (2007) suggested that the course should provide clear expectations of what the student is required to do. Most importantly, the goal should not be compromised because of the introduction of technology. Rather, the introduction of technology to teaching and learning should enhance the process of achieving the goals. It is essential, therefore, that e-learning objectives are anchored on principles rather than on pursuing the acquisition of knowledge from the use of the tools themselves. While the focus of learning could be on knowing a tool and how it works, it does not have to be an overarching outcome for all e-learning courses in general. For example, the concept of affordance (Greeno, 1994) which is the action potential of a tool to achieve a certain objective is a more useful way of visualizing the purpose of a tool and how it can contribute to achieving a learning outcome than that of seeking to understand the tool itself. Using social media for teaching and learning should not be considered any differently. It should not be about knowing how the tool works, but about how it contributes to achieving the learning objective and for enabling teaching and learning.

Medium analysis. The importance of maintaining relevance and keeping content up-to-date was highlighted in the content analysis section. This is because content and the medium in which they are delivered continue to evolve. Web 2.0, the collaborative web, contains a broad range of tools that allow for collaboration, knowledge management, and information sharing. It is an evolution from the way content was previously served on the Internet, which was, in essence, a network of servers providing static pages that were interconnected by hyperlinks.

The evolution to Web 2.0 and the tools available in this version of the web allows users the opportunity to use features such as rich multimedia and collaboration in ways

that were previously impossible. For instance, this collaborative web has contributed to

the growth of user-generated content such as YouTube, which allows multiple users to

create videos and voice data; or Flickr; or other image sites that house large amounts of

digital images. New web formats such as the semantic web (Web 3.0), which concerns

the web's built-in ability to make meaning from its content and organize this knowledge

in ways that can be easily understood by, and useful to, the learner will contribute to

enhancing teaching and learning in the future. Therefore, e-learning techniques should

adopt these new possibilities that the web offers in order to provide the learner with a

richer learning experience.

    Design approach. Sometimes, designing an online learning course is more

intensive and could require additional considerations or work than those required for

planning a face-to-face course (COHERE, 2011). One such consideration is whether to

make the online instruction more didactic or facilitative (Khan, 2007) or both. The use of

technology in teaching and learning is framed by an inquiry approach to learning

(Garrison & Vaughn, 2008), which is problem or question driven, involves "critical

discourse, self-direction, research methods, and reflection throughout the learning

experience" (p. 112). Such attributes place more emphasis on the learner's ownership of

the learning process and on the need for the instructor to change his or her role to meet

the requirements of this new, more facilitative teaching and learning landscape

(Wdrexler, 2008). As a result, a decision has to be made at the design phase as to how

more facilitative or didactic the course will be. In a facilitative role, the instructor fosters

the creation of networks and builds the learner's capacity to find valuable resources in

this network of information. Irrespective of how didactic or facilitative the course should be, a decision must be made up front in deciding the most appropriate course design.

Organizational design. Course units should scaffold or progressively build on each other and should be organized in a form that encourages progressive learning. This is often difficult, especially in e-learning courses, because of the networked nature of the Internet, in which one concept is usually linked to another making it significantly difficult to explain one without explaining the other. For instance, describing online identity requires an understanding of one's digital footprints, which further requires an understanding of technical bits such as *cookies* and online security. It is further challenging to include these concepts in a non-technical course such as psychology or physiology. Khan (2007) suggested that the course should provide a sense of continuity or that each unit of the lesson should build on the previous one.

Method. The course should embrace a methodology that fosters collaborative learning by providing a supportive environment for asking questions, clarifying directions, suggesting resources, and working on joint projects with class members (Khan, 2007). Most e-learning platforms provide tools for discussions, synchronous and asynchronous chat rooms, and features that allow for the exchange of information. However, the course method should include the systematic use and inclusion of these features as an integral part of the lesson or course design to encourage sharing and the exchange of information between the instructors and learners. It should also facilitate group collaborative work.

Technological sub-dimension. Technological considerations are usually the aspect of online learning that are often most challenging for the facilitator or the

institution seeking to introduce e-learning strategies to traditional teaching and learning.

The challenges range from funds required to design, develop, and implement technology-

based learning to the difficulty of building the required skills or capacity necessary for

effective teaching and learning (COHERE, 2011). Technological considerations include

three elements: (a) infrastructure planning, (b) hardware, and (c) software requirements.

  Infrastructure planning. Besides pedagogically planning and including

technology as an intrinsic part of the course structure (see Pedagogical section), the

infrastructure required to deliver the course must equally be planned. An essential

element to this planning is the availability of the personnel who are required to assist the

learners in setting up and for getting started with the course. It is easier for learners who

may already be familiar with the use of certain content management systems or the

Internet for research, teaching, and learning to easily grasp a new e-learning course than

for those who have not. For the latter category, a more careful approach should be

employed in meeting their needs, including the provision of personnel to assist through

beginning challenges such as course set up. This act of providing support is not too

different from the online support requirements discussed further in the Resource Support

section of this framework, which continuously spans the entire duration of the course.

  Hardware planning. An aspect that is usually taken for granted is that of the

technology requirements needed for an e-learning course. These should be spelled out

and clearly stated at the beginning of the course. The requirements should be examined

from two perspectives: (a) that of the institution where the learning content is hosted and

delivered; and (b) that of the learner, which addresses the requirements needed to

participate in the course. It is assumed that the hardware as well as bandwidth needed to

host an online learning course has already been addressed at the institutional level.

However, learners approach online learning with various equipment, infrastructure, and

tools. Resources such as headphones and microphones for participation in online

conferences are usually essential if the course requires their use.

One area where the hardware requirement must be clearly stated is bandwidth. As

this is not directly an issue of software requirement (see the Software Planning section) or

hardware per se, course facilitators or instructors often forget the importance of stating

the bandwidth needed for a minimum level of acceptable user experience in an e-learning

course. Learners in remote or underserved areas, who may, for example, be restricted to

dial-up as their primary means of access to the Internet, may have to make adjustments

either by relocating to areas where there are better means of connectivity or by seeking

alternatives that enable them to meet the minimum requirements for a pleasurable online

learning experience. Sizable bandwidth is required to access the LMS or Internet sites,

most of which may be graphics and video intensive. It is best that learners are informed

of this requirement prior to commencement in order that they can make all the necessary

adjustments for effective participation. A more explicitly defined connectivity

requirement is essential.

Software planning. An essential part of the planning process is to provide the

learner with the links to the software required for the course. It is possible that software

such as a web browser needed to access online classrooms might already be available on

the user's computer. Sometimes, additional software such as presentation, spreadsheet, or

word processing applications may be required for presentations or writing research

papers. Users should be granted access to these tools if they are available. These should

not be taken for granted that the user may already have them because they come by

default on their computers, but should be explicitly defined to the user.

Interface design framework. An evaluation of social media use in teaching and

learning in a Finnish university revealed that the visual design of an e-learning platform

is as important as privacy and security or the reliability of the information on the platform

to the students (Silius et al., 2011). Three-quarters of the student interviewed found ease

of use to be the most important feature. The visual appealing design of an LMS can

positively contribute to the learning experience of the user if the site is well laid out and

the design elements are easily navigable. Based on his framework, Khan (2011)

suggested that the page and site design must be visually appealing; content should follow

a *one idea per paragraph rule*; and it should have a site map, be accessible to a broad

range of users including those with disabilities, and must have an FAQ section. A

detailed description of these requirements is presented in this section.

Page and site design. According to Khan (2007), the page and site design should

look appealing in a variety of web browsers and access devices. Khan's framework was

developed at a time when web developers ensured that their sites were compliant to a

wide variety of Internet browsers on the market. Today, page and site design must also be

equally compliant to browsers on computers as well as those on mobile devices. This

implies that the LMS should also be executable on mobile devices. With the prevalence

of mobile Internet, learners would appreciate having access to their learning content

using handheld Internet enabled devices. Those versions should be equally appealing,

simple to use, and less bandwidth heavy. A mobile-enabled site is not necessarily a full

Internet site, but a scaled-down version of the full site with much the same functionality.

Content design. In addition to the content being relevant (see Content Analysis section), it should be simple and easy to follow and navigate. Khan (2011) suggested that contents should follow the one idea per paragraph rule. The Online Writing Lab for Purdue University (2010) advocated a similar approach:

> The basic rule of thumb with paragraphing [for the web] is to keep one idea to one paragraph. If you begin to transition into a new idea, it belongs in a new paragraph. There are some simple ways to tell if you are on the same topic or a new one. You can have one idea and several bits of supporting evidence within a single paragraph. You can also have several points in a single paragraph as long as they relate to the overall topic of the paragraph. If the single points start to get long, then perhaps elaborating on each of them and placing them in their own paragraphs is the route to go. (para. 2)

This rule suggests the simplicity that the content producer or course creator should maintain for the course content or lesson unit. It also suggests that contents should be provided in sizable chunks. The Internet already presents a broad range of information, which could be inundating unless that information is organized in a form that is easy to comprehend. The course unit should, therefore, be organized in a way that leads directly to the learning outcomes.

Navigation. Site maps or structural aids are essential elements to a web site, as they provide the reader with a global overview of where resources should be. Previous web page designs made it necessary to have site maps as they laid out the breadth and depth of the links and sub links on the site. New web designs, languages, and browser capabilities have resulted in designs that enable more interaction with the site by

providing pop-up menus that are sometimes activated at a mouse hover action. Whereas

users may bypass site maps and go directly towards exploring the site content as a result

of advances in web designs, in the same vein, a carefully laid out course design that

provides an overview of the course from start to finish appeals more to an e-learning

student (Silius et al., 2011). An e-learning course should therefore be well laid out and

easily navigable.

Accessibility. The course should be designed to provide access to a wider user

population (Khan, 2007), including those who are disabled. Khan (2007) suggested it

should be 508 Compliant or accessible to people with disabilities, in response to the 1998

amendment to the Rehabilitation Act of 1973 by the US Congress, which required that

federal agencies make their electronic and information technology accessible to people

with disabilities (Section508.gov, n.d.): "Under Section 508 (29 U.S.C. '794 d) of the act,

agencies are required to provide those with disabilities access to information comparable

to everyone else" (para. 1).

Although no similar law or act exists in Canada, organizations such as the Council

of Canadians with Disabilities (CCD) have drawn attention to the need for "technology

[to be] developed according to the principles of universal design" (CCD, 2011, para. 7),

which suggests that it should be usable by people with various disabilities (CCD Believes

In section, para. 4). There is no common definition of disabilities in Canada; however, the

Canadian Pension Plan's definition states that whatever the disability, it "has to be both

'severe' and 'prolonged', and must prevent you from being able to work at any job on a

regular basis" (as cited in Service Canada, n.d., para. 3). Although the design of e-

learning courses or units should take disability accessibility issues into consideration, it is

usually not very easy to determine the extent to which a broad range of disabilities can or will be accounted for.

Usability testing. Khan (2011) suggested that the availability of a frequently asked question, or FAQ, section in the course and the ease with which learners find answers contributes to the learning management system's usability. The FAQ provides a set of plausible and real problems that learners may face during the process of going through the course and the solutions that they can apply in solving those problems. FAQs are developed around the process rather than the content of the course. FAQs reduce the administration time required to help students go through the course, especially for those where the student-to-instructor ratio is wide, thus making it difficult for one professor to address the individual administrative request of students. FAQs are developed progressively and should be updated as the course progresses.

Evaluation sub-dimension. Within an online learning context, evaluation is a two-way process. This includes the learner and learning objectives, which is conducted at two levels: (a) the mutual evaluation of the learner by the learner and course facilitator and that in which the facilitator assesses the student's learning, and (b) the course learning instruction and environment.

Assessment of learners. In assessing the learners, there should be a mechanism in place whereby they cannot cheat and can be truly measured (Khan, 2007). An appropriate evaluation method should be used (Singh, 2003), which implies that the evaluation criteria should adapt to meet the specificities of each new course. In a social media and adult learning context and within a framework of connected or networked learning in which the learning objectives frequently change to meet the requirements of the learner

and the evolving technology and learning context, learning outcomes would have to be defined specific to the learner's needs. A suggested way of doing this is by collaboratively defining the learning outcome right at the beginning of the course, recalling them during the course, and revisiting them at the end. This responsibility is both that of the learner and the course facilitator.

Evaluation of instruction and learning environment. The course should have a system that accepts the online evaluation of content, instructor, learning environment and resources, course design, and the level of technical support provided and received (Khan, 2007). The evaluation, as suggested by Khan (2007) should facilitate answers to the following questions: Have the learning content been appropriate for their learning needs? Did the course deliver on its outcomes? Did the instructor play a facilitative role? Was the learning environment appropriate and were the learning resources sufficient to meet the objectives of the learner and those *a priori* defined and agreed by the learner and instructor? Was the course design progressive, incremental, relevant, and applicable? Was there technical support available when it was required?

Management sub-dimension. Issues that should be addressed at the administrative and course management levels will always arise during a course. Course withdrawals or concessions should be addressed in a timely fashion, as well as those that require prompt decisions, such as registrations and scheduling of course elements. Simply, the infrastructure and the logistics must be in place to manage multiple delivery types (Singh, 2003).

Content development. Khan (2007) suggested that there must be a project support site for the e-learning production team: a mechanism to address trouble tickets and

technical and operational challenges that the learners may have. Sometimes, the availability of an email address or phone number to which learners and facilitators can address their complaints may be sufficient. New sites are likely to produce a large amount of trouble tickets generated by learners and facilitators. As the site matures, the project support team would have built the necessary skills and expertise to address common problems. It is likely that the FAQ developed during the usability testing (see Usability Testing section) will include common problems generated here. All of these constitute mechanism for managing the content development.

Maintenance. Mechanisms for managing course content must be accompanied by the frequent maintenance of the course site. The presence of a mechanism that notifies learners and facilitators about changes and relevant information, such as email, announcement page, alert boxes, running footer on a page, phone call, or ordinary mail, would enhance the maintenance profile of the learning site (Khan, 2007). Social media is another useful way of providing maintenance information if it is incorporated with the course learning environment.

Resource support sub-dimension. Access to resources, such as course links provided by a dedicated resource person, that is provided through online and offline means is an essential element for the delivery of an online learning course.

Online support. The availability and organization of online and offline resources provided by a resource person such as a counsellor or facilitator (Singh, 2003) or system, through email, an online chat system, or even social media should be addressed. Khan (2007) suggested that the course must provide trouble shooting assistance, expert technical support from specialized staff, or a help line.

Resources. Resource support concerns access to resources that learners can use during their learning process. This includes examples of what may be expected of them, including past students' work that could be used as a reference.

Ethical sub-dimension. Khan (2007) recognized the role that ethics plays in the delivery of an online learning course and suggested the need to pay attention to ethics as it relates to social/political influence, cultural diversity, bias, geographical diversity, digital divide, etiquette, and legal issues. Equal opportunity, cultural diversity, and nationality should be addressed (Singh, 2003).

Social/political influence. Social or political issues that can emerge as barriers to implementing online learning should be appropriately addressed through the process of ethical approval (Khan, 2007). A process for addressing current and future political ethical concerns should be developed to accompany online learning courses.

Cultural diversity. Khan (2007) addressed cultural diversity from the perspective of language and communication. He suggested the need for dis-ambiguity in communication by avoiding jargons, idioms, cute humour, or acronyms. Consideration for cultural diversity transcends language. The type of examples used, resources referenced, and other components of the online course must also respond and be sensitive to cultural diversity.

Bias. The course must be open to a number of viewpoints on controversial issues and present views that suggest diversity of opinion (Khan, 2007). The collaborative and decentralized function of social media makes it possible for a diversity of opinions and views.

Geographic diversity. The course must recognize geographic diversity in such a way that the learners' time zones are considered when components are scheduled. For instance, synchronous communications should be scheduled at a time that is convenient for all students at the different time zones (Khan, 2007).

Learner diversity. Along with the geographic considerations for time, the course should also recognize and consider the learner's individual differences and adapt itself to suit their specificities. Khan (2007) suggested that the course should be designed to have patience for learners and considerations given to those who may not be initially inclined to an individualized learning environment.

Digital divide. Khan (2007) described a digital divide in terms of information accessibility between the digital *haves* and *have nots*. Digital divide has been defined from a number of perspectives: divides between genders, urban and rural, rich and poor, developed and developing countries. It has also been defined from the perspective of educational challenges (Trucano, 2010), to mean a divide resulting from the use of ICTs in the educational context. Whatever definition is used, there is a gap between the technically savvy and those who are not, which may have resulted from access to ICTs by the former. Khan suggested a divide issue should be considered in the design of the distance learning content.

Etiquette. Courses should provide learners with guidance on how to behave and post messages in online discussion forums. While etiquettes could concern very basic protocols and rules to observe when making an online post, there may be other considerations, such as those that involve cultural sensitivities, which should also be considered. Learners should be aware of these different dimensions so that their

contributions do not hurt the feelings of others. It is the responsibility of the course designer or facilitator to include etiquette information in the forum.

Legal issues. Learning sites should address intellectual property issues such as permissions to use or re-use student content. For instance, learners making submissions must appropriately reference or cite resources: images, photos, and other digital elements that they use. The course should allow learners to consent to posting or reuse of their content, such as comments, projects, reflections, and others on the web or outside the learning management system (Khan, 2007).

Institutional sub-dimension. Three essential institutional factors are necessary for the delivery of an online course: (a) institutional preparedness, (b) academic quality, and (c) the availability of student support services.

Administrative affairs. According to Khan (2007), the institution must be ready to offer online courses. This is reflected in its state of preparedness as it concerns available infrastructure to deliver content online, the presence of support services to student and faculty, and courses that have been designed for delivery on the web. The presence of these factors is insufficient by themselves for the delivery of an online course. Accompanying administrative will is essential.

Academic affairs. In terms of the quality of delivery, the course should be no less different from one delivered traditionally. Accreditation requirements and quality of delivery should not be compromised because it is an online course.

Student affairs. Relevant staffs, such as the instructor and other technical personnel, must be available during course orientation. A course delivered online should not offer any less student support than a traditional course. Students may have questions

that can only be answered by the responsible technical staff. It is important that they are available at the beginning of the course.

Sections of this framework: namely, pedagogical, technological (including interface devices), and ethical frameworks will be discussed further as they specifically concern the research in Chapters 4 and 5.

Challenges of Online Learning Approaches

Yukawa (2010) brought another level of complexity into the distance learning dialogue. Although commenting from a blended learning approach where course delivery was done using a combination of face-to-face and online methods, the author argued,

> Blended learning brings . . . challenges on many levels. While online environments provide tools for intellectual and social discourse that supports cognitive development, social networking, and community building, the primary means of online communication today is typed text, which lacks the expressive features of nonverbal communication and voice tones, as well as a shared awareness of context. (p. 55)

Yukawa argued about the inability of ordinary text to replace communication, as we know it: a rather complex endeavour that encompasses both verbal and non-verbal gestures and cues. The author further argued that factors "such as the context of the scholar are important but that they are rarely considered in the delivery of distance education" (p. 55). This is particularly true for cultural contexts where speech takes prominence over text and tacit may override explicit knowledge. Although, in recent times, the growth of multimedia learning platforms has improved interaction, near or distant, by offering the ability to conduct face-to-face interaction through the use of

elements such as videos. This is not necessarily true in all contexts where connectivity

challenges constrain the use of innovative technology solutions for teaching and learning,

thereby resulting in text-based interactions requiring less bandwidth than multimedia,

which may be possible within the infrastructure available. Some of these challenges are

described in the following sections and in the application of Khan's (2011) framework in

examining the perceptions of African learners in the distance education course offered by

a Canadian research university.

Connectivity and technical challenges. Connectivity problems were referred to

as one of the hitches experienced during the delivery of vocational education and training

courses to remote adult education Aboriginal learners in Australia (Twyford, Crump, &

Anderson, 2009). Using equipment provided by the program, such as a satellite-supported

two-way broadband voice, one-way radio, and Internet access, school age and adult

distance education students interacted, and courses were delivered using these

technology. Twyford, Crump, and Anderson's (2009) findings indicated that students

> reported technical difficulties and having trouble hearing fellow students
>
> sometimes occurred . . . in addition, most students found the picture-sound delay
>
> frustrating as audio latency can affect the interaction between teachers and their
>
> unseen students and constrain the interactivity possible in an interactive distance
>
> eLearning classroom. (p. 133)

In spite of this, the project went on to experience some successes; some were referred to

as a "'quantum leap' in the quality and quantity of courses and how students can

participate in education without having to leave their home or community" (p. 133).

As these types of courses are delivered to remote communities, in Canada and beyond, by Canadian universities such as the University of Manitoba, studies that explore their effectiveness, the context where these students learn, and the efforts they make to meet up with the standards are intrinsic to their success and how they can be subsequently delivered efficiently and effectively. From an action practitioner perspective, these experiences will inform the researcher's practice and contribute to shaping and improving the courses he or she facilitates.

Cultural context of online learning. Distance education and online learning allow both local and international students to benefit from courses delivered online. Issues of culture become pertinent in much the same way as in traditional education (Hoffman, 1996; Stevens, 2008; Van Oord, 2005). For instance: How do instructors or facilitators address cultural issues in an online learning class? What role does multiculturalism play in a multicultural online setting? How do student and teacher from different cultures develop a relationship that strives to achieve the academic objectives of the student while aspiring to maintain the quality of content delivery in such multicultural settings?

The discourse on culture, especially multiculturalism and how it applies to education has been an ongoing decades-long one (Egbo, 2009, p. 52) and has taken place across a variety of worldviews and subject areas, particularly in the sociology and anthropological fields and, in recent times, education. Hoffman (1996) argued that the concept of culture has been simplified and reified, that there are fundamental gaps between theory and practice in multicultural education, and that the codification of multiculturalism undermines the essential multicultural theme; what he terms "an

inherent openness and flexibility" (p. 546). This codification leads to cultural

legitimization, which Stevens (2008) argued "has become so commonly represented by

quantitative measures of formal schooling that sociologists scarcely recognize schooling

as a cultural phenomenon anymore" (p. 11). Cultural legitimization creates a perception

in which formal education is perceived by people from all social classes to be an effective

mechanism for social mobility and, consequently, the distribution of social rewards.

Stevens stated,

> The transformation of a complicated process into fairly simple metrics is precisely
>
> what happened to education in post-WWII North American sociology. As
>
> quantitative means of empirical analysis became ever more preponderant in the
>
> discipline generally, sociologists of education increasingly presumed that
>
> quantitative measures of the amount of formal schooling individuals completed
>
> were not only necessary but also sufficient representations of how education
>
> worked. What schooling actually, empirically entailed—namely, the formalization
>
> and transmission of such fundamentally cultural phenomena as language,
>
> mathematics, art, and literature—became a static quantity akin to money. . . .
>
> Education became a metrical phenomenon. The content of formal schooling,
>
> which not only was essentially cultural but also varied, amorphous, processual,
>
> and often hard to measure, faded into the analytic background. (p. 12)

Thus, culture plays an important role to teaching, learning, and research, especially in a

globalized context. However, culture is a difficult word to define, similar to

multiculturalism in education (Egbo, 2009, p. 2, 52-53). Van Oord (2005) pointed

interested researchers to Kroeber and Kluckhohn's collection of over 169 different

definitions of culture. While it has been defined in many contexts including education, in terms of food, behaviour, language, government, and others, it remains a very complicated word in the English language and has come to be used for important concepts in several distinct and incompatible systems of thought (p. 175), as noted by Van Oord in quoting cultural historian Raymond Williams. Van Oord argued that the concept of culture has undergone substantial inputs, including Boas' distinction of culture from cultures, culture as an object that unites a group of people within a particular society, as a process of progress, and as the object that connects or even binds people to their tradition (pp. 175-176). These various concepts of culture tend to suggest the presence of underlying values beneath the surface of what could be seen. One interesting distinction that is pertinent to education and learning is the dominance over, or the subordination of, one culture to another (p. 181), which may be evident in the relationship between the learner and teacher or the learner and the institution. If the discourse on culture holds so much interest in how traditional education is done, even more so is it reflected in distance or online education, for existing online practice cannot be completely stripped of intertwined elements of culture that have been historically linked to education.

Egbo (2009) presented a review of several wide-ranging views of multicultural education, which posed a challenge to educators of which to adopt (p. 53). The seven models included: (a) multicultural education for common values, which is essentially mono-cultural education concerned with creating a sense of national identity; (b) multicultural education as education of the culturally different, which concerns the equalizing of education for culturally different students; (c) education for cultural

understanding, an approach that concerns the recognition of cultural diversity as a social reality; (d) education for cultural accommodation, which rejects segregationist approaches and replaces them with cultural pluralism; (e) bicultural education that rejects cultural assimilation but invests in producing students to operate across group boundaries; (f) education for cultural preservation, which Egbo suggested does recognize cultural differences, but advocates the maintenance of ethnic boundaries; and (g) education for multicultural adaptation, in which students are taught competencies to operate in more than one culture. All of these models have been challenged, and they have their limitations as well as merits (p. 55). However, a more radical alternative to multicultural education is proposed to address the inherent racial and cultural issues that multicultural education does not address. Anti-racist education is an "action-oriented strategy for institutional, systemic change to address racism and the interlocking systems of social oppression" (Dei, as cited in Egbo, 2009, p. 57).

Multicultural education allocates power to the individual learner. Hoffman (1996) suggested proper contextualization, from a holistic and comparative perspective for the teaching of a more sophisticated and reflective understanding of culture, because culture should not be artificially inserted in bits and pieces into everything (p. 555).

Introducing these concepts into technology assumes similar meanings within a different context. First, the technology medium itself assumes the cultural context of the designer. In an education setting, the delivery of online content and the technology used conforms to the cultural context of the instructor and the institution from which the institution emanates.

In describing the larger context existent in the online world and how an understanding of culture is important in this context, Shapiro and Hughes (2002) wrote:

In a social world shaped by algorithms, the mechanical procedures that computers are so good at carrying out, there is no algorithm for building culture and community in online academic and educational environments. . . . The combination of several trends has brought about a situation where, both in the larger society and in academic environment one can no longer take for granted what it means to have community or common culture—trends such as rapidly changing technologies; changes in higher education such as the increasing number of adult and returning students in colleges and universities, . . . and major social and cultural changes such as the globalization of the economy, the informatization of work and the increasingly multicultural environment. Students, faculty and administration come together with multiplicity of beliefs and values about what kind of culture and what kind of community is real, desirable, or possible. Consequently, culture and community must be built or developed, and not simply in one felt swoop but rather as an ongoing process. (p. 93)

The culture of online learning is one layer that students shroud themselves with when they move from the physical classroom setting to the online world. Email etiquette, or the code of conduct, in an online discussion list is one example of this sort of cultural disposition. This is similar to norms, rules, and respect for individual expectations that are usually defined at the beginning of a course, which are used to guide and provide some form of order throughout its duration. Another slightly more complex layer of culture is that which involves students participating in courses from different geographic,

social, and political context. A student based in Asia or Africa engaging in an online study delivered by a university in Canada or the US is an example of this second type of cultural layer where learning epistemologies and styles, the way or forms of delivering instruction, may be very different across these contexts. This research is about this latter form of cultural disposition.

Summary

The impact that the Internet has on learning with respect to the adult learner has been examined in this chapter. I have done this through examining the common attributes that are evidenced by the adult learner and the affordances of social media. Research has suggested that social media can be used for teaching and learning as a far departure from previous distance learning forms of delivering content. I conclude by suggesting the use of Khan's (2011) framework for evaluating e-learning as a useful theoretical framework to examine a distance learning course that was delivered to African adult learners. The importance of culture as an essential consideration for successfully deploying e-learning has also been explored. The methodology that was used in the research is described in the next chapter.

CHAPTER 3: METHODOLOGY

I start this chapter with a description of the research context, including the cultural and technological context of the research participants. The research team and their roles, how participants were recruited, and the process for collecting the research data are also described in this chapter. The issues of ethics and how they were addressed, particularly concerning the relationship between the researcher and former learners who were also the research participants, are raised in this chapter.

The research was conducted with a cohort of learners from a Kenyan-based institution that collaborated with the Extended Education faculty of the University of Manitoba in the delivery of the Introduction to Emerging Technologies course in 2011. The research participants were reproductive health adult educators exploring opportunities for remote delivery of their health-related courses using new and emerging Internet technologies and social media. They lived in Kenya, Zambia, Malawi, Zimbabwe, Lesotho, Swaziland, and South Africa. The course was delivered using Angel, an online learning management system (LMS), and a variety of emerging technologies and Web 2.0 tools such as blogger, twitter, Facebook, and Skype. It lasted twelve weeks. Each week was organized to achieve weekly, predefined objectives, which were distributed to the learners at the beginning of the course. At the end of each week, an hour online synchronous discussion was held to discuss lessons and challenges of learning for that week and to set the tone for the upcoming week. Participants in the synchronous discussions typed their comments instead of speaking, to accommodate for the low bandwidth capacity of the learners, as text chats require lower Internet bandwidth than voice data. At the end of each synchronous discussion, a volunteer uploaded the chat

transcripts to Angel for reference purposes, especially for those who could not

participate. Participation in synchronous chats was graded, and those learners who could

not participate were awarded marks in lieu of participation if they interacted with the

transcript through posting a comment.

Each week, learners engaged with each other in an asynchronous weekly

discussion forum. In addition, they submitted 200-word weekly reflections of their

perceptions of the week's learning as a part of their learning requirement. Each learner

submitted ten reflections. Ten learners were targeted to participate in the research;

however, only seven responded, thus providing a total of 70 reflections that made up the

data set for this research. Research participants were also surveyed, and the results from

the survey were triangulated along with the findings from the weekly reflections.

The Research Team and Their Roles

The research team consisted of me, as the principal researcher, and a research

assistant. I was responsible for designing the research protocol, identifying the research

participating team through purposive sampling, conducting the research, analyzing the

research data, and presenting the final research report. Given the power relations that may

exist between the researcher and the learners, appropriate measures were taken to manage

the *power-over* situation. These are discussed in details in the ethics section. The research

assistant, who had no prior relationship with the research participants, was responsible for

them by sending an informed consent letter and a consent form containing a link to the

online survey (see Appendix A, B, and C). Once the participants returned the signed

consent forms, the research assistant forwarded them to me. I had no contact with the

participants during this period. The only reference to the researcher was found in the mail

sent to the participants. Although the initial survey design incorporated an additional step to follow up with the participants using the telephone/Skype, in the case that additional information was needed, this step was not required.

Data Collection Procedures

The data were collected using a mixed-method approach in the following format:

1. Online survey/questionnaire: The survey questions addressed personal and demographic questions described in the sample survey questionnaire, which can be found below. The survey was hosted in a secure online site and was accessible only to the respondents.

2. Weekly reflections: 200-word weekly reflections of learner's perceptions of the week's learning constituted the third data set for the research. Reflections were extracted from the Angel LMS. Reflections were part of the learner's submissions during the course. Each learner submitted at least 10 reflections. Ten participants were recruited for the research, thus providing a total of 100 reflections that make up the data set.

Online survey/questionnaire

Preamble: Demographics

- Gender: Male/Female

- Country:

- Location where you usually accessed the Internet content: Office/Cybercafe/ Personal Internet/Other? Explain.

- Time period when you conducted your study: before office time, during office time, after office time (including weekends)

- Most convenient schedule: Daily, two to three days/week, three to seven days/week

- Open-ended interview questions:

    1. What were some of the physical, technical, social, and economic challenges that you experience during the course? How did you overcome them?

    2. How would you describe the value that this course has on your life, career, work, family, society, culture or environment?

    3. What role did motivation play? How did you manage to stay motivated?

Reflections. Learners were required to post weekly reflections that directly related to motivational, cultural, and technological challenges, in addition to describing how they have met the weekly learning outcomes. These reflections were analyzed for patterns as described in the Data Analysis Procedure section.

Data Analysis Procedure

An effective way of using Khan's (2011) framework as a tool to examine social media use in teaching and learning is to view it from two perspectives: (a) that of the learners and (b) that of the instructor/institution/administration. The learner's view is one that *demands* a certain level of quality for which individual learning objectives can be achieved. For instance, Khan (2002) suggested that the course expectations must be clear to the learner from the outset. Therefore, pedagogical aspects of the course should respond to this expectation. Conversely, the instructor/ institution/ administration's view is one that *supplies* the resources learners need to achieve the course objectives. For

instance, the course syllabus must declare the learning expectations at the onset and make this clearly available to the learners. Both perspectives work in sync and would hopefully be convergent. The supply of resources and content must meet the demand of the learner for the learning outcomes to be achieved. Thus, each category of Khan's framework can be phrased to both the learner and the instructor. As this research concerned the students, the survey questions were phrased to address the *demand* side—those from the learner's perspective. The course facilitator made efforts to reflect and respond to supply-side questions during the discussion and analysis of the results.

The data set was analyzed as follows:

1. Online survey/questionnaire: the data were extracted from the secure online site and initially analyzed for country, location, and gender; and from the results, participant's characteristics such the learner's location and gender was acquired. Open ended questions were analyzed in the same way as the data from the weekly reflections.

2. Weekly reflections: data from the weekly reflections and open ended question from the online survey were subjected through two parses. The first analyzed the responses for patterns that were subsequently categorized according to their frequency of occurrence. Categories such as technological challenges, motivation, and socio-cultural context emerged after the first parse. The second parse identified themes that were similar to the three dimensions of Khan's (2011) framework: technological, ethical and pedagogical. Within this framework, subcategories based on similar properties emerged after further analysis. The relationships between subcategories and categories were also

explored and resulted in the findings. The aim of this approach was to create a

matrix of interrelated components that explored the complex nature of the

relationships between the different categories and subcategories and how

these elucidated the technical, social, and economic aspects of student's

learning. These outcomes led to addressing the research questions.

Strategies for validating findings. All data were triangulated and validated as

shown in Table 2. As it concerns member checking, analyzed draft narratives rather than

transcripts were sent to the research participants to validate their comments. Draft

narratives indicated the researcher's understanding of the comments made by the

respondents rather than the raw transcripts, which could have been subject to the

researcher's interpretation and different from those of the participants.

Table 2.

Data Collection Matrix

Research Questions/Data collection methods	Survey	Weekly Reflections
1. Demographic Questions confirming gender and location (Tanye, 2008).	Questions will focus on identifying the role of gender on the perception of technology use. (Tanye, 2008).	Comments relating to gender or geographic location and its impact on learning.
2. Physical challenges: technological and economic issues (Khan, 2011)	Distance and access to technology infrastructure. Gender constraints (Khan 2000; Tanye, 2008). Reflect technology challenges Khan (2011).	Analysis of comments on technology challenges (Khan, 2011)
3. Questions on social and culture challenges (Egbo, 2009; Stevens, 2008)	Comments on culture and how the structure and content of the course is perceived, used or intended for use (Stevens, 2008).	Critical analytic abilities versus plain regurgitation of notes, references or links.
4. Questions on motivational issues (Khan, 2002)	Interview questions that help the learner recall factors of motivation during the course. Responses may produce comments that reflect motivation as a factor for completion of online course. (Khan, 2002)	Analysis of where motivation was used to incite more response from students; encourage students.

Ethical concerns. Recruited participants with clarifying questions could directly contact the principal researcher. A few questions were asked and answered on the time frame to submit the survey responses. At the time the survey was disseminated, there was no existing student-teacher relationship between the participants and the principal

researcher as they had completed their course. This does not preclude the fact that there could have been a lingering power-over relation; therefore efforts were taken to minimize the researcher's power over the learners by using a proxy to recruit the participants. Participants were issued a consent letter (see Appendix B) and consent form (see Appendix C) that offered them an option to opt out and to request the destruction of their data whenever they wished. The research was conducted after the course had been finalized and the learners graded, and no participant was taking any courses with the institution at the time of the research. Therefore, there was no relationship that suggested that the principal researcher/facilitator could influence their grades or course work.

Anonymity and confidentiality were maintained by having each participant and research team member sign a confidentiality pledge (see Appendix C). No student was referred to by their names, no direct reference was used, and gender was changed in reporting the data. All survey data were downloaded and deleted from the online survey site after the closing date. All data files are stored in a password-protected computer, and project files are further stored in password-protected and encrypted folders. All data will be destroyed within five years of the completion of the research.

Summary

The research methodology, the research context, and the participants have been described in this chapter. Also highlighted were the ethical concerns and how they were addressed. Khan's (2000, 20007, 2011) framework for e-learning was used to examine the delivery of the e-learning course to the learners.

CHAPTER 4: RESULTS/FINDINGS

The results and findings are discussed in this chapter. The data from the online survey are presented along with the results from the weekly reflections. As mentioned in Chapter 3, the data were triangulated and validated using Table 2, and the three sub-dimensions of Khan's (2011) framework: pedagogical, ethical and technological, were used to categorize the findings. The broad findings are indicated in **bold** typeface, while the comments from the research participants that led to those findings are indented and *italicized*. The following section presents the data from the two data sources:

1. Online survey/questionnaire, which included personal and demographic questions.

2. Weekly reflections, which were extracted from the Angel learning management system, were populated by the research participants during their course. Each course participant submitted ten reflections.

Results: Online Survey and Questionnaire

Demographics/characteristics of the research participants. The survey was disseminated to the research participants via email. Ten participants were targeted; six female and one male learner responded. While the sample size is not sufficiently large enough to generalize the research findings, it was not intended to do so; rather, it was envisioned to provide a representation of the class and a reflection of the local context to which the research participants belong.

Four respondents were from Kenya, two from Zambia, and one from Zimbabwe They did not particularly represent the distribution of the actual class, but suggested the diversity of the group.

Key findings. The key findings that emerged from the survey/questionnaire reflected the key focuses of (a) availability of Internet infrastructure, (b) socio-economic factors, and (c) conveniences as essential and necessary conditions for participating in an online course. All seven respondents accessed courses from their office locations and cited convenience and the availability of Internet access as the reasons for this choice over others, including the following:

> *Because of availability of Internet services.*

> *It was convenient and the Internet connectivity was good and so was the bandwidth speed.*

> *Office has better Internet connectivity.*

> *Free and fast Internet.*

> *Convenience; the program was office-sponsored; connectivity at work was cheaper and faster than at home.*

Respondents also cited similar reasons for their choice of time to access content. When asked what was the most suitable time for accessing online content, respondents mostly did so prior to commencement of work or after work hours (see Figure 3). Availability of Internet access and convenience remained an important reason for participation, as indicated by these responses:

> *It was easier for me to get to the office earlier than leave late.*

> *It was my free time; there was no disturbance, the bandwidth was good and so was the Internet connectivity.*

> *Difficult to access and connect during office hours.*

> *No interruptions and it more quiet.*

> *Early in the morning; it was easier to embark on studying prior to commencement of work.*
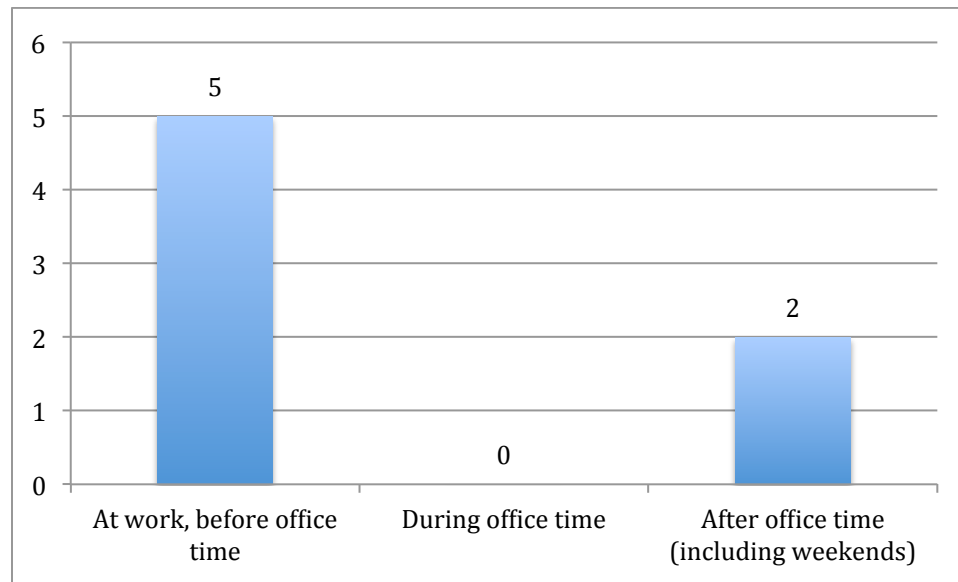
Figure 3. Most suitable time for accessing online content.

When asked what was the most convenient weekly schedule for accessing content, respondents did so between one to three times in a week (see Figure 4). Availability of Internet access and convenience of location were important factors in this decision:

Because of the distance to the office where I could access Internet.

It was after office hours and download speeds were great.

It was after office hours; there was good Internet speed connection, and it was quiet and with no interruptions so was able to concentrate.

Yes because was able to balance workload and course.

Other times I would be occupied.

Because it was not interfering with work schedule.
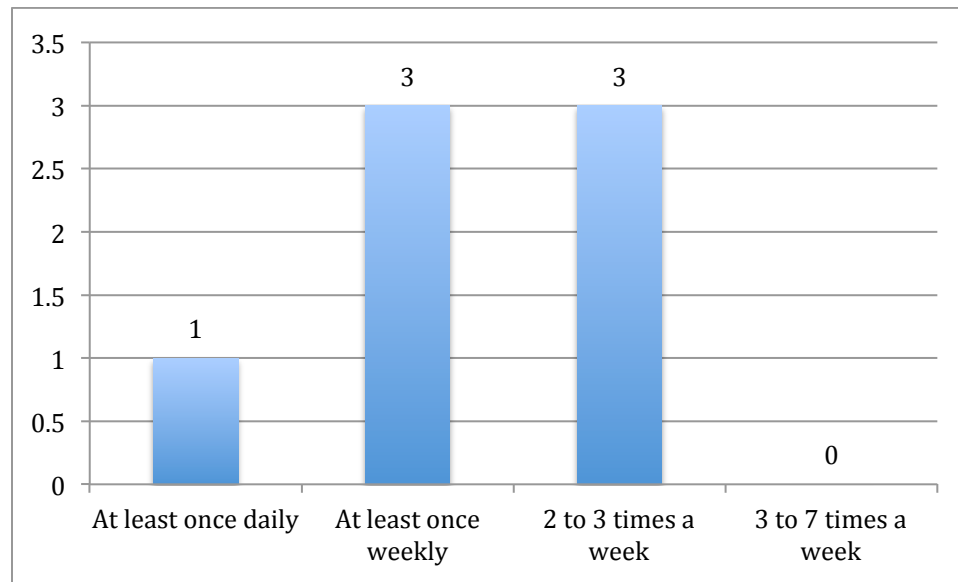
Figure 4. Most convenient weekly schedule for accessing online content.

Finding 1. A feeling of empowerment, enlightenment, and how the course was structured were the most important perceptions of learners on the course. When asked what was their overall perception of the online course, respondents mentioned that they were empowered and enlightened, and they felt that the elements of the course inform teaching and learning. In response, they said:

> *[The course was] mind-opening. (Having grown up with the face-to-face learning system, this course opened up my mind and gave me hands on experience with online learning).*

> *It was a great course, it opened my eyes to the new technologies and how social media is not only for social networking but are useful tools teaching and learning.*

> *Course empowered and enlightened me on accessing emerging technologies tools; also the importance of use was reinforced to me, now more computer literate.*

> *It was a very good course that exposed me to new technologies I had never heard about.*

> *It is an eye opener to the world of e-technologies. It enables one to have an insight into the e- world for learning.*

The course was quite intensive and well structured as it was a build-up of concepts learnt over time. I also liked the fact that it had practical aspects as well as a synchronous session allow students to interact at a pre-determined time on a topic of interest. I learnt a lot from it, which was quite exciting for me.

Finding 2. Infrastructural difficulties and work commitments were sufficient challenges to learning online. When asked what physical, technical, social, and economic challenges they experienced during the course, learners felt the lack of appropriate and affordable access contributed to the learning challenges. They responded as follows:

Access to the Internet was a problem. Internet connection was not so good.

Technical: teleconferencing was a challenge. Sometimes we would get disconnected during a session; at other times we would only hear the lecturer but he wouldn't hear us. Economic: not all participants had good Internet connectivity as most said it was expensive for their organizations.

[Challenges of] accessing some e-learning programs on the net like e-vocal, Blip TV, due to poor technical infrastructure and poor connectivity, also slow speed of accessing some emerging technology tools.

Busy schedules affected my concentration.

Intermittent Internet connectivity; electric power failure during class work schedules.

Poor connectivity, work-study-life balance (times I had to do my studies late into the night to ensure a timely submission of assignments), motivation.

Finding 3. Learners made sufficient adjustments and good use of alternative options to overcome the challenges that they experience. The alternative choices they made included making use of the asynchronous features that were built into the course, such as capturing, preserving, and accessing synchronous chat transcripts; communally collaborating with other learners; and using the Internet when it was most accessible and available to do so. When asked how they overcome those challenges, learners responded:

I overcame the problem with access to the Internet by waking up early enough to get to the office.

Whenever we got disconnected, I would wait to read a soft copy of the transcript of the discussion once it was posted.

Working odd hours, very early in the morning or late at night, when few people were accessing the net.

Creating extra time before and after office hours.

1. Informed the supervisors about the online course 2. I made sure I attend online course before the working hours.

I tried to ensure that I was consistent with my schedule; I strived to do my studies from work where the connectivity was much better than at home. Sometimes I worked late into the night to beat deadlines, I engaged with my colleagues at the office who were in the same program and this kept me motivated throughout the period.

Finding 4. Social media contributed inherent value to learners' future work and career prospects by building confidence, improving interpersonal relationships, and contributing to the development of lifelong learning skills. When asked to describe the value of the course to their life, career, work, family, society, culture, or environment, learners felt that the course, particularly the use of social media, contributed somewhat to their own personal development and could help in improving their social and professional lives:

Thanks to the course, I have tried out many online tools that I now use to communicate with family, friends, colleagues and clients.

It [has] been a great learning experience. I have become more techno savvy; I am able [to] utilize the tools learnt to support our training programs.

Course has enhanced my capacity to be literate and friendly to emerging technology. My networks with friends, family and associates have improved through emerging technology social networks. My ability to access information, teaching and learning material has been enhanced.

It has provided me with professional growth at my workplace.

It has made me aware of the online courses. The implication of leaving solicited or unsolicited information on line . . . has provided me with knowledge to develop learning material for online purposes.

I have learnt new technologies; some, which I hadn't tried out, were demystified. My attitude towards lifelong learning has been greatly enhanced. I have greater acceptance for social media than before.

Finding 5. Internally and externally generated motivation significantly contributed to completion rates. When asked how they managed to stay motivated in the face of the various challenges, respondents described aspects of internal motivation, such as reviewing personal progress in relation to others and feeling left behind; leveraging communal study, such as seeking and utilizing support from other learners; and aspects of external motivation, such as those provided by the instructor. Respondents said:

I focused on how the course would eventually be of benefit to me as a person and as an employee.

Every time I went online and realized that my classmates were ahead of me, I became more determined to catch up and finish. For the challenging assignments, whenever I sought assistance from the more techno-savvy participants, and was helped, I got the zeal to go on; whenever the assignments were marked the lecturer's comments and feedback even to the postings encouraged me to go. His comments were very motivating. He made it a point of commenting on every one's posting and even reminded us to submit our work or visit the cafe for discussions. If one didn't do as requested they ended up feeling very guilty since the lecturer was making a lot of efforts to keep us all in the loop and to keep us going.

I applaud the instructor who was patient, friendly and kept encouraging us. Teamwork kept me going, through team members encouraging comments and communication.

I remained motivated because of the new things I was learning and their relevance to my work place.

The initial instructions of the implications of not participating. The online live discussions and looking forward to obtaining a certificate at the end of the online course.

Interacting with colleagues and practicing what has been taught as much as possible.

In summary, participants identified the availability of Internet infrastructure, socio-economic factors, and convenience as essential and necessary conditions for participating in an online course. In addition, the following findings from the survey indicate that:

1. Empowerment, enlightenment, and how the course was structured are the most important perceptions of learners on the course.

2. Infrastructural difficulties and work commitments were sufficient challenges to learning online.

3. Learners made sufficient adjustments and good use of alternative options to overcome the challenges that they experience.

4. Social media contributes inherent value to learners' future work and career prospects by building confidence, improving interpersonal relationships, and contributing to the development of lifelong learning skills.

5. Internally and externally generated motivation significantly contributes to completion rates.

The data from the survey are somewhat similar to those resulting from an examination of the weekly reflections. Using Khan's (2011) framework described earlier, in the Weekly Reflections section, I present the data from the weekly reflections, which learners uploaded to the course's LMS throughout its duration.

Results: Weekly Reflections

In Chapter 2, Khan's (2011) framework was summarized in Table 1 and was described as having eight distinct but interrelated and essential dimensions that are required for an effective e-learning context. This research focused on three of these dimensions: namely, the pedagogical, technological, and ethical dimensions, because

they address the perspective of the learner and pertain to their social, economic, and

cultural context within which this particular study was mostly concerned. These

dimensions are described in Table 3.

Table 3. *Pedagogical, Technological, and Ethical Dimensions of Khan's Framework*

Framework	Description of
1. Pedagogical	1.1 Content Analysis
	1.2 Audience Analysis
	1.3 Goal Analysis
	1.4 Medium Analysis
	1.5 Design approach
	1.6 Organization
	1.7 Methods and Strategies
2. Technological (including 3. Interface Design)	2.1 Infrastructure planning
	2.2 Hardware
	2.3 Software
	3.1 Page and site design
	3.2 Content design
	3.3 Navigation
	3.4 Accessibility
	3.5 Usability testing
4. Ethical	4.1 Social and Political Influence
	4.2 Cultural Diversity
	4.3 Bias
	4.4 Geographical diversity
	4.5 Learner diversity
	4.6 Digital Divide
	4.7 Etiquette
	4.8 Legal issues

Note: Compiled from Khan (2011, About the framework, Para.1).

The research findings are presented in the context of this framework: namely,

pedagogical, technological, and ethical.

Pedagogical findings. As it relates to the pedagogical considerations of online teaching and learning, four important findings emerged:

1. Social media offer a useful and efficient way in which teaching and learning life skills can be delivered to learners in marginalized communities.

2. Creating a meta-tool for mapping their own learning was a significant activity that catalyzed reflective learning in the online learning context.

3. Building online trust for teaching and learning to take place is a reflection of how trust is earned and developed in the local context.

4. Practical hands-on approach in distance education is essential to teaching and learning.

These findings and how they are attained are described in more detail in this section.

Finding 1. Social media is useful and efficient for teaching and learning. Most of the learners felt they had received sufficient knowledge that fundamentally shaped their person in such a way that enabled them to inform and define new ways of applying this to their career. One student expressed this as an awakening of personal consciousness and an awareness of self:

> *From time to time I keep checking online to see if there are any new footprints linked to me and I am careful how much information I give in any new profile but that doesn't deter me from actively participating, I thus consider myself a confident creative.*

The use of social media for teaching and learning could contribute to helping adults realize how they learn and teach. The following are comments from several students who felt social media was useful and efficient to them, as well as also applicable to their future work:

They can also be used whenever there is a curriculum [or a] need to develop [one], share ideas and reflect on work being undertaken in the classroom or training arena. They are also known to support the collaborative element in teaching and learning so important for peer-to-peer learning involving many people even though located in different places.

From the examples mentioned; I have seen weblogs picking up in Africa . . . so learning about all of them would be useful . . . for training purposes.

I should say that most of us cannot [meet] the high costs of education but [we] can access this valuable information by subscribing on the Internet and simply get a podcast, for example, for HIV information. So I have laid out the flow of my session in PowerPoint titled "the use of podcasts for e-learning and linking it more to building capacity for HIV prevention programs."

Finding 2. Create a meta-tool for mapping learning. Most learners had to situate

their identity and way of learning and knowing within the context of the learning process.

Learners' awareness of their epistemology was useful to them and the course facilitator.

For the facilitator, it helped to better understand the learner's cultural context and their

way of knowing; while for the learners, it helped to assess their own learning, what they

know, how they can chart their learning process, and how they can take control of their

own learning. A Meta activity that led to this outcome was an exercise in which the

learners were asked to create a visual representation of how they learn, the tools that help

them learn, and how these tools are connected to them (e.g., their personal learning

environment). Learners felt this exercise was significantly challenging, but that it

increased their epistemology after they overcame the challenge:

It was challenging understanding and conceptualizing Personal Learning Environments (PLE).

I had to read further more articles from the Internet on what is PLE. What was most amazing is to realize that it is not 'rocket science'. I learnt that PLE is about everything around me that has contributed and that contributes everyday to my daily learning process. It is about the books, newspaper articles, journals, magazines; watching TV News; the Internet, the blogs, amazingly, even about social networks like face book and what I learn from how I interact with others

around me; to even make it more amazing its even about the use of a word program to type my work; emails for communication; and not to mention the diary I use every day to manage my work.

It was an interesting crash week for me but it was worth it. I learnt so much about technology and its interesting relationship with psychology I feel I can now be a trainer ☺.

I also learnt about the 7 aspects of learning, which were all very new to me, in the sense yes I learnt all the time but I never thought that my learning process can be categorized in the 7 aspects which though interrelated are different in their own way.
    Self directed learning—my being in control of what and how I learn it; Creative learning—learning is process oriented and you explore as you learn; Expressive learning—learning as one progresses on it has no conventional method;
    Feeling learning- learning is about how one feels as they learn; the challenges they face and how they react when they face them and how they feel after they have overcome them;
    Online learning—online learning takes place simultaneously with other processes;
    Continual learning—learning is exploratory and continuous, there is no end to learning everyday and every minute one learns something new; Reflective learning - thinking and reflecting on what one is learning about as they progress on learning.

I also learnt a big word "Metacognition"—defined as "thinking about thinking" naturally people have no tendency of thinking about what they are thinking about . . . interesting that you learn quite a lot when you think about what you are thinking and why you are thinking about it☺. . . . I learnt about Metacognitive activities; metacognitive knowledge; metacognitive regulation knowledge and how human beings learn to transform information learnt into knowledge.

Working on this PLE has been a little easier. I have been able to describe the tools, communities, and services that constitute the educational platforms I use to direct my own learning and pursue educational goals. Where I have indicted the clouds, this signifies the vast knowledge out there that I cannot just describe in a single box.

The chat this morning on metacognition and critical thinking was captivating especially the discussion of the African perspective to it. I felt we are being harsh with ourselves when a fellow student said that Africa doesn't have critical thinkers because I believe critical thinking is a choice. We were once referred to as the cradle of knowledge (Mali) and I guess it's time to figure out what went wrong and correct it in the few ways we can.

Another easy aspect was about using thematic areas to define my concept map. This also helped condense my boxes in the PLE. The more I understand the concepts the better I come in utilizing them for my life long learning process.

After reviewing the PLE diagrams, my Personal Learning Environment is providing me an insight of my learning environment of this course. It has provided me an opportunity to reflect on how far have learned and what remains to be learnt.

Finding 3. Build online trust. The findings indicated that learners have to trust

that the teacher will provide the right content. Conversely, teachers must trust that their

learners will undertake the rigour required to satisfy the qualification sought. Similarly,

learners in the online learning context developed trust on a large spectrum of areas. One

learner described this as follows:

This week touched on the issue of Trust for the Internet. Trust is a very subjective matter and at first I thought the question would be "Should I trust the Internet?" Before "How can I begin to trust the Internet"? Some people choose to trust first and wait for this to be betrayed while for others, trust is nurtured. I mentioned in my remarks on the posting on Trust that the rate at which the use of the Internet is evolving will make trust a matter of need and not of choice. But I foresee a situation where organized groupings will come together to try and regulate the content posting thereby enhancing its authenticity.

Finding 4. Practical hands-on approach in distance education is essential for

teaching and learning. Participant comments included:

This course has been quite something! Very well presented and quite informative. I liked the fact that you adopted a very practical approach and that there is so much to take on with me.

New useful tools were introduced and practices; I was thrilled to see my video on trust for the Internet on bip.tv; another very useful tool that a teacher/student can use to further on learning. I had to record over and over again until I was certain that the final product was good enough to upload.

In summary, as it relates to the technological dimension and in consideration of

using Khan's (2011) framework, the findings show that East and Southern African adult

distance education learners appreciated the use of social media as a useful and efficient

way for teaching and learning life skills. The findings have also suggested that an online course should provide a meta-tool to enable learners to (a) reflectively think about situating themselves and the way they learn into the course; (b) seek ways in which trust can be developed and strengthened among themselves, between learners and instructors, and between learners and the course materials; and (c) the inclusion of a practical hands-on approach could help teaching and learning. The data in relation to the technological aspect of Khan's framework are presented in the Technological Findings section.

Technological findings. As it relates to the technological considerations for online teaching and learning, four important findings emerged:

1. In an online course, a structure that carefully organizes and schedules the modules is important for achieving the learning objectives. Such structure should allow students to acquaint themselves earlier on with the technology requirements essential to meeting the learning objectives.

2. A feeling of satisfaction and pleasure in the learning process that is linked to the learner's own life experience could emerge as a result of resolving their technological challenges.

3. The use of social media for teaching and learning, with its inherent challenges, results in a sense of constant virtual and physical mobility for the learner. It produces values similar to communal learning in the learner's local context.

4. Infrastructure and access are a major challenge to distance education, and institutions offering it should be aware of this constraint.

The data leading to these findings are described following.

Finding 1. A structure that carefully organizes and schedules the modules is important. Such structure should allow students to acquaint themselves earlier on with the technology requirements essential to meeting the learning objectives. The structure informed the learner's decision to become prepared. It created a feeling of excitement and confidence in the learning process. Learners found that it helped them to reflect on the learning objectives, on how it was related to their epistemology, and how it could enable them to organize and track their own learning:

> *I found last week's lesson interesting and it actually made me start exploring some tools even more. I tried out making PC-to-PC calls on Skype and Yahoo Messenger just to prepare myself for our first chat on Friday.*

> *I however enjoyed the week's lesson because it gave me a lot to think about especially when it comes to my learning. In addition to learning about the affordances of social media.*

> *I look forward to knowing how to keep track of everything I learn, without which learning would be meaningless.*

The structure of the course that allowed for early acquaintance with technology somewhat contributed in motivating the students' learning to the extent that it built their confidence enough to suggest restructuring other aspects of the course. Learners found it more useful if they addressed all of the technological challenges prior to fully engaging in-depth. For instance, when asked, what she would like to change, a learner suggested,

> *I would like us to spend more time have[ing] such discussions [referring to substantive learning outcomes] as what we had in the morning. If the logistical issues can be handled away from chat then that would be great though I also believe we are allaying all of them with time.*

These comments were in relation to a prior synchronous conversation that the class had had, which was spent addressing some logistic issues rather than the substantive aspects of the course.

Finding 2. A feeling of satisfaction and pleasure linked to learners' life

experience could emerge. Learners experienced a feeling of pleasure when aspects of

technology were addressed. One learner exclaimed, "*This is very encouraging and makes*

life easier especially when you get [or understand] many learning resources." Another

learner said, "*I loved the week's lesson*", referring to the time spent exploring the online

tools that were used throughout the course, while another student mentioned how "*this*

truly was a great learning week . . . looking forward to next week." Learners expressed

this as a feeling of gladness when they explored certain social media tools:

> *I had actually opened an account with delicious before I left for the village but I*
> *could not familiarize myself with the tool. Am glad to say I have been able to tag*
> *three resources today without much difficulty.*

> ***Felt very good*** *[emphasis added] to log onto the wiki and contribute to an article*
> *as I had never done this before. I believe in adding to knowledge as opposed to*
> *just consuming from it and am glad that technology has presented such a great*
> *avenue.*

Another learner agreed, saying that it was "*fundamental to a positive online*

experience", and attributing this experience to the availability of a common

"*communication space that trainers/facilitators can utilize with learners to discuss*

innovative ideas about [a] subject matter." Addressing technological issues at the

inception of the course and prior to addressing more substantive course objectives could

contribute to enhancing the learner's learning experience. Likewise, an exciting learning

experience was identified as important to online learning. Learners expressed their

learning in various ways: (a) as a feeling of satisfaction on completion of her assigned

tasks; (b) as a link between her feeling to her daily activity, resulting in making her "life

easier"; (c) as timesaving and interesting in relation to her life experience; and (d) as a

sense of appreciation of the wealth of resources that was available to him:

> *This week I have indulged in so much technology am slowly becoming techno savvy. So far I have created my PLE; I opened a delicious account and of course downloaded articulate trial version and created an articulate log for updates. I am doing really well and am getting familiar with articulate and even loaded a sample video.*

> *It's amazing how we take for granted the technology that we use every day, yet we do not stop to think [about] how it works for us and makes our life easier.*

> *[It] is so timesaving and interesting. I can quickly get hold of all important information I come across many days after. . . . I hope to use it more now that I have learnt its usefulness.*

> *I am getting to appreciate the invaluable wealth of resources around me. The lesson . . . is making me think critically before I employ any tool for a particular job.*

Finding 3. Social media produces value similar to communal learning; it results in virtual and physical mobility. Several learners fundamentally attributed certain

values of social media for teaching and learning to their own socio-cultural context. In

communities that are more communal than individual, the concepts of connections,

gathering with intent to share, is fundamental to the functioning of such societies. Most of

the learners expressed these concepts in the use of the tools that were available to them.

One learner highlighted social media's ability for creating connections with people and

for gathering and for sharing information as an important value:

> *[The course] made me look at social media in terms of their definition and affordances. I realized there is no specific way of defining them, however the social aspect comes in because they are mostly used for connecting people. . . . Another interesting bit is the fact that it [is] social bookmarking and can therefore be shared within your social networks.*

> *Social book marking video was equally amazing, and I liked the way it is actually in plain English, simple and very precise. I learnt that there are over 15 billion web pages. It is so amazing and unbelievable how we as learners are expected to*

be able to sieve through that number of pages to get relevant information. I have always book marked the pages I visit which are interesting and relevant to my areas of study. Unfortunately, I now have such a long list, . . . and sometimes I end up looking for the same information over and over again. The delicious tags I learnt will make my life so manageable. . . . The use of key words and tags will solve my problems and make remembering web pages easier. I will also be able to organize and share my new found knowledge and interesting sites with my colleagues and friends.

I have learnt that networks are about sharing in a two way communication with no restrictions. I have also learnt that people join networks and leave them meaning that they are fluid. And creating relevant information for the consumers in a network is critical. I find the following tools for interaction quite useful because they are free and in the context of teaching and learning these tools have got a lot to offer. First of all, Skype is a free and easy way for trainers to open up their classroom and their learners to a world way beyond their training environment. With Skype, learners can learn from others, connect with other cultures, and expand their knowledge in amazing ways, share experiences. Unlike emails, these tools provide instant feedback with dimension where one can listen, see and hear the communication, and accessibility is not limited.

Social media has evolved to be a very powerful tool in today's learning. I acquainted myself with various tools that . . . I will need to explore further as they will be useful to my work and most importantly, day-to-day learning.

However, social media presented inherent challenges that created a sense of and a need for virtual or physical mobility for the learner. Perceived as a fundamental challenge, learners expressed dissatisfaction at the non-permanent state of social media, which created the need for constant virtual mobility from one available tool to another:

Bad that yahoo is at it again; they decided to close down yahoo photos and now learnt . . . that delicious might be going too; I will probably jump to diigo or something more sustainable.

I mentioned that delicious was also quite some innovation given the challenges of managing user profiles (and hence bookmarks). . . . With these, one can be able to move around the globe and still gain access to the useful bookmarks with an Internet connection and a browser only. With the various exciting sites that we visit and wish to track . . . this way of bookmarking enhances efficiency and effectiveness in the way we work.

Certainly, social media for teaching and learning did not come without its challenges. Its unstable nature in the aforementioned section caused by the rapid pace of technology's evolution renders most tools obsolete soon after they are created. Learners found grappling with a new tool often challenging. Although certain learners, as reflected in the following quote, found ways to navigate this, others were not so resilient:

> *This has been another busy week. Buy am trying hard to catch-up with my work. . . . Over the months I have learnt and gained so much. . . . I have come to realize that technology is evolving every day. What I thought I knew a few months ago becomes almost obsolete the minute I become conversant with it. This to me is saying I must keep myself abreast of what is new, what is being discovered everyday to make my work easier.*

As a result, learners were prone to ask prior to using a tool if the information they will provide throughout the duration of the course will survive its and the Internet's evolution. This was one out of the many challenges that learners faced in the use of social media for teaching and learning. One learner expressed this as a "nagging experience" that resulted in virtual mobility as she looked for solutions to the challenge. Another expressed her challenges as a wrong doing, while another was willing to take on this challenge and transform her ability to overcome them into virtues of "patience" and "persistence":

> *I had a nagging experience whilst trying to upload my presentation; I don't understand why [one tool] kept stripping off audio from presentations (not just mine but my classmates as well). But nonetheless, through this hardship, I managed to learn a new free tool that assisted me convert my [powerpoint] into video which I then uploaded onto you-tube, the video is embedded on my blog.*

> *I have had challenges uploading [to] my blog; I wonder what I've been doing wrong. I hope I will succeed before close of day.:*

> *I should persist in trying to upload my [presentation]; the . . . servers seemed temporarily unavailable at the time I was working on this. I have found that patience and persistence is a necessarily virtue when working with [social media]!*

Another student expressed persistence through seeking assistance:

I tried to work on the presentation, . . . I worked on the PowerPoint; then had to work on a voice over. I tried it on my own it didn't work. So I called my Son [who] took me through a step-by-step instruction on how to do the narration. It worked. I was really impressed. The next hurdle was to upload. I experienced technological challenges at its best. The connectivity was really slow I could never get it to upload onto Angel. I have only just managed it in the office.

Finding 4. Infrastructures and access remain a major challenge to distance learning. Perhaps the most important challenge to learners in a distance-learning course is that of access to the Internet. This is often characterized as the digital divide in the literature, which in a broad sense spans various levels between countries and within countries. While the challenge of available Internet has been addressed in both urban and rural areas of some countries, this is not so in others. A second level of divide also exists between the urban and rural areas, where the latter has less access than the former. Participants' comments reflected their problems relating to infrastructure and access:

My apologies for submitting my assignment late, this is coz I couldn't access Internet in Swaziland.

It was a busy but interesting week. I've been trying to catch-up on my assignments. I thought I would be able to do my work when I was away. It's amazing how I take things for granted, when I have technology working for me at will, and fast Internet connectivity. In Swaziland, I discovered they have major technological challenges. The Internet speeds are very slow. There are serious communication hurdles due to political interferences and lack of goodwill from the authorities to improve the cabling processes around the country. It's a very closed up market that is dominated by only one ISP who have made it almost impossible for other competitors to come into the market so Internet services can only be provided by the Posts and Telecoms Company, which does not have liberty to expand unless approval comes from higher authorities (read King's government). The terrain is also a challenge; it's a very mountainous country so unless communication boosters are installed strategically you find connectivity to the Internet is in a very limited radius.

One major issue that is still pulling us back is the lack of adequate Internet infrastructure in remote places like Eldoret [a semi-urban area]. And Internet being the backbone for effective E-Learning . . . more efforts will have to be

directed towards addressing this challenge. It may be worth noting the various fibre optic cable initiatives (TEAMS, EASY, SEACOM) that are passing through the Kenyan coastline . . . have dramatically reduced the browsing costs but the challenge of ensuring the infrastructure is well distributed internally still stands. . . . It is quite evident that Africa still has a long way to go. I can attest to the challenges that have been mentioned where a big percentage of the population relies on Access to Internet from the cafes as opposed to the comfort of their homes, educational institutions or offices.

Internet access, though essential for teaching and learning especially in distance education courses, was only one among the various other challenges with which learners were faced. The lack of electricity and the inability to use small devices such as microphones contributed to a feeling of frustration among learners. Some of these were expressed as:

I was in class for a few minutes, then suddenly I got disconnected. After trying for a while and managing to get through, I realized my machine wasn't fully powered up and it just went off on me. It was really frustrating. . . . So there went my class session.

This Friday I finally got to present. It was all systems go until my turn came. I had tested the mic before, but alas, it refused to work. I had to jump from one machine to another trying to make the presentation. It was really frustrating, keeping everyone waiting.

Thanks to Technology and as my colleague put it "a little demon was working on the microphones".

Then the presentation got uploaded but to my dismay it was without color and the title and the body texts were overlapping. Oh dear talk about technological frustrations.

Finally I presented but hey, I was not very happy. Let me hope the last leg of this journey will be less frustrating/ challenging.

Learners felt that their infrastructure challenges contributed to heightening their levels of frustration, especially when they were not addressed appropriately. The importance that came with structuring the learning so that technology issues were addressed earlier on in the course in order that learners could focus on the more

substantive elements of the course was mentioned earlier. This was a more useful

approach than if the entire course duration had been interspersed with one technology or

the other, or one social media tool or another. If these feelings of frustration were not

addressed earlier, demotivation set in, and learners either created resilience that helped

them to navigate the circumstance, usually expressed in an action of physical or virtual

mobility as mentioned earlier, or completely withdrew. Those who remained were

optimistic that this would change with time:

> *In Africa despite the challenges faced in ICT infrastructure, which may hinder the networked learning implementation, slowly the networked learning environment will grow.*

In summary, as it concerns technological challenges using Khan's (2011)

framework, the findings have suggested that infrastructure, access, and the instability of

social media tools for teaching and learning remained challenging to most distance

education learners. Learners assumed a sense of constant virtual and physical mobility in

order to respond to the challenges that they faced. When they were addressed, including

those challenges that allowed learners to acquaint themselves with the technology tools

needed throughout the duration of the course, a feeling of satisfaction and pleasure in the

learning process emerged that motivated them towards the learning objectives.

Ethical findings. As it relates to the ethical considerations for online teaching and

learning, three important findings emerged:

1. Distance education could be challenging across cultures, but recognition of

    the learner's cultural context, such as work pressures, socio-cultural

    conditions, and technological challenges, and a retrospective and proactive

    review of the course could significantly improve learning outcomes.

2. Motivation is integral to online learning, possibly resulting in improved completion rates.

3. Self-realization, actualization, consciousness, and awareness of personal growth and development are essential outcomes of a program that recognizes the learner's local context.

The data leading to these findings are described in this section.

Finding 1. Recognition of the learner's context, such as work pressures, socio-cultural conditions, technological challenges, and inclusion of a review process, can improve learning outcomes.

Work pressures and a conception of the required time to conduct a task were different across cultures. One learner exclaimed, *"I am ok though kinda overwhelmed with work."* This comment best described the overwhelming feeling that most of the learners perceived throughout the course. It seemed that the course load compounded their personal work burden. As adult learners who have familial and occupational commitments, work challenges were especially prominent. Another learner argued:

> *I had to exhibit a lot of discipline to beat the deadline for the mid-term assignment, as there was enough pressure from work already; which is another lesson learnt that might not directly relate to this course.*

For this learner, the ability to manage work requirements and the rigors of distance education required a shift in perception. Most of the learners approached the course with a perception that online learning may not require the same levels of commitment as face-to-face. They felt that they could juggle their work and studies with less time allocated to the latter, signalling an indication that this position may have been influenced by social or academic context or both:

When we started this course, it didn't seem too hard to afford 1 hour a day but as time went by, we got fewer and fewer. Personally I grappled with several work-related tasks and had to consciously find time (even in the wee hours of the night) despite the busy schedules and thus, the course have improved my endurance levels.

Cross-cultural distance education should take cognizance of technological challenges. Technology posed significant challenges to most of the learners. One learner, after apologizing for submitting an assignment late, exclaimed, *"[I] am just realizing the challenges that come with ELearning in terms of being able to access technology when you need it."* Accessibility to online content such as multimedia and other bandwidth-hungry applications like the Angel LMS required a certain minimum bandwidth for connection, which may have been insufficient for the learners. Another learner argued:

I was . . . unable to get my assignments done on time. The hotel we stayed in had a dial up Internet connectivity that was very slow and before I could log in to angel would be constantly kicked out, not to mention the tokens were very expensive. I came back on Monday night so [I] am working on a crash program. . . . I consoled myself though when I discovered that I wasn't the only one who had the challenges. I realized most of my colleagues experienced the same challenges.

Learners were often left with a feeling of satisfaction and accomplishment after they had been able to find appropriate solutions to their connectivity challenges and, as a result, were able to navigate their learning context. One learner said, *"This has been . . . challenging and time consuming; . . . however, it's worthwhile. I have learned a number of things."* Technological challenges are further discussed in Chapter 5; however, in this context, concern for the learner's technology context should be considered in the design and delivery of a distance education course.

An application of learning objectives, technological or otherwise, should conform to the local learning context and also reflect the socio-cultural circumstances of the

learners. Learners felt that their learning should transcend the fundamental design of the

course to accommodate their own learning context. One learner suggested that the

conceptualization of digital literacy as an element of information technology should not

be limited because *"[information technology] is important to consider digital literac[ies]*

not just as [information technology], but as a socio-cultural practice." In referring to

digital literacy and its implication to his socio-cultural context, another learner further

argued:

> *This brings about the social human aspect where these digital systems have to*
> *conform to cultural aspects and consideration that the information presented*
> *through them is meant for social beings.*

The aforementioned quote suggested the need to design learning objectives to recognize

that the participants engaged in the learning process are humans who have their bases in a

certain socio-cultural construct. In this regard, some learning objects and the artefacts

used in teaching and learning should not only recognize this context, but should also be

parsimonious enough in order that a shared level of understanding can be attained by

instructors and learners:

> *When reading the paper presented under week one, I initially found the authors to*
> *have used highly academic language but I guess this was in order considering the*
> *expected technical level of the audience. I guess the author's citations also helped*
> *to shape his language.*

> *The tendency of the successors in most African societies has been to destroy the*
> *footprints—the predecessor's created knowledge. However, with the various*
> *emerging technological tools, destruction of knowledge becomes virtually*
> *impossible because it [is] society owned. It's a societal knowledge. It is held by*
> *the human being.*

The learner context could be understood from the perspective of individualized

and communal learning. In this regard, learners felt their learning as adults and lifelong

learners should be more communal than individual in relation to their broader community

and societal context. The importance of community as a platform for sharing ideas and

receiving feedback from others was identified as an essential part of learning:

> *Once [lifelong learning] is clearly defined, it should not be individualized, as it is not only for the benefit of individual, but community and societal. Therefore, a definition of lifelong learning should hint on society as well. . . . Lifelong learning therefore should not be for individual but for the Human being. There is need for society to build on the learning of others for survival and continued betterment of life not of individual but society. . . . The knowledge created through lifelong education should be [in the public] domain.*

> *My interaction in forums, blogs is mostly influenced by the desire to enhance my technical knowledge or solve a particular technical issue. Without these forums my work would be very difficult or nearly impossible; and that makes me truly appreciate the various tools of interaction. My online Communities of practice go without saying; communities [are] involved. . . . I would find myself contributing to solutions that have worked for me or appreciating a posting of a solution that I was looking for.*

The outcomes indicate that dialoguing, communal learning, and knowledge

sharing and interactivity are essential and critical elements to the adult learning context.

Online technologies and their features could be leveraged to can facilitate these aspects of

adult learning in a way that benefits the learner and his/her style:

> *Edtechtalk [an online forum] forum is quite useful in discussing the current educational matters; it looks like the forum for the .com teacher who has to change the delivery style to fit the current technologies.*

> *Vallis' view learning as a way of being. I learnt some very interesting aspects about learning: Who is in the room is not important your co-learners do not have relevance to your learning process—Learning is individualistic, my fellow classmates have nothing to do with my learning and the knowledge I gain from what I am learning. The learning and understanding is for my own benefit. After all when I seek to learn something, it is so that I can be a better person and be able to perform my activities better.*

This latter quote suggested that the concept of individualistic learning was new to

the learner and somewhat challenged her socialization, which recognized communal

learning. In an attempt to address this perceived lack of understanding of the learner's

socio-cultural context, another learner commented on the challenges of learning across

cultures and the imposition of different standards of learning:

> *I also came across a study that assessed the international standardization of electronic communication and identif[ied] the problems of communications due to intercultural nature of the online communication. Lack of intercultural understanding can lead to chances of miscommunication and thus affect the networked learning. This requires an international standard way of communication between the cyber-cultures.*

The same learner further commented on the pleasure of increased group interaction at the

end a difficult task: *"The exercise of developing the PLE [personal learning*

environment] has been [a] challenging one though. As a result, most of us have not

commented much this week. I hope those who had the opportunity to chat enjoy[ed] it."

Finally, he highlighted the importance of communal learning after the course was

complete: *"My other worry is how we will continue as a team helping each other in the*

delivery of the earmarked online courses?"

These all suggest the imposition of an underlying culture of individualistic

learning to learners in a community of communal learning. The cultural undertones

voiced by the learners suggested learning is individualistic is perpetuated in online

distance education and should be given some thought during the design and delivery of

online content. If not, learners may be kind to suggest a rethinking towards

"international standard way of communication between cyber-cultures" or be forced to

drop out.

Both a retrospective and proactive review period built into the online course

could contribute to improving learning. Learners felt they needed a breather from the

course right about midway into the 12-week program. As adults, combining their work

schedules with their studies made it even more challenging to learn. The pace of the

course seemed slightly fast for the learners, although there was no benchmark against this

perception. A one-week break was imposed to allow the learners to review their learning

and to catch up with the core lessons modules. It also allowed them to reflect on the

progress of their learning and to generate internal motivation towards achieving their

learning objective. For this learner, it was less about meeting the course requirements and

more about meeting the learning objectives:

> *I am going though the 6 weeks work again to refresh my mind on what we have covered. It gets interesting all over again. I am also taking time to read other people's postings that I may have missed over the past weeks. I look forward to resuming.*

> *A learning contract is an essential element to motivation.* Learners in a certain

context valued the importance of a contract, verbal or written, and they tended to take it

seriously and remained committed to such formalized arrangements. As a part of their

introduction right at the beginning of the course, learners were asked to agree to a

contract that required them to commit a minimum required time to the course. One

learner said, *"The introduction was great and . . . the commitment contract made me*

realize the seriousness of the program."

Finding 2. Motivation is integral to online learning, possibly resulting in

improved completion rates. For most learners, motivation was intrinsic to their

completion. Certain learners were capable of internally generating their motivation, while

others depended on external sources. One learner captured internal motivation using the

words dedication and determination: *"I have also noted that for one to effectively*

complete an e-learning course, it takes a lot of dedication and determination." Others

had to put in an extra effort to keep up with the class: *"I have however, made some efforts to catch up with everyone even though I believe I would have learnt even more things if I didn't miss."* For this learner, the goal was meeting the course requirements, after which the learning objective could be attained. For another, the progress in the course was reflected in the physical act of rolling up sleeves and getting to work: *"Week 5 on now and I guess it's time to roll up my sleeves even higher to catch up. . . . I also purposed to myself that I will try as much as possible to complete the program."*

While motivation played an important role in improving completion rates, there were significant levels of challenges that made it almost impossible to attain. One student was tasked with the responsibility of nudging learners on, especially those who failed to meet their weekly course requirements. After she had made significant efforts to get her colleagues to take a more active role in their learning, she argued, *"these have been the most challenging weeks in my online studies."* Another learner felt frustrated, as others had not played their role in meeting up with their communal course obligation, thereby resulting in a two-week delay:

> *These two weeks [I] have some understanding of the challenges of conducting an online course in terms of student participation, presentation and meeting the deadlines. Despite instructions being given clearly, some of us, participants seemed confused as to where to drop our assignments. This has made us drag on without making presentations.*

During this period, the course facilitator played a significant role by providing the much needed external motivation, as reflected by this learner: *"I truly appreciate your [course facilitator] taking time to take us through this course despite all the challenges encountered."* External motivation was intrinsic to stemming the downward decline in class participation when it became clear that certain learners felt overwhelmed with the

amount of work. The most significant and important contribution towards completion

was the internal motivation generated by those who eventually did. One learner who had

somewhat overcome the challenge of participation and who had recently received an

invite to present a paper about her online learning experience at conference indicated:

> *Another positive thing that happened this week is that I will be making a presentation . . . at the e-learning conference. Thanks to the encouragement from [my e-learning facilitators] and my colleagues during the e-learning workshop, who encouraged me to submit an abstract.*

Evidently, motivation, both internal and external, helped to build her confidence to

submit an abstract for the conference.

Assigning the responsibility of internally motivating a group by another group

member could be useful only to an extent. During the course, and in recognition of the

communal state of the learners, one student was assigned the task of facilitating,

coordinating, and internally motivating the group. Her initial perception was one of

frustration:

> *I have had people coming to me to say they are busy but want to continue with the program. Yes we are all very busy, but hey, it's about commitment and setting priorities on the things that matter. Well, I hope we get back on track and continue with this interesting course. . . . I have learnt quite a bit about human beings during the break, (talk about learning IT and psychology) sometimes unless we are pushed we do not work. This of course is the wrong attitude. Commitment is critical when one is undertaking any venture or any form of assignment. It's a pity we seem to be going in circles. I think human beings need to feel the pain of committing their personal resources.*

This learner showed a feeling of frustration when her efforts at trying to get her

colleagues to re-engage with the learning activities after a two-week break proved

challenging. She felt that *"it's been an interesting 2 weeks; following up on those lost in*

the woods; trying to negotiate with the management and establish the way forward for

this program." Although this role was important, it was burdensome to this learner, as

she also had to create mechanisms that internally motivated her own learning.

Nevertheless, she felt rewarded and further motivated when she received feedback that

her director was impressed with her activities as a group coordinator:

> *When our donors went on their annual evaluation trip to their institution, . . . they gave a very positive feedback back about how I am keen at following them up when they lag[ged] behind. The positive side of this discussion was that I was doing a commendable job with the e-learning program, keeping everyone on their toes. This of course has gone well with my Director. . . . [I am] looking forward to a less stressful period in the coming few weeks.*

The communal nature of learning in this context played a significant role in why

this learner agreed to accept the role of internally motivating others. She understood that

it came with commitments that could be difficult, time consuming, overwhelming, and

demotivating. It could also affect her ability to stay motivated or to continue on the

course. Her resolve to take on the task indicated a feeling of responsibility, within this

communal context, to the other learners, resulting in a persistence that gave more time

and effort to the class. Unless someone has hopes of receiving a reward at the end of the

process, there are indeed no incentives or motivation for why this role should have been

taken.

   ***Finding 3. Self-realization, actualization, consciousness, and awareness of

personal growth and development are outcomes of a learner-centred program.*** Most of

the learners expressed a consciousness of their learning in relation to their local and

global context:

> *This week helped me [to] understand the various sources of knowledge [and] that we constantly receive knowledge and information both for academic purposes and professional development.*

> *I must purpose to learn new skills, to upgrade myself and to make myself relevant in my place of work; to make myself relevant within the environment I live in and more so to remain relevant within the global environment.*
>
> *Knowledge is created. Creation of knowledge requires meta-cognitive and cognitive processes.*

The earlier processes of meta-cognition and a mapping of personal learning networks, which resulted in a critical personal review of their own learning, could have contributed to creating an awareness of their own learning context. The learners began to express confidence, self-realizations, and awareness of personal growth. They identified a set of principles to which they associated their feelings of self-realization and against which their growth could be benchmarked. When asked to submit a certain assignment, one learner felt that a personal standard of quality had to be developed in addition to the course requirement:

> *Creating my mid-term exercise has been one interesting activity where I seem to have had a lot to write yet should be mindful of the 5 minutes within which I must present. Even after sorting it out, I had to record the sounds several times until I felt this final product is worth submitting.*

Another learner felt that her way of organizing her thoughts was insufficient for the amount of knowledge that she continued to acquire. As she reflected on her personal learning environment, she had to develop new benchmarks and methodologies for organizing her knowledge:

> *I believe that this PLE will grow with time as I get to discover more and even as technology continues to evolve. I just need to again think of how to effectively converge these different scattered sources so as to be effective and efficient in my learning.*

The perception of self-realization or actualization was based on a benchmark of principles firmly linked to the learner's context. For instance, one learner who would not "look back" felt an incredible amount of growth and progress had been attained since she

took an "active part" in her learning and, as a result, could conduct a personal evaluation

of her own progress over time:

> *I discovered that I have laid my hands on a lot of information from the time I*
> *started taking an active part in my learning but have not taken time to look back*
> *and analyze what I have actually acquired from the learning. The lesson changed*
> *my attitude on learning and I believe am a better learner now.*

> *Self-realization is associated with a perception of control and power.* Learners

who took an active part in their learning attained a feeling of control, confidence, power,

and responsibility over their learning. This outcome became even more important as they

considered their online personae in relation to what they considered to be their physical

personae and identity and how their activities on the Internet could be misconstrued and

ill intentioned, even against their will. Some argued:

> *I am now able to choose which tools to use (though I still need hands on guidance*
> *on some of them) but without overlooking the fact that any online tool I use keeps*
> *my digital footprints more than does the ground I step on.*

> *The lesson itself made me examine my digital footprints and one thing I*
> *discovered is that I can, to an extent, control what information I put online. . . .*
> *Some tools compel one to part away with information [in order] to access*
> *something [else] online. . . . I find this unfair because there is no guarantee that*
> *the information will not be access[ible] by someone else.*

> *The networked student video gives lots of advice which include taking control of*
> *my own learning; importance of finding credible information; importance of*
> *bookmarking websites and sharing of links to sites with others to build my*
> *capacity and that of others thus translating information into knowledge.*

This feeling of control was sometimes challenged by a perception of helplessness and

vulnerability at the ease by which it could be lost. This was reflected by the learner who

argued that *"there is no guarantee that the information will not be accessible by someone*

else." As it concerns the Internet, especially in relation to the use of social media,

learners felt that control could be wrested from their hands as easily as they engaged and

increased their interactions with it. Another argued: *"I also noticed that if one is not careful they can easily get lost in the maze of knowledge"*, referring to the amount of information that they had to receive during the course and in relation to the information they had to sieve through to attain certain learning objectives. The comment indicated that she was not comfortable giving off control in this maze. She further argued:

> *If you can synthesize [the knowledge gleaned] well, you get to learn so much but if you are not careful, [and] focused into what you want, you may get lost in the cloud of knowledge.*

Other learners further strengthened this perception of helplessness with an emphasis on their identity and privacy in an online setting:

> *Having read through the article, . . . it brought back memories about the number of times I have tried search about myself, online. But the first time I did it, I was anxious to find out the context in which what I had submitted about myself or written about or what other think of me was being presented on the search engine results most especially on Google. [It] brought out "relatively safe information" and from that day I was a bit careful in terms of how much I should provide online. But then given the challenge of not staying behind while everybody is going digital, you find yourself forced onto Skype, face book etc. I guess this is one big challenge we face. However the fear of 'not wanting others to know much about me remains. In other words you have not control of your privacy once your contact information, pictures get online—it seems to stay on and anybody can access the information hence inviting in a lot of unwanted mails.*

> *The emergent of the digital technologies and the job requirements have made it virtually impossible to keep one's identity private.*

> *The reading has enabled me understand that my identity is no longer private.*

> *The digital footprints left on the web can be useful or damaging. Thus how can identities be kept private on the web? By developing erasers that delete an identity after someone has engaged with the web technology. If this is not possible, transparency and honesty should be the norm on the web so that the digital footprints left contribute positively to the development of humanity.*

Learners attained a position of self-actualization and realization, which lead to a perception of self-control—of their own knowledge, identity, and how they should

comport themselves online. Afterwards, there was a feeling of helplessness when they

realized that control could be lost.

Self-realization leads to questioning of certain aspects of adult learning in

relation to the local cultural context. As learners attained a level of self-actualization,

they began to question certain aspects of their learning, their culture, their environment,

or what previously was perceived to be the status quo. For instance, one learner

questioned the definition of literacy found in their reading:

> *The evolving meaning of literacy from the ability to read and write to the ability to understand information however presented is quite fascinating but I found this definition to be harsh. My concern is for instance; there are those who might be physically challenged to access this information presented in a way that doesn't suit them. [For example] a blind person may only read a Braille book and not written text, he/she may need a computer with special audio aides. On the other hand, those who see are not conversant with Braille and most do not see [the] need for acquainting themselves with it, . . . may therefore not be able to read [the] information presented in this manner. Does that mean that these categories are therefore digitally illiterate?*

As it relates to the application of technology, one learner challenged the

conventional use of digital devices solely for entertainment and argued for better use in a

way that it addressed the quality of literacy of the youth population:

> *During my reading, I found podcasts as one of them most fascinating tools that can be used where a digital recording of a radio broadcast or similar program, made available on the Internet for downloading to a personal audio player. Many young people these days have IPods, advanced mobile phones and I felt that these gadgets can be put to very good use if one can download podcasts with some useful information and apply in our contexts.*

The learner's position is better understood within the framework of literacy, reading, and

writing and in relation to her local Kenyan context. Recent figures indicated Kenya has a

literacy rate of 87% of adults aged 15 years and above in 2009, up from 74% in 2000, and

93% of youths aged 15 to 24 (World Bank, 2012). According to participants, literacy

alone was insufficient, but applied information literacy, such as the ability to create and

re-use multimedia content, held better promise that could enhance the quality of the

literacy of the youth population. One learner reflected as follows:

> *However, in African environment most adults tend to be digital illiterates. If they are to benefit from the emerging technologies there need for them to learn these technologies.*

Summary

Data from the online survey/questionnaire and the weekly reflections submitted

by the learners were analyzed to present the findings of this research. An online

survey/questionnaire was deployed in order that the research could identify the learner's

geographic location, gender distribution, and the factors that contributed to a successful

completion of the course. It essentially helped to determine the learners' local context and

characteristics. Even though an equal quantity of male and female participants was

sought, the outcomes indicated that respondents were mostly female, who accessed

content from countries where Internet access was more readily available than others, and

for whom access was facilitated by their work environment. Even though some of these

factors could positively contribute to increasing learning, their overall learning context

was not necessarily and sufficiently conducive for online learning, or catalytic to

attaining their personal learning objectives, or meeting the course obligations. In the face

of these challenges, learners had to adapt to what was available within their local context.

In addition, they utilized the course structure to navigate the unfavorable learning

environment. The survey outcomes indicated that they felt empowered and enlightened

mostly because the course was structured in a way that their learning was gradual:

starting from an awareness of self to a recognition of their own way of learning. As a

result, learners' capacity to progress towards the learning outcomes depended on their

ability to adjust their learning styles and to adopt alternative approaches to circumvent

contextual huddles. Some of these responses included devoting more time to their

learning, getting to work earlier, or staying later in order to access the Internet, and

through negotiating time with their work places.

An important outcome from the survey also indicated that learners perceived that

the use of social media contributed to their present and future work and career prospects

and to the development of lifelong learning skills. They also indicated that motivation,

both internal and external, could help in attaining completion.

The outcomes from the weekly reflections were likewise significant and tended to

validate the findings resulting from the survey data. Using Khan's (2011) framework as

the underlying theoretical concept, pedagogical, technological, and ethical dimensions

were identified in the research data. Further analysis indicated that these dimensions were

inseparable and highly interdependent, making it nearly impossible to address separately.

This does not suggest an anomaly. Rather, it supports the notion that Khan's framework

does not necessarily only set out to disaggregate e-learning into essential elements, but

also to create a conceptual framework that would assist learning institutions and

instructors to address manageable components of e-learning. As a result, the dimensions

should be seen as viewing the same object using different lenses.

As it concerns the pedagogical findings, learners felt that social media offered

them useful and efficient ways in which teaching and learning can be delivered to them.

Attaining this understanding did not come only with use. Indeed, applying a practical

hands-on experience to the course significantly contributed to their learning. It was the

careful integration of meta-cognitive aspects, such as the use of a meta-tool for mapping their learning, addressing and situating personal and socio-cultural issues like trust into the learning context, that produced substantial gains.

In relation to the technological aspects, creating a structure in which students engaged with their learning artifacts or objects much earlier in the course assisted them in becoming relatively at ease with their use for the rest of the course. It significantly reduced the amount of "anxiety for technology" that some of the learners had initially displayed. Instead, a feeling of satisfaction and pleasure emerged because they were able to navigate their challenges among which was the lack of access to the internet and that of using some of the personal technical infrastructure.

As it relates to ethical consideration, the findings indicated that the host institution's learning context and those of the learners might be sufficiently different. Therefore, in order to achieve the learning objectives, host institutions should recognize the learners' context including their social, cultural and technological dispositions. For instance, sometimes, it might be necessary to disrupt the course by building a "rest" period midway into the program in order to allow learners reflect on their learning. Not only is this in recognition of the need to "catch some breathe" but also an ethical acknowledgment of "rest" as a local culture.

Though learners may attain a state of personal awareness and self-realization, internal and external motivation may be required to guarantee completion rates. It becomes ethically necessary for the host institution to seek ways of building such concerns into the course program. More of these concepts are discussed in the following chapter.

In summary, in this chapter, I have described the results using data from a survey disseminated to the learners, and a synthesis of their weekly reflections submitted by the learners throughout the duration of the course. In Chapter 5, these findings are discussed in relation to the literature.

CHAPTER 5: DISCUSSION

In Chapter 3, a data collection matrix was presented as a framework that could help in triangulating and validating the data from the survey, weekly reflections, and interviews. Interviews were not required because sufficient data were received from the first two methods. The findings from the survey and the weekly reflections were populated in the revised matrix (see Table 4). In the rest of this chapter, I discuss the research outcomes using this matrix.

Table 4. *Data Collection Matrix Revised*

Research Questions/Data collection methods	Survey/Questionnaire	Weekly Reflections
Technological (Physical challenges, technological and economic issues, Khan, 2011)	Availability of Internet infrastructure, socio-economic factors and convenience are essential and necessary conditions for participating in an online course. Infrastructural difficulties and work commitments were sufficient challenges to learning online.	In an online course, a structure that carefully organizes and schedules the modules is important for achieving the learning objectives. Such structure should allow students to acquaint themselves earlier on with the technology requirements essential to meeting the learning objectives. A feeling of satisfaction and pleasure in the learning process that is linked to learners' own life experience could emerge as a result of resolving their technological challenges. The use of social media for teaching and learning though challenges results in a sense of constant virtual and physical mobility for the learner. It produces values similar to communal learning in the learner's local context.

Research Questions/Data collection methods	Survey/Questionnaire	Weekly Reflections
Technological (cont'd)		Infrastructures and access are a major challenge to distance learning and institutions offering it should be aware of this constraint.
Ethical (Questions on social and culture challenges Egbo, 2009; Stevens, 2008)	Empowerment, enlightenment and how the course was structured are the most important perceptions of learners on the course. Learners made sufficient adjustments and good use of alternative options to overcome the challenges that they experienced. Social media contributes inherent value to learner's future work and career prospects by building confidence, improving interpersonal relationships and contributing to the development of lifelong learning skills. Internal and externally generated motivation significantly contributes to completion rates.	Distance education could be challenging across cultures but recognition of the learner's context such as work pressures, socio-cultural conditions, and technological challenges can significantly improve learning outcomes. A retrospective and proactive review could enhance the learning outcome. Motivation is integral to online learning possibly resulting in improved completion rates. Self Realization, actualization, consciousness and awareness of personal growth and development are essential outcomes of a program that recognizes the learner's local context.
Pedagogical (Questions on motivational issues Khan, 2002)		Social media offer a useful and efficient way for which teaching and learning life skills can be delivered to learners in marginalized communities.

Table 4 continued on next page

Research Questions/Data collection methods	Survey/Questionnaire	Weekly Reflections
Pedagogical (continued)		Creating a meta-tool for mapping own learning is a significant activity that catalyzes reflective learning in the online learning context.
		Building online trust for teaching and learning to take place is a reflection of how trust is earned and developed in the local context.
		Practical Hands-on approach in distance education is essential for teaching and learning

Data Validation

Earlier in the research, Table 2 was presented as a guide to validate the data resulting from the research. Two data sources were provided from the research: (a) surveys/questionnaire and (b) weekly reflections. The outcomes of the data, which were collated and presented in Chapter 4, were triangulated in Table 3, which is essentially Khan's (2011) framework restructured to reflect the three dimensions with which this research is interested. A discussion of the research findings based on this framework is presented next, where I re-examine the data in the context of the literature review.

Contextualizing the Research Findings

In Chapter 1, I identified that the research set out to highlight the importance of the growth of ICTs and their increasing role in shaping social, political, and economic

aspects of societies. ICTs are also a critical driver in fostering globalization, empowering

people while at the same time disenfranchising them. The growth of the Internet, an ICT,

is substantially contributing to global revenue growth and also to research, with a

particular role in fostering the delivery of education today. Canadian universities, similar

to their US and European counterparts, continue to explore avenues to attract

international students and to deliver education to learners across their borders using the

Internet. Social media, as an emerging Internet technology, could significantly influence

how teaching and learning is conducted. This was explored in this research by an African

instructor involved in the delivery of online distance education to adult learners in

Southern and East Africa. Three elements of Khan's (2011) framework, discussed in the

next sections, were implemented as the conceptual framework for examining this

program.

Globalization and the Education of Learners

Returning to Altbach's (2004) description and its impact on education; economic,

technological, and scientific trends; politics; and culture cannot be ignored or removed

from the delivery of online content today. An underlying imperative viewpoint of this

research is that institutions delivering content to international or distance education

students in other countries or cultural context should recognize these requirements and

take necessary steps to address them, especially during the design and delivery of their

programs. The implications of not doing so could create inequalities (Altbach, 2004;

Round, 2007) and discontent (Stiglitz, 2002). For instance, the delivery of technology

content without recognizing the digital gaps existing between the host institution and the

learner's context would likely disenfranchise rather than produce development or any substantial learning value.

Technology, as an element in teaching and learning, is one of the many components to consider in the delivery of distance education. The social, economic, and cultural context of the learners should also remain at the fore during the design and delivery of content. Learners within their political context, such as those considered in this research, located in developing countries, or by extension, those in remote locations in Canada, such as First Nations people, are making efforts to tackle their challenges through addressing the technological gaps and through adapting to the cultural and social learning context subtly or directly demanded by the host institution. More effort is required by host institutions to meet their clients' efforts at some midway point. A thoughtful fusion, rather than a haphazard integration, of face-to-face and online learning experiences (Garrison & Vaughan, 2008) will help in this regard by contributing to the design and delivery of more locally and contextually relevant content.

Technological Aspect of Khan's Framework

The outcome from examining the survey/questionnaire and the weekly reflection data in relation to the technological aspect of Khan's framework can be summarized as: (a) the use of technology for teaching and learning poses significant challenges that sometimes make online learning nearly impossible; and (b) learners develop strategies that help them navigate these challenges, in order to achieve their personal learning goals.

As it concerns the challenges that result from the use of technology for online teaching and learning, evidence from the survey and weekly reflection data (see Table 3), suggests that among many factors, such as the socio-economic situations of the learners,

the availability of Internet connectivity is the single most significant challenge to online

learning. This was consistent with the literature on distance education offered to learners

in the developing country contexts (Mpofu et al., 2012; Rye & Støkken, 2012). Based on

results from his survey, Boitshwarelo (2009) asserted that "Internet access was the

biggest challenge in schools not only because of the limited number of Internet-connected

computers but also because of the limited times it was available to teachers" (Individual

teacher participants section, para. 1). Rye and Støkken (2012) alluded to the socio-

economic situation of learners who have to decide whether to use their limited resources

to access the Internet or to meet other needs.

Although the situation is gradually improving with the increase of mobile

proliferation across African countries and the growth of Internet infrastructure, as

mentioned in chapter one, more progress in this area is required, particularly in extending

last-mile access to homes and schools. However, access to the Internet alone is

insufficient for solving the kind of problems that learners face or for it to broadly

improve the delivery of education. Largely private sector interests drive the proliferation

of Internet access in most countries, including Canada. Where there are no financial

incentives to private sectors to deploy, particularly to underserved and unserved areas,

governments would have to step in to meet this need. It is for this reason that specific

policy interventions at more structural levels, such as institutional, provincial, or national

policy level as suggested by COHERE (2011), could significantly improve the

availability of Internet access for all uses, including education. Even then, the careful

integration of Internet technologies at the course planning stage is essential.

More so, from the perspective of course designers, facilitators, or institutions that deliver online learning to students in other context, consideration should be given to the technical challenges that learners are likely to face. In the context of this research, I found out that defining the Internet requirements early enabled learners to adopt and adapt strategies that assisted them to navigate potential challenges, which in turn contributed in facilitating course delivery. For instance, learners who participated in the research would like to acquaint themselves earlier on with the technology tools needed to meet their learning objectives. Therefore, the structure of the course played an important role in how learners are able to negotiate their learning.

The use of social media as a means of interacting with other learners and with the course content was another strategy that provided useful outcomes because the bandwidth available on mobile devices was somewhat sufficient for learners to create and access content using social media rather than through the course's content management system, which was significantly bandwidth heavy. Gibson's concept of affordance (as discussed in Greeno, 1994) makes social media use particularly interesting to learners.

As it concerns learners having to develop strategies to meet their personal learning objectives, institutions that deliver online learning also have some lessons to learn here. The outcome of the research has suggested that learners develop resilience and implement coping strategies to help them navigate and achieve their personal learning goals in the face of technological challenges. For instance, learners (a) created mobility, either virtually or physically; and (b) engaged in communal learning through seeking support from other learners.

In terms of creating mobility, learners tended to move away from the challenge towards what might seem comfortable to them. Sometimes, this involved shifting to old learning habits, such as printing of online course materials as suggested by Jones and Lau (2010). In their research, learners were "more comfortable printing their course materials and studying them offline" (p. 413) as a coping strategy than engaging in reading content from an online discussion board. Although the setting of their research was slightly different, in that it was offered to learners in another cultural context, responses from the East and Southern African learners in this research were similar to those of participants in the study by Jones and Lau. Both categories of learners employed strategies that resulted in mobility from one form of presenting and using content to another. For the African learners, mobility was either virtual, when they shifted their learning strategies from one online tool to another, or physical, in which case they moved from one location to another in search of a conducive learning environment characterized by good Internet connectivity or availability of electricity or both. These were proactive steps in order that they can achieve their personal learning objectives.

Mobility can also be expressed in ways that allow learners to access content irrespective of the device they use; as a result, the use of social media provided the learners a functionality that allowed them to create content using one device and to access it using another. Device agnosticism is a functionality that encourages mobility in learning and, as a result, can significantly influence the delivery of teaching and learning in an adult setting that is likewise constantly mobile. However, these benefits are useful only if they are recognized and fundamentally built into the design of online learning content.

Eastern and Southern African learners in the program also engaged in communal learning in order to navigate some of the challenges they faced. Principles that surround community cohabitation traditionally emerged from communal grazing grounds policies that were historically instituted to address the challenges that pastoralists faced with feeding their livestock (Rohde et al., 2006). It is no surprise that those same principles underpin aspects of most African communities, with significant impacts to this present day, including education. Education and the way people learn from these parts of the world tend to remain communal in comparison to the rather individualistic forms that learning takes in North America (Olneck, 2004).

Several models and formats for distance education were discussed in Chapter 2, ranging from the fully online formats delivered by traditional universities to new emerging ones such as iTunesU, which concern the creation of open content for educational purposes. Ultimately, it does not matter what format is employed for delivering distance education; these underlying principles discussed in this section should guide the design and delivery of content to all learners in all context.

In summary, in the design and delivery of distance education technology, programs should take into consideration the following:

1. The connectivity situation of the host institution is not necessarily similar to those of the learners and, therefore, should not be used as a standard for the delivery of content. As a result, course designs should take into consideration the various tools that will be deployed to ensure that they are indeed usable in the learner's context.

2. Adult learners in different cultural contexts learn communally and in forms that are slightly different to those in the host institution's culture. Consequently, the delivery of online courses should take into consideration the communal nature of learning in these other settings through: for instance, the ways that tasks are assigned.

3. Device agnosticism is a useful functionality that can benefit the learner in the way that it enables and supports physical and virtual mobility. However, this functionality is only useful to the extent that the host institution recognizes and fundamentally builds it into the design and delivery of the course content.

Ethical reflections

In reviewing the ethical responses from both the survey/questionnaire and the weekly reflections in the light of Khan's (2011) framework, the research outcomes can be summarized as follows:

1. The use of technology, particularly social media, contributed to building learner's confidence, improving interpersonal relationships, and enhancing the development of lifelong skills.

2. Self-realization, actualization, consciousness, and awareness of personal growth and development are essential outcomes of a program that recognizes the learner's local context.

3. Internally and externally generated motivation significantly contributes to completion rates.

The findings from this research are consistent with existing literature, which had suggested that learner's confidence was boosted in his or her use of technology for

teaching and learning. Ertmer and Ottenbreit-Leftwich (2010) referred to several researches by Bauer and Kenton; Piper; and Wozney, Vakatesh, and Abrami, in which teacher's confidence showed some significant enhancement with the use of technology in their classrooms. Based on their research, they further claimed that "helping teacher(s) to gain personal experiences that are successful" is the most powerful strategy for assisting them to build confidence (p. 261). Galanouli, Murphy, and Gardner (2004) asserted that prior training is essential in order for teachers to gain confidence. These findings do not set out to suggest that embracing technology alone is the only way to improve confidence. Neither do they suggest that its use at all times will likely achieve the same results. On the contrary, they indicate that there are significant levels of challenges with the use of technology for teaching and learning, with variable usefulness to the learners. As a result, proactive attempts to understand the technology would be required with consequential achievements. Appropriating the technology in the right way and the context in which it is being deployed are factors that will determine the degree to which confidence will improve or not. For instance, if the learners are unable to access and use the required tools on the course, frustrations will set in and increase, and confidence levels may drop.

As it concerns the ability of social media to contribute to the improvement of interpersonal relationships between and among learners, further research may be required. The debate would certainly border on the quality of the relationship that is fostered through social media in relation to traditional forms of relationships, and if not fostered at all, one suffers when the other improves and vice versa. The design of the course sufficiently encouraged interactions between learners. Notwithstanding, the course

design sufficiently encouraged interactions between and among learners. For instance, in the emerging technologies course discussed in this thesis, a clear course instruction for weekly discussion submissions required learners to interact with each other rather than focus on submitting responses to assignments that were intended to only solicited grades from the course instructor. In this way, learners were forced to interact with themselves, and relationships between them were formed, nurtured, and developed. Some of the learners also participated in a weeklong in-person session, which arguably could have consequentially influenced the online interpersonal interrelationships between and among them. The outcome of the research, however, suggests that learners observed improvements in their interpersonal relationships with other learners and, in some cases, increased interactions with others outside their learning cycle.

In a review of social media use and their contribution to fostering relationships, Kaplan and Haenlein (2010) examined groups of social media tools measured against a framework of social presence/media richness and self-presentation/self-disclosure. They argued that tools such as blogs scored high in self-presentation/self-disclosure and low in social presence/media richness compared to more interactive virtual world applications such as Second Life that returned high on both counts and, as such, offered higher levels of relationship development. East and Southern African learners who actively utilized blogs more than any other social media application, as benchmarked against Kaplan and Haenlein's model, suggested high levels of self-representation/self-disclosure and lower levels of social presence/media richness. Consequently, they may be perceived to exhibit a somewhat low to intermediate level of interrelationship. Nonetheless, the significant

outcome here is that relationships were fostered as they increasingly used the tools and interacted with each other.

Not only were relationships nurtured and developed, the skills and knowledge that learners acquired from the course significantly contributed to developing lifelong influences, such as careers and improvement to personal growth and development. Most learners frequently suggested that they would apply the principles and lessons learned to their own work programs; others suggested that they would develop the lesson outcomes much further into their work and careers.

Learners also expressed some sense of self-realization and actualization in addition to developing confidence, improving interpersonal relationships, and growing lifelong learning skills required for the work place. These outcomes were consistent with Merriam, Caffarella, and Baumgartner's (2007) analysis of the needs of adult learners for personal motivation and growth. Their view stemmed from the "theory of human motivation based on [Maslow's] hierarchy of needs" (p. 282), which suggests that human's topmost need of self-actualization can be attained after meeting other lower levels of needs, such as physiological, security and protection, love, and self-esteem. This final need "can be seen in a person's desire to become all that he or she is capable of becoming. . . . Maslow's self-actualization is the goal of learning" (p. 282).

A rather narrowly conceived conceptual view of social media in the context of Maslow's hierarchy of needs was presented by Marques (2011):

> Writing a blog lets your creativity flow freely and helps you expand your ideas
> throughout the Internet. That's why blog platforms such as Blogger, WordPress
> and Tumblr appear at the top of Maslow's pyramid, in the Self-Realization area.

Twitter appears at the Esteem level, as a confidence and self-esteem booster.

Because Facebook and Google+ are important parts of building relationships and

being in contact with friends and family, they are classified as the social need to

Belong. Finally, LinkedIn is associated with Safety, as a professional Social

Network. (para. 3)

Extensive research is required to ground the claims that Marques (2012) asserted.

However, it does suggest a plausible look at social media use in fulfilling certain self-

realization needs of adult learners. The degree to which learners perceive a feeling of

self-realization, or the extent to which the course enabled them to attain this perception,

may be difficult to prove within the scope of this research. However, it is worth

recognizing that as adult learners, self-realization is intrinsic to motivation, which may

have resulted in completion for most of the learners.

So, how do these outcomes influence teaching and learning as it relates to ethical

issues highlighted within Khan's (2011) framework? Through his framework, Khan has

suggested the recognition—by the host institution and the facilitator—of cultural

diversity as an ethical issue in the design and delivery of online content. Specific efforts

should be made to catalyze confidence building, self-realization, and motivation in

learners. Commencing with an acknowledgement of gaps in the institution's

understanding of the learner's context is a good starting point. After which, specific

efforts should be made to develop better knowledge and to encourage steps that engender

these factors in the learners. These efforts, though internally generated by the learners,

can equally be externally initiated by the course facilitator. Ryan and Deci (2000)

elaborated on these factors using the cognitive evaluation theory [CET], a sub-theory of

self-determination theory, which

> has an aim of specifying factors that explain variability in intrinsic motivation.
>
> CET is framed in terms of social and environmental factors that facilitate versus
>
> undermine intrinsic motivation, using languages that reflects the assumption that
>
> intrinsic motivation, being inherent, will be catalyzed when individuals are in
>
> conditions that conduce toward expression. In other words, it will flourish if
>
> circumstances permit. (p. 70)

> Ryan and Deci (2000) argued that "optimal challenges, effectance-promoting

feedback, and freedom from demeaning evaluations, . . . choice, acknowledgement of

feelings, and opportunities for self-direction were all found to facilitate intrinsic

motivation" (p. 70). They also warned that teachers who are cold, uncaring, or who

ignored and failed to respond to the learner's initiation can engender lower intrinsic

motivation.

In sum, an understanding of the learner's context and how these factors play could

help to improve learning outcomes and to achieve learner satisfaction. However, learning

institutions should proactively seek to understand the learning context of their learners in

order to engender motivation.

Pedagogical aspects of Khan's framework

Two major outcomes emerged that could be attributed to pedagogical aspects of

Khan's (2011) framework:

1. Building trust online is equally as essential as trust earned and developed in the local contest. Employing a practical hands-on approach could help to develop trust.

2. Creating a meta-tool for mapping the learner's own learning is a significant activity that can catalyze reflective learning, even in an online context.

Spiecker (1990) quoted the German education philosopher Bollnow to define trust in education:

Trust . . . is the irreplaceable presupposition of all human life, and therefore trust is also the first irreplaceable presupposition for all human development and also for all Education. (p. 157)

Trust is essential to both the learner and the facilitator. For the learner, it is trust that the content received from the facilitator will be useful to the student and that it would meet expectation and contribute to achieving his or her personal learning outcome. For the facilitator, it is trust in the student that he or she will communicate specific expectations to the facilitator in order that the program or course will be adapted to meet them. Spiecker (1990) distinguished between two types of trust: "trust in powers and trust in inclinations" (p. 158), which better explains the kind of trust parents have in their children and those children have in their parent, or of teachers in their students and vice versa. Spiecker suggested that trust implies expectations and uncertainty: expectations that the trusted has power in the future to deliver on the trust and uncertainty that this trust can be broken based on certain factors. In this case, the trusted has power over the situation and the truster, while trust inclinations are largely dependent on the trusted's moral standards, qualities, and virtues. Trust could be mutual, and a trust relationship is

established when both the truster and trusted trust each other's inclinations. Earlier, in the

Appropriate Technology for E-learning section, I had suggested that the adult learner

would rather be a collaborative partner, with the facilitator, in the learning process

because he or she brings in a mature perspective to the class (Rudestam & Schoenholtz-

Read, 2002, p. 7). The basis for such collaborative partnership is trust: in this case,

mutual trust between the facilitator and the learner. Institutions and facilitators delivering

adult learning should seek to develop trust between themselves and their learners by

examining ways in which this can be achieved. Mutual trust is equally important in both

face-to-face and online adult education settings, even more so in the online setting where

learners may not have the benefit of physical presence. One way that trust can be

established is through the introduction of a practical hands-on approach to class activities.

As learners engage in them, they are likely to develop inclinations that are similar to

those of the course facilitator. Course facilitators are likewise likely to create hands-on

activities that leverage the learner's inclinations or seek to create them if they are not

already inclined to do so.

As it concerns the creation of a meta-tool, learners were asked early on in the

course to create a map of the learning network. The reflection resulting from this activity

suggested that it caused them to critically analyze their learning, mostly within their

cultural context. Learning occurred when the learners were able to understand their own

way of knowing and learning, grounded within their cultural context. Khan's framework

suggests that contents should be analyzed in terms of relevance to the time, i.e. how up to

date they are. Social media continues to characterize today's landscape more than ever

before, and their use for teaching and learning should be examined relevant to the

learners' context. Not only do they provide the learner with rich video, voice, and images, they are also tools that could help the learner analyze their own learning if it is considered as such.

Social media somewhat facilitated new forms of relationships between the learners and the course facilitator in the way knowledge was delivered and learning took place. Learning was no longer time bound where asynchronous methods of interactions offered by learning management systems confined interactions to a central location. In order for learners to access content, they would have to log into the site and access whatever information has been provided by the instructor or other learners. Sometimes, no content exist. Social media offers a push factor where learning content is "forced" onto learners at all times thereby attracting their attention to the learning content. As learners meta-cognitively analyze their ways of learning, they highlighted the connections between themselves, their instructors, the objects in their learning networks; and how these elements are linked together by the information and content that flows between them.

In conclusion, I will reflect on the use of Khan's (2011) framework as a conceptual model for examining the various components of this research. Firstly, it was useful for disaggregating into various components the various elements of a distance education course delivery. This disaggregation helped to examine the different components in more and finer details so that delivery could be enhanced. They incite critical reflection on the part of the instructor delivering the course or of the institution delivering the program. Secondly, the framework presents different views of the same object, essentially provoking the program developer, institution, or course instructor to

view content delivery from many perspectives. These different views may not be entirely independent from each other, but are highly intertwined as has been shown in this research. The views portray different aspects in which to evaluate the same distance learning course or delivery. It should not baffle the researcher, school administrator, or course facilitator that the efforts of disaggregating the course into components is a difficult task; rather, this is a confirmation that they should all work towards achieving the same learning objective. Thus, interlinked threads between sub components resulting from an evaluation of an online course could be expected and further explored as strengths of both the evaluation exercise and of the course.

While the framework is useful for a dated evaluation of courses, a contemporary version may be required: one that is not period-bound or is limited to the technology at a given time. Indeed Khan (2000, 2001, 2007, 2011) has developed several versions of his framework over the years, some of which have been revised in recent times; a more all-encompassing version that transcends technology's rapid growth and development may be required. However, developing one would have to take into consideration the finer details that could be evident in the sub components, which present models have addressed in far less details. For instance, in exploring culture, a lot more grainy methodology may be required than a broad overview of the local context in which the online course is delivered. One aspect that may be of particular interest is in trying to understand the local context of learning using a collaborative approach that most African or First Nation cultures tend to adhere to, rather than an individualistic perspective that Khan's (2011) framework tends to advance. In this regard, Garrison and Vaughan's (2008) model may play a more significant role and perhaps provide a better tool for analyzing the local

cultural context to e-learning from this social-cultural perspective of learning. Essentially, a more refined and detailed framework may be required that comprises an amalgamation of certain components of these frameworks in order that an overarching one that addresses one or the other shortfall could be developed. This task is outside the scope of this present research and could be explored further in future researches.

Summary

In this chapter, the data collected have been discussed using Khan's (2011) framework described in Chapter 2. Several significant findings have resulted in this research, which will be summarized as recommendations in Chapter 6. Further analysis of the data suggested that Khan's three dimensions: pedagogical, ethical and technological, were highly interrelated and integrated. For instance, what appeared to be an ethical element was also significantly technological or pedagogical and vice versa. This does not reflect an anomaly in the data, but an indication that though elements of an online learning course could be disaggregated in order that they could be well analyzed; they are, in actual fact, different lenses used in viewing the same object.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

This research has examined the perception of East and Southern African adult learners of an emerging technologies course delivered by the University of Manitoba Extended Education Faculty, a Canadian research university. Several significant findings have emerged from the research that could lead to the enhancement of distance education content delivery. It could contribute to new and enhanced forms of cooperation between Canadian universities offering distance education courses and institutions based in developing countries, especially those in Africa. A better understanding of their needs and their context will result in appropriately tailored offerings that suit the purpose and context of the environments where online and distance education courses are delivered.

The research has highlighted the growing impact that ICTs, particularly the Internet, is having on the social, political, and cultural landscape and, specifically, on education. While it provides the ability for a content delivering institution in one context to offer distance teaching and learning to learners in another context, a mindless integration of technology for these purposes could produce unintended results, including creating inequalities and discontent. Therefore, careful consideration is required in order to understand the sensibilities of the recipient learner's context. This includes (a) an understanding of their technological abilities, (b) the ethical considerations of the learners' context and how these relate to those of the institution, and (c) the pedagogical issues that should be considered for efficient and egalitarian teaching and learning to take place.

Even though technological challenges arise during the course of delivering content, with Internet access being the predominant lack, learners are making efforts to

meet the requirements of their learning through developing and adopting strategies that

help them to circumnavigate these challenges. Therefore, institutions delivering online

education should recognize these contexts and develop strategies that meet their learners'

efforts at some midway point. They should carefully consider the integration of Internet

technologies, including social media and their affordances, during course planning and

delivery stages. Three key recommendations emerged from this concern.

1. Recognize learner's local technological constraints.

2. Consider the socio-cultural context of learners in the design and delivery of

   online learning courses.

3. Recognize cultural diversity is an ethical issue in teaching and learning.

Recommendation 1: Recognize the Learner's Technological Constraints

The first recommendation that emerge from this concern is that academic

institutions delivering online courses to learners in other context should initially

recognize the technological challenges that their students may face. Learners situated in

remote areas outside of the country such as those discussed in this research, or those in

underserved areas within the country, such as First Nations persons in Canada, may not

be able to fully participate in distance education courses without the host institution

giving due consideration to the technological challenges that they may encounter. The

bandwidth requirements needed for learners to enjoy a pleasurable learning experience

should be considered in the choice of tools such as: (a) the LMS that will host the course

content; and (b) the use of new tools such as social media applications, which are

increasingly pervasive, makes more efficient use of bandwidth, and align well with the

mobile nature of adult learners. Likewise, in recognition of the challenges of Internet

access in the learner's context, academic institutions offering online courses should make sure to inform their learners of the minimum bandwidth requirements of the course prior to course commencement. This way, learners can develop their own adaptation strategies, either by exploring options to use their office facilities or relocating to areas where Internet access may be more readily available.

This recommendation also concerns provincial education departments in Canada, whose mandate for education delivery also covers rural areas and regions outside urban areas where Internet access is least available. Specific policy considerations should be made in order that remote rural areas would have the minimum bandwidth necessary and required to allow for online learning. It should be the responsibility of both provincial and federal governments to make access available for education, for all, across the nation.

Recommendation 2: Consider the Socio-Cultural Context of Learners in the Design and Delivery of Online Learning Courses

The second recommendation concerns the use of social media in online education: for improving interpersonal relationships among learners and between them and their course facilitator. Online learning courses should introduce and promote course elements that recognize learning as a social endeavor. Course designs should include clear statements emphasizing interactive or socially motivated learning, among and between learners, over individualized learning that produces interactions only between the learner and the learning material, course instructor, or facilitator. In an adult learning setting, while elements of control cannot be exerted on the learners, given their desires for more personalized and self-directed or self-paced learning, inter-relationships between them can be encouraged and pseudo-control exerted in a way that they utilize the inherent

social nature of social media for more interactive learning. Institutions offering distance education should explore the introduction of socially-enhanced and highly-interactive interpersonal elements in the design and delivery of their courses.

However, some important questions emerge from the study that require further research including: (a) Does social media's use in teaching and learning provide more value to the learner than merely its affordance as a tool for delivering content? (b) Does it improve the quality of interpersonal relationship with associated benefits, intended or otherwise, that meets and surpass the program's learning objectives? More research is required in this area (a) to understand if traditional forms of learning relationships are similar to those fostered by social media, and (b) if these learning relationships produce more value that leads to achieving personal- and course-learning outcomes. Some of these researches can be conducted through action research methodology and phenomenological approaches; in which case, institutions delivering distance education would have to experiment with social media for teaching and learning and draw out lessons from their own personal experiences. Returning to Ertmer and Ottenbreit-Leftwich's (2010) and Galanouli et al.'s (2004) findings, teachers or online distance education facilitators require prior training needed for them to gain confidence in the use of social media. Teachers should enroll in emerging technologies courses in which social media and its affordance is used in its delivery.

Recommendation 3: Recognize Cultural Diversity as an Ethical Issue in Teaching and Learning

The third and final recommendation concerns the recognition of cultural diversity as an ethical issue by academic institutions as they design and deliver online content.

This is because concepts such as motivation, development of learner confidence, and driving learners towards the point of self-realization in their learning journey are issues that will produce more value to the learner if host institutions consider them as ethical imperatives. Teachers in an online setting should not be insensitive to impulses from learners (Ryan & Deci, 2000) because the *anytime, anywhere* function of online learning places a new demand on the teacher to remain constantly *on call* to provide learning direction to increasingly demanding students. As a result, institutions and facilitators delivering online content should develop strategies that respond to learners when they are in actual need of support and services. Consideration should also be given to how adults learn in their cultural context and steps developed to recognize this. Such steps should take cognizance of how learners internally motivate themselves and build their own confidence in learning. Also, in this regard, further research is required to understand the importance of self-actualization as intrinsic to motivation that, in turn, results in improved completion rates.

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APPENDIX A: INTERVIEW PROTOCOL

Date:

Researcher:

Description:

Introduction:

Hello. My name is _____ and I am a researcher from the University of Manitoba. I appreciate your taking the time to speak to me today.

Thank you very much for filling out the survey we sent you earlier about your experience and perception as an African learner on a distance education online course on technology.

We are now in the final stage of our research and are conducting a more detailed follow-up interview to clarify some of the initial points your raised when you completed the online questionnaire. I have all the information you gave us in this survey, and will mainly be asking you follow-up questions on some of your responses.

Your comments will be combined with comments from other participants and will not be tied to your name. You may withdraw without penalty at any time if you choose.

Do you have any questions before we begin?

1. What were some of the physical, technical, social, and economic challenges that you experience during the course? How did you over come them?

2. How would you describe the value that this course has on your life, career, work, family, society, culture or environment?

3. How did you manage to stay motivated?

Thank you for taking the time to respond to these questions. Please allow me to reiterate that you are under no obligation to agree to participate in this research. However, if you choose to do so, you will be free to raise questions or concerns with my professors or me at any time throughout the study and you may withdraw without penalty at any time if you choose. The interview transcripts, as well as a summary of the findings of the study will be sent to you via email or in hard copy depending on your preference.

APPENDIX B: INFORMED CONSENT LETTER

Date:

Dear potential participant:

My name is Ben Akoh and I am a graduate student at the Department of Education at the University of Manitoba. I am conducting a research study entitled **"Online adult learners in Southern and Eastern Africa: An Application of Khan's framework to evaluate a Canadian University Program."** I am requesting your voluntary participation in this study, which I hope will lead to better understanding of the experience and the context with which African students embark on their adult learning process. As a past student that has taken the "Introduction to Emerging Technologies" course, your input in this regard is important and it will shape how the program is delivered in the future.

Currently, the Extended Education department offers several online courses to students in several countries in Africa, and in North America and Asia. However, individual student context are different across these various locations and continents. For instance, while Internet access may be available to students in North America and Asia, this does not necessarily hold true for those in Africa. The delivery of an online course depends on a number of very complex factors that may be technical, socio-cultural or motivational. The purpose of the research is to explore these factors, and the constraints and challenges that they pose to African adult learners who are part of an online course delivered by the university; and to investigate ways in which these context specific constraints can be manipulated to better enhance the course delivery. A qualitative approach will be used to collect data through an online survey and then followed by an interview with you and other students taking part in this interview. Texts and responses used in the process will be collected and analyzed with the intention of identifying constraints and challenges, in order to provide appropriate solutions to them. Findings will likely inform present and future course offerings. The research outcomes could benefit the Extended Education department of the university and other institutions offering online adult education distance courses to African learners.

The research is guided by the following questions:

1. What were some of the physical, technical, social, and economic challenges that you experience during the course? How did you over come them?

2. How would you describe the value that this course has on your life, career, work, family, society, culture or environment?

3. What role did motivation play? How did you manage to stay motivated?

Data will be collected in the form of online questionnaires and follow up telephone or Skype conversations over the period of 4 weeks between March and April

2012. If you decide to participate in this study please read through and sign the attached consent form.

In closing, allow me to reiterate that you are under no obligation to agree to participate in this research. However, if you choose to do so, you will be free to raise questions or concerns with me at any time throughout the study and you may withdraw without penalty at any time if you choose.

Thank you for your consideration. Please contact me at [email address] with any concerns you may have.

Sincerely,

Ben Akoh
Graduate Student
Faculty of Education,
University of Manitoba

Graduate Supervisor:
Marlene Atleo, Ph.D.
Associate Professor,
Adult and Post-secondary Education, EAF&P
Faculty of Education
University of Manitoba
Email: [email address]

APPENDIX C: CONSENT FORM

Research Project Title: Online adult learners in Southern and Eastern Africa: An

Application of Khan's framework to evaluate a Canadian University Program.

Researcher: Ben Akoh

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Currently, the Extended Education department offers several online courses to students in several countries in Africa, and in North America and Asia. However, individual student context are different across these various locations and continents. For instance, while Internet access may be available to students in North America and Asia, this does not necessarily hold true for those in Africa. The delivery of an online course depends on a number of very complex factors that may be technical, socio-cultural or motivational. The purpose of the research is to explore these factors, and the constraints and challenges that they pose to African adult learners who are part of an online course delivered by the university; and to investigate ways in which these context specific constraints can be manipulated to better enhance the course delivery. A qualitative approach will be used to collect data through an online survey and then followed by an interview with you and other students taking part in this interview. Texts and responses used in the process will be collected and analyzed with the intention of identifying constraints and challenges, in order to provide appropriate solutions to them. Findings will likely inform present and future course offerings. The research outcomes could benefit the Extended Education department of the university and other institutions offering online adult education distance courses to African learners.

The research is guided by the following questions:

1. What were some of the physical, technical, social, and economic challenges that you experience during the course? How did you over come them?

2. How would you describe the value that this course has on your life, career, work, family, society, culture or environment?

3. How did you manage to stay motivated?

I, _____, agree to take part in this University of

Manitoba, Faculty of Education study titled: **Online adult learners in Southern and**

Eastern Africa: An Application of Khan's framework to evaluate a Canadian

University Program.

I understand that my participation from [date] will involve:

- 1 x 10 minutes online questionnaire about my predisposition, experience and preparations towards taking an online course.
- 1 x 60 minutes session of a follow interview on salient issues raised in your online response
- 1 x 20 minutes to review the transcript of interview and to make additions, deletions or changes I deem necessary.

I understand that to help protect my anonymity, I will be asked to read and revise the interview transcript. This process will allow me the opportunity to edit out any information that I feel is too sensitive or that I feel would serve to identify me. I understand that my specific answers and comments will be kept confidential. I understand that my name will not be identified in any report or presentation that may arise from the study. I understand that only the principal investigator, research assistant and supervising professor will have access to the information collected during study. I understand that the findings of this study will be presented at conference and included in a range of publications. I understand that direct quotes from data I provide may be used, and that there is no anticipated benefit for participation. I understand that the data for this project will be destroyed within 5 years of the completion of the research.

I understand that interview transcripts, as well as a summary of the findings of the study will be sent to me, via email or in hard copy as I prefer.

My signature on this form indicates that I have understood to my satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive my legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. I am free to withdraw from the study at any time, orally, or in writing, and/or refrain from answering any questions I prefer to omit, without prejudice or consequence. My continued participation should be as informed as my initial consent, so I should feel free to ask for clarification or new information throughout my participation.

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

____ I prefer to receive my interview transcript via email: address: _____

____ I prefer to receive my interview transcript in hard copy: address: _____

____ I prefer to receive a summary of the findings via email: address: _____

____ I prefer to receive a summary of the findings in hard copy: address: _____

     If you have any questions or concerns about this study, please contact the principal investigator, Ben Akoh at:

Ben Akoh
Graduate Student
Faculty of Education,
University of Manitoba
Email: [email address]

Graduate Supervisor:

Marlene Atleo, Ph.D.
Associate Professor,
Adult and Post-secondary Education, EAF&P
Faculty of Education
University of Manitoba
Email: [email address]