EFFICACY OF ONLINE DISTANCE LEARNING: LESSONS FROM THE HIGHER EDUCATION FOR SISTERS IN AFRICA PROGRAM

Jane Wakahiu, PhD
Executive Director of the African Sisters Education Collaborative (ASEC)
at Marywood University, Scranton, Pennsylvania

Simon Kangethe, PhD
Dean, Faculty of Education at the Catholic University of Eastern Africa (CUEA)
Nairobi, Kenya

ABSTRACT

Online distance learning is a feasible strategy to provide access to higher education for women in Africa. By reaching across borders, partnerships between African and American universities can be used to remove barriers to educational attainment for women in the developing countries. Using the case of the Conrad N. Hilton Foundation-funded Higher Education for Sisters in Africa (HESA) program, this qualitative study describes the perceptions and experiences of 18 women from Kenya and Uganda enrolled in HESA's online teacher education program. The study investigates the effectiveness of HESA as a means to provide college education for women in Africa. Findings indicate that participants developed capacities to demystify technology and defy the odds, and successfully navigated online learning barriers. The support systems provided to them by faculty and administrators allowed them to persist and to successfully complete one year of online classes. The cohort system model provided them with a peer support mechanism, and the availability of resources from the American university duly supplied them with up-to-date research and educational materials. Technology should be utilized to afford underprivileged persons an education.

INTRODUCTION

Technology has become an integral part of our surroundings, and interactions mediated by technology are enmeshed with direct interactions with people. Studies report that the exponential growth in information, communication and technology (ICT) has created a paradigm shift in higher education (Marakas & Johnson, 1998; Coates, 2005; Chen & Yeh, 2006). In the west, the result of ICT growth and spread has significantly impacted higher education—as is evident in emerging online learning models such as the University of the People and Coursera. Education opportunities are readily available to the workforce. Despite ICT development, it is not clear to what extent emerging ICT is affecting the higher education landscape in developing nations. Given the increased use of technology in Sub-Saharan Africa (SSA), through devices such as cellular phones and through Internet access in cyber cafes, it is essential to examine how ICT is used to facilitate the realization of Education for All (EFA).

Because education promotes the ability of individuals to function and attain their potential in society, increasing access to higher education and supporting girls and women in education attainment is the most resourceful investment that can be made in Africa. Large gaps in higher education access for girls and women in Africa prompt several questions. Is education something enjoyed by all? How does emerging ICT impact education in the developing nations? How can

ICT facilitate education for all? The technology revolution in the west encourages education conversations with a focus on lifelong learning, knowledge management, and e-learning. Using the case of Higher Education for Sisters in Africa (HESA), an initiative that is using innovative technology to increase higher education access to women religious in Africa, this study will provide insights on how technology devices can be used to offer online distance education (e-learning) for women in SSA. Moreover, ICT may offer a variety of learning experiences, and can be woven into the fabric of pedagogical interactions, creating meaningful teaching and learning experiences (Banks, 2009; Onguko & Ngata, 2010). Women religious (Catholic sisters or nuns) engage in providing humanitarian services in schools and health care settings, as well as social and pastoral services, particularly in rural areas where government services are deficit. Providing higher education for these women is a promise for quality educational and health care programs in Africa.

Research shows that growth in ICT has led to an escalation in e-learning. This has resulted in a demystification of online distance education. In the Babson survey report *Going the distance: Online education in the USA, 2011*, Allen (2011) reports that enrollment in online courses in higher education has been growing significantly since 2006. The report elaborates that in the fall of 2010, over 6.1 million students were enrolled in at least one online class, representing a 17% growth in enrollment rate for online courses. At least 31% of all higher education students take at least one class online. Given that technology and Internet access continue to advance and penetrate SSA, as evidenced by increased cell phone usage, the popularity of mobile money transfers, and improved access to social media, it is essential to examine if such innovations can be tapped so as to increase access to higher education attainment for all in Africa.

Studies reveal that while ICT has had positive effects on businesses in Africa, barriers still exist. In Kenya, the report adds, rural internet coverage has expanded exponentially with significant investment in mobile money, exemplified by Safaricom use of mobile phone-based money transfer services. Although there are a variety of online distance education programs in existence, the costs and support systems have been inhibitive to enrollment in those programs. Notable online educational programs in the developing nations include Indira Gadhi National Open University (IGNOU) and The University of South Africa (UNISA). IGNOU has an enrollment of 1.5 million students and serves 26 countries and UNISA, a distance teaching university, enrolls a quarter of a million students. Using cellular signals commonly purchased as bundles, cellular phone carriers provide internet access, thereby creating opportunities to invest in women through e-learning, particularly in rural areas. E-learning fulfills the requirements for learning in a modern society, and has greatly increased the demand for higher education (Katz, 2000; Arbaugh & Duray, 2002). It is clear that online education is becoming attractive and fundamental to non-traditional students who otherwise would not have the opportunity to attend college using traditional methods. In this study, e-learning refers to any web-based system that makes information or knowledge available to users or learners; e-learning ignores border restrictions or geographic regions (Sun, Tsai, Finger, Chen & Yeh, 2006).

Using the case of Higher Education for Sisters in Africa (HESA), a new initiative implemented via partnership between an American and an African university in which 18 women religious in Uganda and Kenya are taking 12 credits per semester in online classes, this study examines the efficacy of e-learning for women religious in Africa. Considering perennial questions about the

quality, retention and productivity of online education, this study examines perceptions, experiences and challenges of online learning as explained by these women. The goal of the study is to provide insights on best practices and ideal models for working women. HESA is informed and shaped by research on educational and gender gaps in Africa, as well as by the sisters' needs to upgrade their credentials in higher education.

Women, Education and ICT in Africa

Literature on sub-Saharan women's engagement in education, leadership, and business tends to pathologize African women, which results in the misrepresentation of their experiences (Ngunjiri, 2007). Moreover, inherent cultural obstacles continue to perpetuate gender inequality in access to education (Shabaya & Kwandwo, 2004; Ngunjiri, 2012). Women educators, lawyers and social workers continue to struggle in the fight to eradicate female genital mutilation and a culture associated with marrying off girls after the ritual, thereby denying them the education opportunities that are a prerequisite for individual development and job marketability. Certainly, counter-narrative stories on women in SSA must be told. Despite many debilitating obstacles endured by women in Africa, there is hope: non-governmental organizations are working to bridge the gender gap in education, create business opportunities for women, provide women with access to capital and microfinancing, and ensure that women's rights are upheld. Increasing opportunities for higher education via online distance education will be a strategy to invest in women, and will create a path for them to rewrite their stories.

Lumumba (2006) asserts that gender inequality in access to education impacts SSA negatively. Similarly, rigid policies and cut-off points for university entry, coupled with the high cost of higher education, lead to low enrollment in tertiary institutions. For example, gross enrollment at the tertiary level for women is significantly lower than that of males; in Ghana, the percentage of female enrollment in higher education is 6.7%, versus 10.8% for males; in Kenya, 3.3 % versus 4.7%; in Nigeria, 8.5% versus 12%; in Tanzania, 1.9% versus 2.3%; in Uganda, 3.7% versus 4.7% and in Zambia, 1.3% versus 3.3% (UNESCO, 2010). This low enrollment of women in higher education means that women continue to lack credentials for high-profile managerial jobs. Moreover, poverty, socio-economic issues and political upheavals in the sub-Saharan region make it even more challenging for girls and women in the affected regions to attain an education—particularly individuals from poor and rural regions. The high prevalence of HIV/AIDS and internal and external displacement also take a toll on women. As a result, women entering religious orders have little or no higher education, which is a major concern for this study.

According to a 2012 World Bank Report, data from 33 developing countries reveals that gender differences in occupations of employment account for 10-50% of the gender gap. Although there is remarkable growth in student numbers in higher education across SSA, there is only a 6% gross enrollment rate for higher education (the global average, based on UNESCO data, stands at 26%). Tanzania, for example, has a 1.5% enrollment rate, which is considerably below the average. Therefore, increasing well prepared teachers in schools is imperative. In Africa, improvement of the quality of teacher training, implementation of pedagogical strategies, and integration of the use of technology in colleges and schools are all essential. Instructors continue to struggle to improve their teaching. Adequately prepared teachers with skills to integrate

technology into their classrooms may help to reinvigorate educational systems in Africa. Research shows that technology could play a significant role in educational development in the global south (Mahrufu & Power, 2010; Shohel & Banks, 2010).

Shohel and Shrestha (2010) contend that ICT can be used to increase access to authentic teaching and learning materials, which could be used at a time convenient to teachers, such as while preparing lesson plans or travelling to schools. Moreover, use of ICT may be a bridge to provide access to education and quality professional preparation. American and African universities involved in delivering HESA are working in partnership to increase the number of teachers in SSA by educating women religious, who primarily run schools. Prior to starting online distance learning classes, HESA provides a three-week orientation on the use of technical skills to navigate technology, in order to access online library resources and gain global perspectives via interaction via Skype, WebEx and Google Hangouts. Both cultures provide diverse perspectives pivotal for teachers serving in a global society.

HESA targets women religious who have a desire to upgrade their credentials in order to meet government teacher requirements and deliver effective services in the schools. However, because of the many great needs in their communities, some sisters have been put to ministries without adequate preparations. Despite the need to upgrade their credentials, a lack of replacements in those ministries makes it almost impossible for women religious to leave their ministries to pursue further studies. HESA is timely in meeting the needs of these sisters to acquire an education while continuing to serve in their ministries. The long-term focus for HESA is to provide e-learning to women religious in nine countries in SSA: Ghana, Nigeria, Cameroon, Kenya, Uganda, Tanzania, South Sudan, Malawi and Zambia. HESA utilizes both multi-media distance education and face-to-face orientation with the entering cohort and for reflective learning each year. Examining the perceptions, experiences and challenges of e-learning among 18 women religious enrolled in HESA is the focus of this study, with a goal of establishing best practices in e-learning for women in Africa.

Purpose

The study examined the perceptions, experiences and effectiveness of educating women religious in Africa via online distance learning. The study describes the experiences of the women taking online distance learning classes at an American university.

Research

The following research question guided this study: (a) What are the learners' experiences in online distance learning? (b) What is the effectiveness of online learning for women in Africa? (c) How helpful is the support provided during online learning? (d) What challenges are associated with distance education? (e) How are the challenges resolved in order to ensure continuation with online distance learning, and what communication tools are used to resolve online distance learning challenges?

Program Description

There are many forms of e-learning, including interactive video and self-paced multimedia programs, as well as synchronous online environments, in which students must log in at specific times to participate in live chats, and asynchronous interactive online programs, where students log in regularly within a flexible schedule and participate by way of discussion boards and other technologies. With advanced emerging technologies, use of WebEx, Skype and other platforms that allow face-to-face interaction can add flavor to learning, particularly for women in Africa. Fisher and Baird (2005) assert that "the use of technology in online education is a binding part of the online learning environment—students either love it or hate it—the key is to have support mechanisms in place to minimize the impact of these digital potholes on student motivation and retention (Fisher & Baird, 2005, p. 92). Rovai and Downey (2010) state that most online distance learning programs fail to succeed because planners and designers fail to consider design, implementation, evaluation and sustainability of the distance learning courses and programs. Course designers and instructors should constantly review their courses to ensure that content is up to date, relevant and true to learning outcomes (Lieblin, 2001; Tresman, 2007). HESA was designed considering all of these challenges, including the challenge of internet access in Africa. HESA is designed and tailored to address the higher education needs of Catholic sisters in Africa. Over the years, women religious in the US have supported sisters to study in the American colleges founded by their congregations. Given the increased demand for higher education among the women religious in Africa, and the high costs of higher education, travel and living expenses in the US, the presidents of four congregations and the universities founded by these congregations established the African Sisters Education Collaborative (ASEC). The goal of ASEC is to increase access to education for women religious in Africa. HESA is delivered via partnership of American and African universities. HESA uses an innovative design to deliver higher education by engaging American and African universities in partnership in order to offer a hybrid online and onsite degree program for sisters.

HESA provides opportunities for education access to these women, who otherwise might not have it available to them. It also provides additional university preparation to help remediate earlier educational inadequacies, and provides sisters who did not qualify for entry to university directly the opportunity to matriculate at an American university and then complete their degree at an African university. Taking classes online accommodates sisters' needs to continue serving in their ministries, where their services are so greatly needed. Through the use of technology, HESA provides added benefits that include remote access to learning resources in American institutions and expansion of students' global knowledge and competency through interaction with American students via a virtual, spatial interface. This mode of delivery uses pertinent technological innovations readily available in Africa through the use of wireless cellular signals to access internet capability. Because persistence is a key issue in these online learning universities, a cohort model and partnership with African universities will provide needed support for the sisters.

HESA students are selected from graduates of the Sisters Leadership Development Initiative (SLDI), a workforce development program conducted by ASEC that provides participants with basic technology skills relevant for online learning. Graduates of SLDI who are eligible for HESA are those who have the necessary credentials to enter higher education. In SLDI,

participants are provided with basic technology skills—a prerequisite for online learning. Selected individuals apply to enter university in their areas of interest. Admission applications are reviewed by both the American and the African university.

The entering cohort gathers for a three-week orientation prior to the start of the academic semester. The orientation course provides basic research skills, basic technology training in the Microsoft Office suite, information on library services in the partner universities, and other academic requirements as well as training in the use of the online interface platform. Faculty at partnering institutions in the US and Africa teach the orientation course via WebEx and continue to support students via Skype and Google Hangouts. To enhance these services, partnering institutions in Africa provide academic support for the sisters and monitor their progress. Faculty members from partnering universities monitor the students' progress and provide support where necessary. An annual two-day reflective teaching session allows students to share their experiences, assess their academic goals, and strengthen their academic relationships.

THEORETICAL FRAMEWORK

This study is framed by Adult Learning Theory (Knowles, 1980; Lieb, 1991) with a focus of establishing the efficacy of online learning for 18 women religious in Africa. We examined their perceptions and experiences of online distance learning using the Adult Learning Theory (ALT), which postulates that adults learn differently and require time and space to process their learning. ALT is credited to Malcolm Knowles, who coined the term andragogy as the "art and science of helping adults learn" (Knowles, 1980, p. 50). The theory applies a variety of principles; for example, it posits that because adults are internally motivated and self-directed, they bring their life experiences and knowledge into their learning environment and are goal oriented, practical and like to be respected in the process of their learning.

Studies reveal that adults bring into their learning a variety of experiences and ideas that are relevant to learning, and that adults are likely to practice knowledge and skills learned (Brookfield, 2003; Cervero & Wilson, 2001). Malcolm's proposition that adult learners are self-directed is further studied by researchers (Cranton, 2002; Mezirow, 2000; Corley, 2003). Self-directed learning refers to a process in which individuals take the initiative, without the help of others, in planning, carrying out and evaluating their own learning experiences.

Mezirow (2000) contends that learning changes the way individuals think about themselves and their world, thereby shifting their consciousness. As adult learners discuss and reflect about their learning experience, new ideas arise that may lead to a shifting of their frame of reference. The majority of HESA students have applied knowledge and skills learned in their courses to their work environment, and this are a predictor of transfer of knowledge. Online distance learning requires self-discipline and self-direction because there is no requirement to attend classes at a particular time; much relies on the learner's own planning to complete the assignments. Continued communication from instructors with students taking online classes may be a feasible strategy to engage struggling students (Morris & Finnegan, 2009). Although not all adult students are self-directed, HESA students have been quite responsive in completing their work and assignments within the required time. Adult learning informs this study so that instructors

teaching adults may become more aware of the best instructional strategies for enabling learners to discuss learning and connect it with their own experiences for permanent meaning.

METHODOLOGY

To address the research questions, we used Adult Learning Theory to investigate the experiences and perception of the 18 women religious in Africa who are enrolled in the HESA online distance learning program in an American university. We developed a questionnaire, which contained open-ended items to investigate the question "what is the efficacy of HESA online distance learning?" We pilot tested an initial version of the questionnaire before constructing the final form of the instrument. The instrument considered students' own experiences with online learning, their perception of its effectiveness, the support that was provided to students, and any challenges they may have encountered. In addition, the questionnaire sought to identify pertinent demographic characteristics of the student; namely: age, country of origin, and current engagement.

Respondents included all 18 women religious enrolled in the HESA online learning pilot program. Their ages range from 30-51 years. These women religious originated from four countries, including Kenya, Uganda, Nigeria and Sri Lanka. All are serving in a variety of programs in Kenya and Uganda. For a long time, these women have desired opportunities for higher education, with no success due to prohibitive costs and the inability to take extended leave from their ministries to study. These women successfully completed the Spring 2013 semester taking 12 credits online at an American university. A three-day reflective learning workshop was held for them to connect and share their experiences in the summer of 2013. A cohort model allowed these women to connect via Skype to discuss assignments. These women are presently continuing their work towards a degree at a university in Africa.

FINDINGS AND DISCUSSION
Demographics

Participants were 18 women religious from varied nationalities, including Kenya, Uganda, Nigeria and Sri Lanka. They were taking nine credits each online at an American university through the Higher Education for Sisters in Africa (HESA) program. Six of the participants reside and work in Uganda and 12 in Kenya. All were adult learners, as illustrated in figure 1.
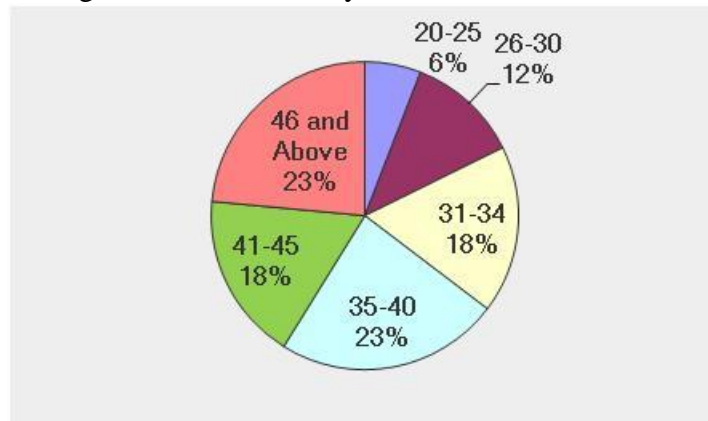

Figure 1. Participants by age.

The majority of participants are the first generation in their families to acquire higher education credentials, as shown in Figure 2, which illustrates the educational levels of their parents.
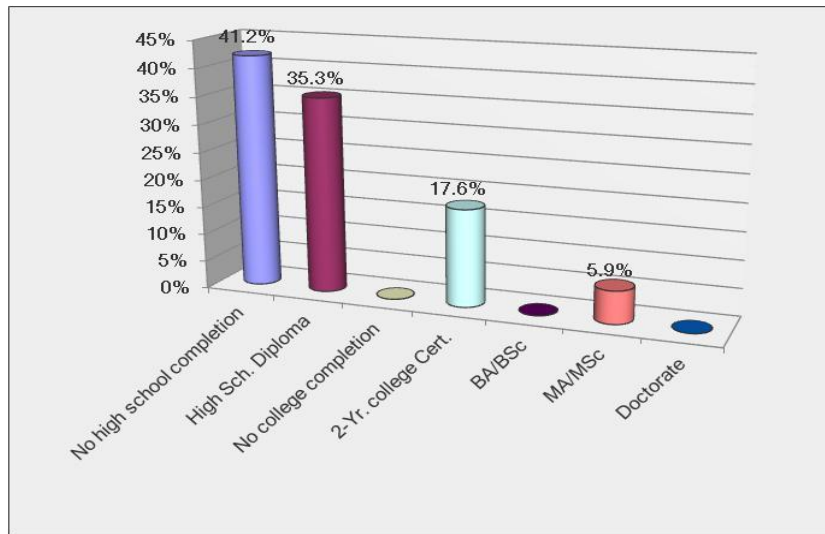

Figure 2. Highest level of education attained by parents of HESA participants.

Participants reported that a high number of women religious in their congregations are in dire need of higher education, and that their congregations are in dire need of college credentials for these women. As indicated in Figure 3, 12% of these congregations had more than 300 women who had no higher education, and 24% had more than 200 women who had no higher education. This confirms studies on the need to increase access to education, and that females in Africa have low educational levels (Lumumba, 2006; Shabaya & Kwandwo, 2004; Beoku, 2006; Maathai, 2006; UNESCO, 2008).
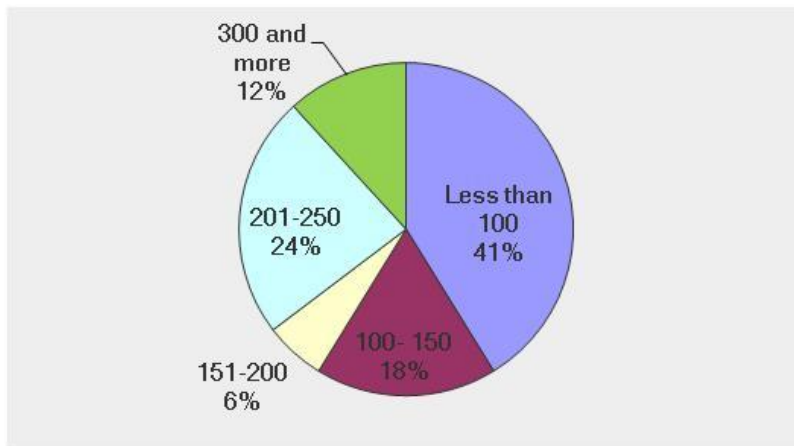

Figure 3. Number of sisters with no college degree.

Participants also reported that acquiring higher education credentials may possibly increase their employability, as well their remuneration; 88% reported that they are certain that they would earn a higher salary with additional education. Knight and York (2004) claim that educational access and success is the engine of wealth creation and is reciprocal to development, and

UNESCO (2008) contends that human capital directly increases productivity by raising the production potential of employees. Respondents reported that their monthly earnings ranged from $100 to $300 a month, as shown in Figure 4. With more educational attainment, the salaries of these women would improve markedly, and their service delivery may also be positively affected.
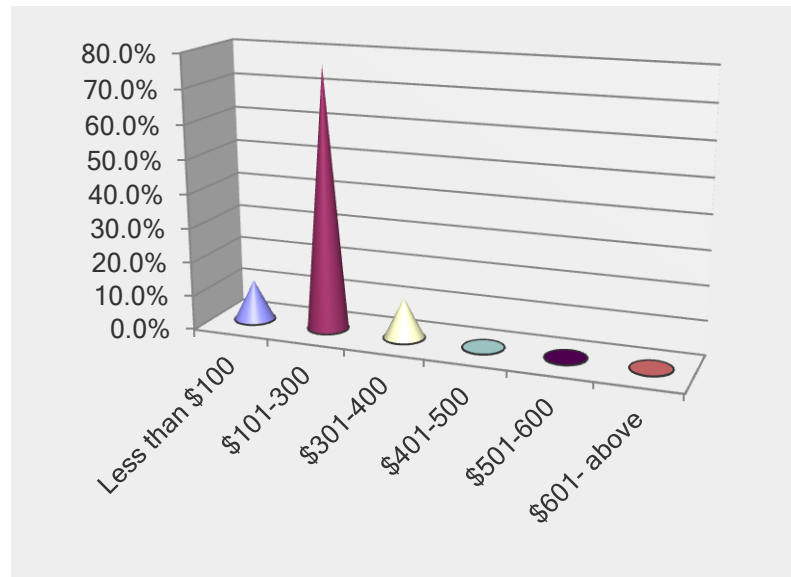

Figure 4. Monthly salary range, as reported by participants.

Online Distance Learning Experience

Studies have examined various elements of e-learning with a goal of shedding light on the quality and credibility of online learning programs, including factors that help students to be successful in completing online courses (Coates, 2005; Berge & Huang, 2004), instructional planning (Nash, 2005), the importance of instructors' frequent communication with students (Fozdar, 2006), and the need for instructors to engage struggling students (Morris & Finnegan, 2009). The learning environment is believed to play a powerful role in learners' academic accomplishment; indeed, experts in the field of brain research are convinced that an individual's physical and emotional well-being is closely linked to their ability to think and to learn effectively (Jensen, 2000; Ackerman, 1998). In addition, providing support and an amicable learning environment is vital to student success.

HESA students take online distance classes offered at an American university. They reside in Africa and receive technical support at an African university. Due to this mode of learning, the researchers sought to find out the learners' experiences in the HESA online distance learning program. Participants were asked **to *explain their entire educational experience via online distance learning at the American university.*** We examined their academic and support experiences from the American university. A majority of the students (88.2%) indicated that they had good experiences, while 11.8% reported their experiences as fair. Three themes emerged from the descriptive reports, which we categorized into (a) experiences with the learning processes; (b) communication and technology; and (c) personal commitments.

Experiences with the Learning Processes

With respect to learning processes, participants expressed contentment with the manner in which their instructors handled them; as reported by one participant, "the program is good because ... the lecturers are very understanding and encouraging." Another said "it's good because sometimes I fail to complete my assignments but with the help and persistence reminders from my faculty I manage to continue." This is a fair indicator of favorable support mechanisms in place at the American university. Findings also indicate that the program has shaped learning habits and changed attitudes towards self-directed learning among the participants. In support of this view, one participant pointed out "I feel these studies are helping me to be disciplined and principled that I don't have anybody to follow me." However, not all the participants share the same opinion. Some are in fact challenged by the absence of a physical lecturer, and expressed the need for a face-to-face session during which concepts that they found difficult to follow online might be clarified. A participant said "sometimes one does not understand the instruction, also at times, getting the information I need is difficult"; similarly, another participant said "sometimes I felt the need of meeting my instructor face-to-face, when some facts needed more elaboration." These statements may be evidence of the need for a blended mode of learning. Interestingly, upon review of the grades and written assignments of participants, it was found that these students did just fine. It is thought that the novelty of the online classes may have impacted the confidence and self-esteem of the participants, so that they underestimated their own ability to navigate this new learning mode.

Communication and Technology

Findings indicate that it was not just online learning that was new for these 18 women; in fact, this was the first time that most of the participants had experienced the use of electronic devices in a learning environment. Their inadequate prior knowledge of basic computer use, as well as such components as wireless modems, proved a challenge to many of the participants at the beginning. However, participation in three-week intensive technology training enabled them to become familiar with the online learning platform and develop a level of confidence. In explaining this technology navigation challenge, one participant said "to begin with I was computer illiterate as a result I had trouble in sending my assignment such that in the first semester most of my assignments ... failed to be delivered to the instructor." Students who were computer literate did not have as many problems, and indeed, some found the online mode very helpful and relevant, taking their status into consideration. As one expressed, "because I am able to use the computer technology in my course work, I can look for information from the internet; I can communicate to my instructors and fellow students on HESA program and get the response in a timely manner." Another added, "I am able to Skype to the instructor in USA and ask all the questions… in addition, I realized I had to be organized in asking my questions because I do not meet the instructor every day." The online mode itself has helped some of the participants to sharpen not only their skills in the use of technology in learning but also their evangelization. This is supported by one participant's statement: "[the program] has enabled me to gain new knowledge which is empowering me in the service I am offering to God's people. It has also enhanced my ICT skills." Another expressed her opinion that "the program has helped me in computer skills, I am getting new knowledge about teaching and what is required of a professional teacher or qualities of an effective teacher in the world today."

Work Related Commitments/Responsibilities

In their pursuit of online learning, participants experienced some challenges, as explicated in the findings herein. The greatest challenge was balancing life as a student with their work-related responsibilities. By and large, some students felt that there were too many assignments, and that it was difficult to effectively handle the demands of online learning given their other work obligations. Despite the absence of a traditional classroom and fixed schedule, participants were made to understand that taking courses online did not exempt them from covering the syllabus. One participant said, "It is challenging me towards balancing the different commitments I hold… online learning has created an additional demand on their time." Another pointed out that "one has to struggle and work hard to meet the assignments submission date line" As is often the case in regular face-to-face learning, participating students felt as though they never had enough time to do their assignments. However, in their second semester in online learning, there were fewer or no issues and concerns in meeting course deadlines. It is possible that most students had adjusted to this new way of learning and were able to accommodate their other schedules and activities.

Participant Perceptions of Support

In their responses to the prompt "*How would you rate the support provided to you during online learning?*", participants indicated that they attributed their success in online learning to the support they received from stakeholders. This support system was threefold; participants were supported: (a) by faculty at the American university, (b) by faculty at the African university, and (c) by the HESA administration in both the US and Africa. This section discusses support system from the three entities.

Support Received from American University Faculty during Participants' Online Learning

Findings revealed that a majority of the participants (64.7%) rated support from the university faculty as excellent, while 29.4% said support was good. Students paid great compliments to the faculty and library staff. One of the participants commented, "from [the American university] I have got all the support I need ... faculty have given me moral and intellectual support and they are always there to assist ... they are ready and patient to answer to our questions." Another added, "instructors are kind and supportive ... they provide timely feedback on assignment, excellent courses like Bible study and others ... they have provided the means and ways to help, learning... become a lot easier." It is also evident that some of the participants were challenged by the use of technology in learning, but that the faculty at the American university remained patient and supportive. One student stated, "though I was not knowledgeable of technology, the instructors were tolerant and patient with me, yet eager to assist me in any way possible... they used WebEx to assist me to navigate where I could not." In short, views expressed by the participants indicate an agreeable level of satisfaction with support from the American university faculty.

Support Received from the African University

During the first year of student learning, the main function of the African university was the provision of library services and e-learning technical support. During the orientation session, participants visited the library of the African university and had a chance to meet with the university's technical team. We wanted to find out students' views about the support that they have received from the African university. Findings indicate that 11.8% and 35.3% rated the services as excellent and good, respectively. However, 5.9 % of the students said the services were fair. In favor of the support received from the African university, one of the sisters said, "the support…has encouraged me especially when we had orientation session and the evaluation of the first semester they came to encourage us to work hard". Another sister explained that "constant encouragement from staff keeps me going." Despite this favorable view, it is clear that some students experienced challenges that prevented them from fully utilizing available services. Some of these challenges included travel distance and the inability to use ICT. One participant had this to say: "I did not have much with [the African university] during this period due to the distance … but the staff and faculty were always ready to explain what we seem not to understand well and encouraging us to persist in our online studies." Despite the challenges, there is general consensus among the participants that staff at the African university provided moral and psychological support; as one of the participants is noted, "the staff contacted me once in a via email, it was so encouraging to me to move on, for sure, this provided emotional and psychological support … that someone cared of what I was doing."

Support Provided by HESA Administration

The researchers sought to find out the nature of support participants were receiving from the HESA program administration. Almost all of the participants indicated excellent (88%) or good (12%) support by HESA administration. Participants reported that administration provided them with the instructors who had made it possible for them to acquire higher education that would have been otherwise impossible. According to the participants, HESA provided financial support as well as provision of instructional materials. Moral support from HESA administration has, according to the participants, encouraged and boosted their morale and willingness to continue with the program. One participant observed, "everything is provided for, learning materials and financial learning needs ... they do encourage me to keep going and constantly remind me what is expected of me." Another added, "thank God for HESA administration ... they are very supportive and have encouraged me always ... the journey is not easy and ... without them I could have lost hope." Participants noted that this support was especially helpful, given that they were not traditional students and had been out of school for over 15 years, and it was not easy to adjust to higher levels of academic rigor.

Moreover, participants' follow-ups and constant communication with administration enabled them to remain on track in doing their assignments. One participant reported, "HESA administration has provided us with instructors who have made it possible for me to acquire more knowledge, instructional materials and moral support." Several participants (75%) reported that they had all they needed to undertake online learning classes and had been prepared to do so, so there was no excuses. As one participant explained, "I had all I needed to do my studies, I had

no excuses, a new laptop for efficiency, money for buying modems and loading bundles availability of books." Another added, "administration encouraged me to keep going and reminding me on information required from me … there is no way I would not do my work."

Relevance of Instructional Support Materials

At the beginning of the online studies, the HESA administration provided each of the participants with a variety of instructional support tools ranging from laptops, Internet access and modems to textbooks. For effective teaching and learning, it is imperative that instructional support materials are appropriate to the circumstances. Thus, we wanted to find out the views of the participants about the relevance of the instructional support materials. From the findings illustrated in Figure 5, it is clear that participants' ratings of instructional materials were overwhelmingly high. The participants indicated that it would have been very expensive to acquire the instructional materials provided. The provision of these materials made it possible for them to participate in the program with ease. They indicated that the materials are very vital to their studies and have made it easy for them to continue their studies online. One of the sisters had this to say: "they were right tools for the work … everything was quite okay, the laptops, text books and online … the materials have enabled me to carry out the tasks with less hassle." Despite encouraging comments about the relevance of the materials, the participants did cite a few challenges with the materials, especially use of the laptop. In this regard, one of the students commented, "I had to print the articles to help me reduce the computer light that was harming my eyesight." Another participant noted that the "library services enabled me to receive great support and advice encouraged me to work hard."
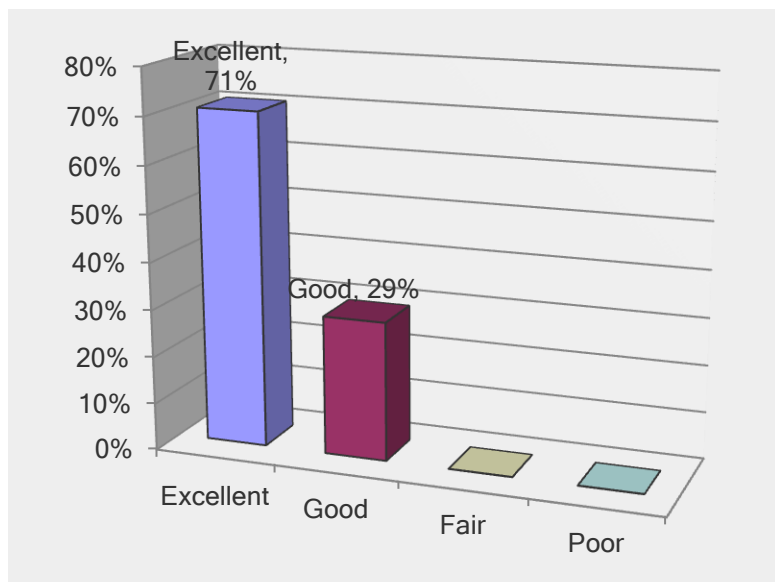
Figure 5. Student ratings of the instructional support materials.

Because participants were taking online classes and were also engaged in other ministerial activities, support from all stakeholders, including instructors, HESA administration and their congregations, was critical. For the congregation, providing participants enough time to read and complete their assignments was essential to their success. We examined the support provided by their congregations; results are tabulated in Table I below.

Table 1: *Rating of Support Provided by Congregation*

Rating	Percent	Count
Excellent	29.4	5
Good	47.1	8
Fair	23.5	4

Career Aspirations and Role in Ministry

Responding to the item "*what would you consider to be your primary career*?" a majority of the participants (88.2%) indicated education and teaching as their primary careers, while the remaining identified nursing. Despite the prevalence of education as primary career, some of the participants have been compelled to pursue other disciplines; as one participant explains, "I would consider teaching to be my primary career …it is the career of my choice but because of obedience and deficit in our ministries I was requested to train as an accounting and secretarial." Ordinarily, the majority of women religious congregations in Africa work to respond to the needs of the people they serve; as such, it is not unusual for an individual to be asked to undertake a career that she may not feel comfortable in. Often individuals have liked the work they do as a result of practice and by getting in touch with the reality of poverty and the needs of the people whose suffering they are alleviating; however, some women religious end up changing their careers altogether. Perhaps it would be important for individuals to have a conversation with their leadership teams in order to resolve this conflict.

Participants' Role in the Ministry

It was important to know the roles of participants in their ministries in order to understand the level of engagement that was possible and how easy it would have been for them to successfully engage in online learning. We therefore asked participants to explain their role in their ministry. Participants demonstrated involvement in a wide range of functions. A majority (70%) are teachers; others indicated having administrative roles that include project managers, financial administrators, principals, head teachers, and boarding masters, among others. Evangelization and preaching were also identified as major responsibilities undertaken by the participants.

Salary Expectations on Graduation

Ordinarily, an individual's earnings are reciprocal to her education and also the type of the job. The majority of these women have an annual salary of less than $1,900. Education is correlated with higher earning and quality of living: with each additional year of education, the average earnings rise by 11%, and with each additional year of a girl's education, her eventual wages rise by 10-20% (UNESCO, 2008). Certainly, providing access to education for girls and women will have both social, economic, and developmental impacts in Africa. In light of this, we wanted to find out participants' earnings expectations after graduation. This item elicited mixed reaction but with the majority (88.2%) indicating that they expected an earnings increase. The participants' expectations are summarized in Table 2.

Table 2: Participant Responses to the Prompt "Acquiring a Degree Will Improve my Salary"

	Percent	Count
Yes	88.2	15
No	11.8	2

Participants expected their salary to increase; evidently, they expect to be assigned higher-level responsibilities. In this vein, one participant indicated that "because I will work in a different level in my profession ... the salary will go up." In support of this view, another participant commented, "this is because there will be the additional workload given due to the level of education and competence in the profession." Despite these expectations, other participants were more general, and were not looking forward to monetary gains after completion of studies. For instance, one participant said "I work as a missionary; therefore I do not think they will increase my salary but this degree will make me to be a better teacher and help the society".

Appraisal of Online Distance Education

The researchers were interested in finding out the perception that the participants had towards online distance learning as a strategy for enabling sisters to acquire higher education. Findings reveal that a majority of the participants rated online distance learning highly (29.4% moderately high and 17.6% very high). Participants' ratings of the program are summarized in Table 3.

Table 3: Participants' Rating of Online Distance Learning

Rating	Percentage	Count
Very high	17.6	3
Moderately high	29.4	5
Moderate	47.1	8
Low	5.9	1

Participants viewed the program as a means for those who have no time to attend regular and full-time study programs. The online program also enables the participants to study at their own pace and on their own schedule. One of the participants had this to say: "many things are happening in the Internet ... online learning ... can help many of us to pursue our career even when still in the present congregational apostolate." Despite the high rating of online distance learning as a strategy for enabling sisters to acquire higher education, the participants expressed some feelings of anxiety. Some participants indicated that the managers of the program give them a very short time to prepare for the program, which suggests poor planning. The participants also said that if they are given adequate time to prepare, they can learn at any level. Having to juggle between congregational apostolate and online learning is not easy for some of the participants; for instance, one of the participants commented "I am not sure because some who have big responsibilities may not get it easy to complete their assignments."

Self-Appraisal of Scholastic Abilities

We examined how the participants rated themselves on selected scholastic characteristics as compared to their counterparts. The characteristics that were measured include: academic ability; computer skills; leadership ability; physical health; public speaking; self-confidence (intellectual); self-confidence (social); ability to write and communicate in English; ability to write and communicate in Swahili; and ability to navigate complex academic situations. A majority of the participants (52.9%) feel their academic ability is somewhat moderate, while close to 6% said that they are of exceptionally high academic ability.

With respect to their prior experience in the ability to use computers, half of the participants indicated they had moderate ability, while 5.6 % contended that they had low ability in computer skills. Almost all the participants were confident about their leadership ability. Forty-seven percent of the participants indicated that they have moderate leadership ability, and another 47% said that their leadership skills were somewhat high. A majority of the participants (64.7%) indicated that they are of moderately high physical health. Tables 4 to 13 summarize data on participants' ratings of self.

Table 4: Self Rating of Academic Ability

	Percent	Count
Somewhat moderate	52.9	10
Somewhat high	41.2	7
Exceptionally high	5.9	1

Table 5: Self Rating in Computer Skills

	Percent	Count
Low	5.6	1
Somewhat moderate	16.7	3
Moderate	50.0	9
Somewhat high	22.2	4

Table 6: Self Rating of Leadership Ability

	Percent	Count
Somewhat moderate	5.9	1
Moderate	47.1	8
Somewhat high	47.1	8

Table 7: Self Rating of Physical Health

	Percent	Count
Moderate	29.4	5

Somewhat high	64.7	11
Exceptionally high	5.9	1

Table 8: Self Rating in Public Speaking Ability

	Percent	Count
Somewhat moderate	5.9	1
Moderate	58.8	10
Somewhat high	29.4	5
Exceptionally high	5.9	1

Table 9: Self Rating of Self-Confidence (Intellectual)

	Percent	Count
Moderate	52.9	9
Somewhat high	41.2	7
Exceptionally high	5.9	1

Table 10: Perception of Self-Confidence (Social)

	Percent	Count
Moderate	41.2	7
Somewhat high	58.8	10

Table 11: Self Rating on Ability to Write and Communicate in English

	Percent	Count
Moderate	35.3	6
Somewhat high	47.1	8
Exceptionally high	17.6	3

Table 12: Ability to Write and Communicate in Swahili

	Percent	Count
Low level	29.4	5
Somewhat moderate	11.8	2
Moderate	23.5	4
Somewhat high	23.5	4
Exceptionally high	11.8	2

Table 13: Ability to Navigate Complex Academic Situations

	Percent	Count
Low level	5.9	1
Somewhat moderate	17.6	3
Moderate	58.8	10
Somewhat high	17.6	3

Importance for Sisters in Africa of Acquiring Degrees in their Areas of Expertise

A 2011 UNESCO report on education posits that of the 700 million illiterate people globally, the highest numbers are found in the sub-Sahara and the Arab States. With the increased demand for education and budget constraints, technology can be used for distance learning offerings. To assess the significance of higher education for women religious in Africa, the participants responded to the question "Why do you think it is important or essential for sisters in Africa to acquire degrees in their areas of expertise or ministry?" A majority of the participants were of the opinion that within the context of their ministries the need for higher education is high. They indicated that, given current technological developments and the increase in the use of ICT in Africa, women religious will need to be highly competent in their fields of specialization. This is only achievable through higher education. In this regard, one sister stated that "In today's ministry you require some high degree of knowledge in your area of expertise therefore you need to study to that high level in order to acquire enough skills and knowledge, having in mind that you are dealing with learned people thus you too must be a learned person."

Many of the societies around the sisters are moving towards higher education. If her ministry is to be meaningful to these societies, a sister will have to acquire an education that is higher than, or at least equivalent to, that of the society in which she lives and works. Many of the participants also indicated that the need to have higher education at the university degree level is gradually becoming a requirement of their respective governments. One of the participants had this to say: "in Africa ... it is a new rule that teachers have to have proper qualification to teach in the schools."

Challenges Associated With Online Distance Learning

We investigated some of the challenges participants experienced in association with their first time studying in online learning mode. They reported that there was a variety of difficulties that they had to navigate in the process of taking online classes. However, these obstacles did not deter them from learning. Scholars argue that attrition rates for online distance learning are estimated to be 10-20% higher than traditional face-to-face learning (Ravai, 2002; Holder, 2007; Nichols, 2010). However, unlike studies reporting the high dropout rates, all 18 HESA participants successfully completed one year of online coursework and continued their studies at the designated African university.

The obstacles encountered were not viewed as a hindrance to their academic pursuits. Participants endeavored to juggle their daily responsibilities with adapting to study online, which

was not easy for them at the start of the semester. In addition, power outages—and sometimes Internet connectivity—were a challenge. Others reported that they would prefer faculty to provide more time for students to complete assignments. Despite the identified challenges, participants reported that the online learning model is the most viable strategy to increase access opportunities to women religious in Africa. One participant observed, "studying via online distance learning is advantageous as it minimizes college expenses paying residential fees in universities in Africa … it is also important as it enables sisters to complete their courses as they continue serving in their ministries." Another suggested online learning has afforded them an opportunity to interact with faculty from other universities as well as global and intercultural exchange, explaining that "online distance learning provides a wider exposure and new outlooks on education from different cultures." Still another observed, "It gives the sisters an opportunity to learn and practice computer skills, and also to help them to advance so as to amicably respond to the needs of our time." One of the participants reported that "it is fascinating; it is very good and easy to learn in this way, I am encouraged." This was the first time participants were learning about technology as well as engaging in online learning classes: it was easy for some to be overwhelmed.

Given that participants successfully completed their assignments and did not drop out of the program, we wanted to examine how they successfully responded to the challenges of online learning. Participants reported that the cohort system seemed to be very supportive; they used Skype and telephone calls to exchange ideas and support each other to persist in their studies. Moreover, they reported that the three-day reflective learning workshop was positive reinforcement for their academic pursuits. Participants met and shared their experiences and challenges, and were enabled to review their academic goals; as a result, they were ready to continue. Participants further noted that use of WebEx and Skype enabled them to resolve their technological difficulties.

Participants' Perceptions of the Obstacles Hindering Higher Education for Sisters in Africa

It is general knowledge that females in Africa rarely have the same opportunities in education as their male counterparts (Maathai, 2006). This situation has not improved. Thus, we sought to find out from the participants the possible factors that hinder congregations from providing higher education to women religious. To assess this, the researchers identified a number of perceptions that are thought to hinder the provision of higher education and requested that participants rate the importance of these factors as obstacles. The factors included: poverty; the importance of education for their ministries; the costs of education; whether the ministries sisters engage in do not require higher education; the possibility that some women religious do not like the rigor required in higher education; a lack of the high school qualifications required to enter universities; and circumstances where degrees are not essential to serving in their ministries. Tables 14-20 provide a summary of their sentiments.

Table 14
Poverty

	Count	Percent
Low	1	7.7
Fairly low	0	0.0
Moderately low	5	38.5
Moderately high	5	38.5
Very high	2	15.4

Table 15
Important for Sisters' Ministries

	Count	Percent
Low	4	50.0
Fairly low	1	12.5
Moderately low	1	12.5
Moderately high	1	12.5
Very high	1	12.5

Table 16
High Costs of Education Make it Unaffordable

	Count	Percent
Low	0	0.0
Fairly low	3	27.3
Moderately low	1	9.1
Moderately high	2	18.2
Very high	5	45.5

Table 17
Ministries Sisters Engage In Do Not Require Higher Education

	Count	Percent
Low	0	0.0
Fairly low	7	77.8
Moderately low	1	11.1
Moderately high	1	11.1
Very high	0	0.0

Table 18
Do Not Like Rigor in Higher Education

	Count	Percent
Low	2	28.6
Fairly low	0	0.0
Moderately low	3	42.9
Moderately high	2	28.6
Very high	0	0.0

Table 19
Sisters Lacking High School Qualifications to Enter Universities

	Count	Percent
Low	3	25.0
Fairly low	5	41.7
Moderately low	1	8.3
Moderately high	1	8.3
Very high	2	16.7

Table 20
Sisters Do Not Need Degree to Serve in Their Ministries

	Count	Percent
Low	2	22.2
Fairly low	0	0.0
Moderately low	1	11.1
Moderately high	3	33.3
Very high	3	33.3

CONCLUSIONS

Findings in this study reveal that technological innovation and its transformation, affordability and availability in the developing nations is an opportunity to provide much-needed education to the marginalized of rural Africa. Participants described learning experiences with profound statements that endorsed online learning as an excellent strategy for fulfilling their dreams to acquire an education. Learning environment is believed to play a powerful role in learners' academic accomplishment (Jensen, 2008; Sousa, 2001). Indeed, experts in the field of brain research are convinced that an individual's physical and emotional well-being is closely linked to the ability to think and to learn effectively. The students enrolled in the HESA program take online distance courses offered at an American university. They reside in Africa and receive technical support at an African university. To be sure, this sort of partnership represents a viable strategy for supporting women and marginalized populations of Africa. Now that technology has erased communication barriers, barriers that hinder marginalized populations from acquiring an education should be removed as well.

Studies reveal that educators report significantly higher course dropout and failure rates among distance learners than among learners in traditional campus-based programs (Simpson, 2004; Wojciechowsk & Palmer, 2005). Interestingly, there were no dropouts or failing grades reported in the program. Use of a cohort model and support systems provided by partners in Africa, as well as the reflective learning experience in the summer, enabled students to refocus and air out some of the challenges they encountered so that they could be amicably resolved in a timely fashion. Although students may be taking online classes, higher education institutions should seek to include support systems that are, by and large, meaningful for their students.

Participants also persisted in the learning process because of the respectful way in which they were treated by their lecturers; as one student reported, "the program is good because ... the lecturers are very understanding and encouraging." Research studies express similar outcomes; namely, that well-informed and effectively-supported learners flourish, progress and succeed in their programs of study (Hartwell & Farbrother, 2005; Owens, 2002). Although some students felt challenged by the absence of a physical lecturer and desired a face-to-face session, participants quickly realized that they were engaged in an altogether new form of learning in which they could meet with faculty via technological platforms such as Skype, WebEx and Google Hangouts.

Studies suggest that for students to persist in online learning, communication with instructors who address students' needs in a timely manner is essential. Packard (2009) adds that the failure of instructors to communicate with students in a timely manner could negatively impact those students' learning and their ability to complete the course. Regarding communication and technology, findings indicated that this was the first time most of the participants had experienced online learning; indeed, many had never before used *any* electronic tools in a learning environment. Neither inadequate prior knowledge of the use of computers and wireless modems nor the requirement of a higher academic language prevented participants from working to achieve their dreams and educational goals.

In addition, providing continuous technical support mechanisms for students encourages their persistence and reduces the burden for instructors (Zhao, 2003). The partner institution in Africa provides technical support as well as ensuring that the quality of higher education is not compromised. Using models such as HESA will be a strategy for changing the educational attainment trajectories for women in Africa.

Consistent with Adult Learning Theory (Knowles, 1980; Brookfield, 2003; Canton, 2002), which holds that adults are internally motivated and self-directed; participants in this study were all adult and exhibited high levels of self-direction and commitment to learning. As a result, all persisted and successfully completed one year of online learning. Further, Mezirow (2000) proposes that learning changes the way individuals think about themselves and their world, thereby shifting their consciousness. In line with Mezirow's proposition, participants were very confident and comfortable with online learning delivery after their first semester. Moreover, some of them opted to continue taking online classes instead of attending classes' onsite at the African university.

Although the HESA program is relatively new, the findings in this study indicate that Africa need not lag behind in providing access to higher education for women; instead higher education institutions should develop student- and cultural-friendly programs and student support mechanisms for women to succeed.

REFERENCES

Adetunde, I. A., & Akensia, A. P. (2008). Factors affecting the standards of female education: A case study of senior secondary schools in the Kassena-Nankana District- upper east region of Ghana. *Journal of Social Sciences 4*(4), 338-342.

Allen, T. H. (2006). Raising the question number 1. Is the rush to provide on-line instructions setting our students up for failure? *Communication Education, 55*(1), 122-126.

Assie-Lumunmba, N. (2006). Empowerment of women in higher education in Africa: The role and mission of research. *UNESCO Forum Occasional paper Series Paper*, 11.

Arbaugh, J. B., & Duray, R. (2002). Technological and structural characteristics, student learning and satisfaction of web-based courses-An exploratory study of two on-line MBA programs. *Management Learning, 33*(3) 331-347.

Banks, F. (2009). Technological literacy in a developing world context: The care of Bangladesh: In PATT-22: *Pupils Attitude Towards Technology Conference*, 24-28 August. Delft: Netherlands.

Berge, Z. & Huang, Y. (2004). A model for sustainable retention: A holistic perspective on the student dropout problem with special attention to eLearning. *DEOSNEWS, Vol. 13*(5), Retrieved from http://www.ed.psu/acsde/deos/deosnews/deosnews13-g.pdf

Bloch, M. N., Beoku-Betts, J. A., & Tabachnick, B. R. (1998). Women and education in sub-Saharan Africa: Power opportunities and constraint. Boulder, CO: L. Reinner.

Burbules, N. C., & Callister, T. A. (2000). Universities in transition: The promise and the challenge of new technologies. *Teachers College Record, 102*(2), 271-293.

Carr, S. (2000). As distance education comes of age, the challenge is keeping the students. *The Chronicle of Higher Education: Information Technology*. Retrieved from http://chronicle.com/free/v46/i23/23a00101.htm

Chen, K., & Jang, S. (2010). Motivation in online learning: Testing a model of self-determination theory. *Computers in Human Behavior*, *26*(4), 741-752. doi:10.1016/j.chb.2010.01.011.

Chen, . L. C., & Bagakas, J. G. (2003). Understanding the dimensions of self-exploration in web-based learning environments. *Journal of Research on Technology in Education, 34*(3), 37-373.

Clay, Melanie, N. Rowland, S. Packard, A. (2008). Improving undergraduate online retention through gated advisement and redundant communication. *Journal of College Student Retention, 10*(1), pp. 93-102.

Coates, H. (2005). The value of student engagement for higher education quality assurance. *Quality in Higher Education, 11*(1), 26-36.

Daniel, J. S., Kanwar, A. & Uvalic-Trumbic, S. (2006). A tectonic shift in higher education? *Change Magazine, July/August, 38*(4), 16-23.

Eaton, S. E. (2010). Appreciative Inquiry: An overview. Eaton International Consulting Inc. Retrieved from www.eatonintl.com

Fisher, M. Baird, D.E. (2005). Online learning design that fosters student support, self-regulation, and retention. *Campus-Wide Information System, 22*(2), 88-107. Retrieved https://pantherfile.uwm.edu/simonec/public/Motivation%20retention%20articles/Articles/Fisher_OnlineLearningDesign.pdf

Fozdar, B. I., Kumar, L. & Kannan, S. (2006). A survey of study on the reasons responsible for student dropout from the bachelor of science program at Indira Gadhi National Open University. *The International Review of Research in Open and Distance Learning, 7*(3). Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/291/747.

Fodzar, B. I. Kumar, L. S. (2007). Mobile learning and student retention. The International *Review of Research in Open and Distance Learning, 8*(2)

Gatua, M. W. (2009). Overcoming the odds: Challenges and successes of sub-Saharan Africa women seeking higher education in the United States. *Adult Learning, 20*(3), 16-19.

Holder, B. (2007). An investigation of hope, academics, environment, and motivation as *10*(4), 245-260. doi:10.1016/j.iheduc.2007.08.002.

Katz, Y. J. (2000). The comparative suitability of three ICT distance learning methodologies for college level instruction. *Educational Media International, 37*(1), 25-30.

Kukulska-Hulme, A. (2009). Will mobile learning change language teaching? *ReCALL 21*(2), May 2009, 157-165.

Lieblein, E. (2001). Critical factors for successful delivery of online programs. *Internet and Higher Education, 3*(3), 161-174.

Lillard, L. L. (2006). Marketing research relationships to promote online student success. *Journal of Library Administration, 45*(1), 267-277.

Maathai, W. (2009). *The challenge for Africa.* New York, NY: Random House.

Marakas, G. M., Yi, M. Y., & Johnson, R. D. (1998). The multilevel and multifaceted character of computer self-efficacy: Toward clarification of the construct and an integrative framework for research. *Information System Research, 9*(2), 126-163.

McCullum, H. (2005). Education in Africa: Colonialism and the millennium development goals. Retrieved from http://africa.org/newsfromafrica/articles/art_9909.html.

Morris, L. V., Wu, S._Shyan, & Finnegan, C. L. (2005). Predicting retention in online general education courses. *The American Journal of Distance Education, 19*(1), 23-36.

Nichols, M. (2010). Student perceptions of support services and the influence of targeted

interventions on retention in distance education. *Distance Education*, *31*(1), 93-113. doi:10.1080/01587911003725048.

Ngunjiri, F. W. (2012). Women's spiritual leadership in Africa: *Tempered radicals and critical servant leaders*. Albany, NY: State University of New York Press.

Ngunjiri, F. W. (2006, March 12-14). *Gender and power: Deconstructing the positioning of African women leaders*. Paper presented at the Women as Global Leader Annual Conference, Abu Dhabi, United Arab Emirates.

Onguko, B. & Ngatia, S. (2010). Mobile learning: Small technologies massive contribution. Education in a Digital World 2.0 Series. Retrieved from http://www.learningcentral.org/node/65720

Rovai, A.P. (2002). In search of higher persistence rates in distance education online programs. *The Internet and Higher Education, 6*, 1-16.

Schrum, L. & Hong, s. (2002). From the field: Characteristics of successful tertiary online students and strategies of experienced online educators. *Education and Information Technologies, 7*(1), 5-16.

Shabaya, J., & Kwadwo, K. A. (2004). Unequal access, unequal participations of the gender gap in education in Africa with special reference to Ghana, Zimbabwe and Kenya. *A Journal of Comparative Education, 34*(3), 395-424.

Shohel, M. M. C. & Banks, F. (2010). Teachers' professional development through the English in action secondary teaching & learning program in Bangladesh's experience from the UCEP schools. *Procedural Social and Behavioral Sciences, 2*, 5483-5449.

Shohel, M. M. C. & Shrestha, P. (2010). Mobile technology in communicating language teaching (CLT) practice in Bangladesh: Experience from the UCEP schools. In XIV *Congress on Comparative Education Sciences, 14-18 June*, Istanbul, Turkey.

Shohel, M. Mahruf, C. & Power, T. (2010). Introducing mobile technology for enhancing teaching & learning in Bangladesh: teacher perspectives on open learning. *The Journal of Open & Distance Learning,* 25(3), 201-125.

Sloan-C. (2008). Staying the course: Online education in the united States. Retrieved from http://www.sloan-c.org/publications/surveys/staying_course.

Simpson, O. (2004). The impact on retention of interventions to support distance-learning students. *Open Learning, 19 (1),* 79-95.

Sifuna, D. N. (2006). A review of major obstacles to women's participation in higher education in Kenya. *Research in Post-Compulsory Education, 11*(1), 85-105.

Sun, P.C., Tai, R. J., Finger, G., Chen, Y.Y & Yeh, D. (2008). What drives a successful e-learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computer & Education, 50,* 1183-1202.

Tresman, S. (2002). Towards a strategy for improved student retention in programs of open, distance education: A case study from the Open University UK. *The International Review of Research in Open and Distance Learning, 3*(1), Retrieved from http://irrodl.org/content/v3.1/index.html

Tyler-Smith, K. (2006). Early attrition among first time elearners: A review of factors that contribute to drop-out, withdrawal and non-completion rates of adult learners undertaking eLearning proms. *MERLOT Journal of Online Learning and Teaching, 2*(2), 73-85.

UNESCO (2007). *Education for all*. Retrieved from http://www.efareport.unesco.org.

UNESCO (2008). *Education for all global monitoring report 2008*. Accessed online from, 4 http://www.unesco.org/publishing.

UIS (UNESCO Insitute for Statics). (2006). *Teachers & educational quality: Monitoring global needs for 2015*. Montreal: UNESCO Institute for Statists.

Vrasidas, C, &Glass, G. V. (Eds.). (2005). *Preparing teachers to teach with technology*, Charlotte, NC: Information Age.

Wakahiu, J.. & Salvaterra, M. (2012). Sustainable leadership: Lessons and implications of a leader development program for women religious in Africa. *The Journal of Pan African Studies, 5*(2, 150-167.

Wang, Y. S.(2003). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information & Management, 41*, 75-86.

Whitney, D. & Trosten-Bloom, A. (2003). *The power of appreciative inquiry: a practical guide to positive change*. San Francisco, CA: Berrett-Koehler

Wojciechowski, A., & Palmer, L. B. (2005). Individual student characteristics: Can any be predictors of success in online classes? *Online Journal of Distance Learning Administration, 8 (2).* Retrieved November 23, 2005, from http://www.westga.edu/%7Edistance/ojdla/summer82/wojciechowski82.htm

Zhao, Fang. (2003). Enhancing the quality of online higher education through measurement. *Quality Assurance in Education, 11*(4), 214-221. http://www.onlinelearningsurvey.com/reports/goingthedistance.pdf