Online ISSN 2345-0037. ORGANIZATIONS AND MARKETS IN EMERGING ECONOMIES, 2014, VOL. 5, No. 1(9)

IMPACT OF POLITICAL AND CULTURAL FACTORS ON ONLINE EDUCATION IN AFRICA: THE STRATEGIES TO BUILD CAPABILITIES

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Abstract. *Recently the concept of online education has received considerable attention worldwide; however, its low success rate in Africa warrants further investigation. The purpose of this study is to examine the impact of political and cultural factors on online education. For the purpose of the study, the political factor constitutes government support, technological infrastructure and trained instructors, whereas the cultural factor focuses on gender bias, culture bias and language barrier of learners. Drawing on the theory of source-position-performance, we argue that source (i.e., online education) should be promoted in rural areas as usages of mobile technologies and cellphones are more than computers, and that online education leads to competitive advantage. Finally, we propose a couple of strategies to build capability.*

Key words: *gender, government, instructors, language, online education*

Introduction

Four out of every ten primary school age children in Sub-Saharan Africa are not in school (UNESCO, 2012). Education is important for several reasons. First, it reduces poverty and contributes to national development. Second, it reduces corruption and makes the economy competitive. Third, it is seen as the only means to a successful life in African societies. When there is little education, corrupt behavior is unlikely to be detected and thus eliminated (Eicher, García-Peñalosa & Ypersele, 2009). Fourth, unequal access to educational resources decreases lifelong educational achievement. Lastly, education among women leads to a reduction in infant and maternal mortality rates, two of the

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United Nations Millennium Development goals (United Nations, 2013). Africa needs good education delivered through appropriate means.

Past studies have usually focused on *education of technology* in Africa; however, the *medium of education (such as online education)* in the context of political and cultural context has received little attention. We fill this gap by identifying six pertinent factors from literature and field interviews that affect education in general and online education in particular. The political factors relate to government support, technological infrastructure and provision of trained instructors, whereas the cultural factor relates to gender bias, culture bias and language barriers. Online education is defined as distance education in which the student enjoys a high degree of autonomy in deciding what, when and how to study at their own pace through the application of a wide range of media print, audio-visual, CD-ROM, computers and the Internet (Komba, 2009).

From political viewpoint, few African governments are eager to provide necessary resources to develop online educational system in their countries. For example, the Kenyan government has realized the importance of online education and introduced the e-learning policy to become a learning economy (Kituyi & Tusubira, 2013). As a result, the government has set up information and communication technologies (ICT) structures to create an e-enabled and knowledge-based society by 2015 and to move to a middle income level country by 2030 (Vision 2030 Blue Print, 2008).

From cultural viewpoint, educating women has resounding effects economically, socially and culturally. Women make up 64 percent of illiterate adults worldwide (UNESCO, 2012). The World Bank indicates that educating girls has a higher economic payoff than educating boys, leading to a greater economic development (Chen, 2004). An increase in educated women has generational effects, as their children are more likely to stay in school for longer. The majority of women in the poorest and least educated areas of Africa are likely living in rural areas where access to technology is limited (Gill, 2010). Certain outdated cultural views discourage women to use computers in some parts of Africa. Others discourage women from pursuing education. For example, many African societies, especially those in the rural areas see women primarily as sources for wealth through bride price that is usually paid to the girl's parents. Thus, many girls end up being married off before finishing basic primary schooling. Another practice that keeps girls away from education is Female Genital Mutilation (FGM). The Turkana and the Maasai of Kenya are renowned for these ugly practices.

Online education may play a role in overcoming some of the educational challenges. Government policy makers and university administrators can be creative in developing online education systems to reach the marginalized section of society. Our theory to promote online education and instruction is based on the premise that there is a greater usage of cellphones and mobile technologies than computers in remote villages in the African continent. In the following sections, we present a conceptual framework and explain each factor in detail. Next, we propose strategies for effective online education to build a nation's capability.

The Conceptual Framework

We adapt Day & Wensley's (1988) source-position-performance framework (presented in Figure 1) in which Online Education is a source and Capability is outcome (performance) through enhanced competitiveness (see also Han, Kim & Srivastava, 1998).

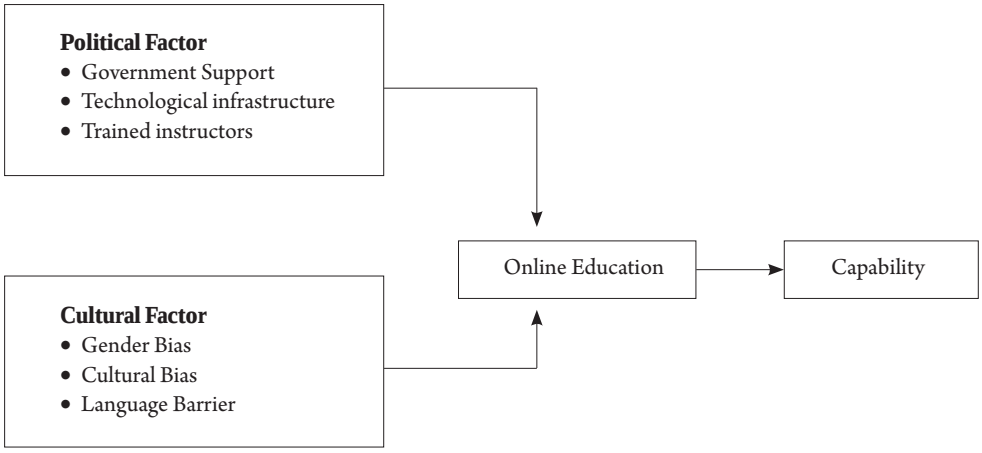

FIGURE 1: **Factors linking Online Education and Capability**

Political Factor

The political factor relates to government support, technological infrastructure and provision of trained instructors.

Government Support

African governments have often been criticized for not improving their nations' educational systems (Warschauer, 2003). One of the reasons for such reluctance is the economic factor. Online education is extremely expensive and it needs government support and resources such as electricity, computers, internet access, etc. (Fuchs & Horak, 2008). In Kenya electricity costs in manufacturing and for domestic use are so high that they are generally said to be among the highest in the world (Economic Survey, 2013). Although information technology (IT) professionals may consider optimising the use of bandwidth, anti-virus software installation, and traceable usages, among others, the bandwidth is still expensive in Africa due to the lack of infrastructure and due to the weakening of local currency, making import of technology further expensive. Another possible reason for such reluctance may be the fact that people leave their home countries after receiving their education to work in more developed countries (Vinokur, 2006). For example, Kenyans can be found working in Uganda where they

can command higher salary because Kenyan education is perceived to be better than Ugandan. To make the matter worse, government officials focus on staying in power as long as possible. And one way of achieving this is to control constituents by depriving them of high quality education. African governments, when criticized for not investing in online education, argue that spending money to build the infrastructure to support online education cannot be justified if people leave after getting educated. Therefore, spending that money would be unfair to the population that remains in the country. Although the statement is controversial, there may be some truth in it. Governments spending and budget allocations are largely dependent on the governments' education policies.

Technological Infrastructure

Africa lacks the broadband Internet. An eight-country study discovered the need for high bandwidths and low-cost telecommunications by setting up more government educational institutions (Venter, 2003). Africa has one percent of the world average of bandwidth per capita (Juma & Moyer, 2008). Most African institutions can only afford an average of 1.554 mbps (megabits per second), which is too low for even a small university given its users. The Internet Telecommunications Union report (2007) suggests that only about ten percent of communities have a wired telephone line, and only one percent of communities have access to the Internet. At the village level, only three percent of communities have access to a wired telephone and half percent of the communities have public access to the Internet technology. Further, unreliable public power supplies is a reality (Foster & Steinbuks, 2009). Many parts of Africa do not have electricity or proper IT infrastructure to facilitate effective online education. Installation and maintenance of the sophisticated equipment required for using modern information technologies is also a problem in rural areas where the rough terrain and poor roads limit access (Lubbe, Heaney & Swank, 1997). As a result, online education is a frustrating and time-consuming experience for both students and trainers (Rohleder et al., 2008). Governments need to prioritize their resources.

Trained Instructors

Trained instructors are critical to online education (Volery & Lord, 2000). Attracting high-quality instructors to schools in developing countries is an increasingly difficult task. The number of qualified instructors is particularly small in sub-Saharan Africa and the salary of the instructors is also often too low. Therefore, the schools are forced to hire unqualified and ineffective teachers who may not even show up sometimes in schools (Lazaru, 2005). It is not the technology but the instructional implementation of the technology that determines effectiveness of online education. Another difficulty in attracting trained instructors to teach in online environment is the fact that online classes are 40 percent more work for the instructor than face-to-face classes. Because instructors play a central role in the effectiveness of online education delivery, Webster and Hackley (1997) suggest hiring instructors with the three characteristics that

influence learning outcomes: attitude towards technology, teaching style and control of the technology. With properly trained instructors and information technology professionals, there will be flexible access, properly connected and distributed networks and an assurance of quality content being transmitted. Indeed, political and government support is needed. Funding from international development agencies and corporations may not always be available to develop local capability. African governments must make the training of instructors a priority.

Cultural Factor

The cultural factor focuses on gender bias, culture bias and language barrier.

Gender Bias

African women face barriers to accessing education. The gender gap at the post-secondary level has widened and the ratio of women to men has fallen in the last decade. The introduction of user-pay systems in the education system in some African countries has put financial pressure on families. When these families are forced to choose between educating a son or daughter, the son gets the preference. This trend still continues. In a study of Zimbabwe education in 1999, only 23 percent of eligible young women aged between 15-24 were attending school; 64 percent of those not attending stated that they had dropped out because they could not afford it (Shebaya & Konadu-Agyemang, 2004). Even in South Africa – the most advanced nation in African continent – government policies relating to ICT encompass the costs associated with the Internet communications as gender-neutral, while ignoring the financial disparity between gender (Olatokun, 2008). Because education is necessary to participate in the modern economy, African women are confined to menial jobs due primarily to poor access to education and training. The gender bias may explain why women in Africa remain the most undereducated in the world.

Cultural Bias

Social and cultural norms also influence women that engage with online educational technologies. In rural areas, the sole places to access the Internet may be located in areas where women are uncomfortable frequenting such as cybercafés or libraries (Hafkin, 2002). Also, women may carry a heavier domestic load and have few leisure hours to spend on the Internet (Gill et al., 2010). They may also be required to take care of livestock or children or the elderly, or fetch clean water as many may lack access to appropriate sanitation facilities (United Nations, 2013). Further, certain outdated views regarding suitability and control over use of technology, particularly in the domestic setting, discourage the use of computers by women (Cecchini & Scott, 2003). Furthermore, the Internet technologies tend to be densest in the most populated areas (cities) while women mostly remain in rural areas (Hafkin, 2002). The concentration of women in rural areas with low levels of accessibility to the Internet means fewer

opportunities for women to access and participate in online education. Education whether online or offline should be able to remove such cultural biases against women.

Language Barrier

Using minority languages to teach may be another obstacle to online education. During the 19th century, English was introduced as a language of learning and teaching (LoLT) in missionary schools. Although the English language became mandatory in schools, it is still not frequently spoken outside classrooms; for many students, their first language is not the same as the language of instruction or the language in which texts are produced (Adler, 2002). African educational system uses English or French – the second language for the students. While the continued use of English or French in education has considerable advantages in establishing a high level of achievement for a minority group such as professors and researchers, the language barrier may be an obstacle for the majority of the population. Clearly, most citizens in Africa do not speak college-level English or French, so the idea of giving education, particularly in online environment, in foreign language may violate the principle of giving every single child the right to access to education. However, to enter high-income professions such as medicine and engineering, Africans need to succeed in the foreign language training as a medium of instruction (Setati, 2002).

Strategies for building Capability through Online Education

Partnership with NGOs and Universities

African governments need to find funding opportunities from international agencies to provide ICT infrastructure to schools. Civil society and NGOs working with donor agencies continue to play a major role in providing computers to schools and lobbying governments to take the lead (Farrell & Shafika, 2007). Reliance on NGO initiatives appears to be fairly typical situation across a number of sub-Saharan African countries (Paterson, 2007). A South African owned e-learning company – eDegree operates internationally and provides online higher education through partnerships with universities in South Africa, Kenya, Uganda, Tanzania, and the United Kingdom (Neetha, 2007). Trainers may decide to customize material by adding, deleting or editing contents and language. The *Open Learn Lab Space* managed by the British Open University enables users to download and remix course content. The African Virtual University also offers online education (African Virtual University, 2013). Other kinds of e-learning collaborations have also emerged over time such as the *e/me*rge conference. This is a virtual conference on educational technology in Africa and its goal is to generate and share knowledge-based information among the members of the community (Carr & Czerniewicz, 2009).

Open Resources and Virtual Classrooms

Trainers need to collaborate across borders and consider using open-source course management and delivery software such as *Moodle* and *Sakai* (Nafukho, 2007). Open source software offers the potential to reduce the costs of the software while providing institutions greater control over their financial resources. Students can receive online education using different format**s**. Some programs are able to combine online features as well as audio and video with live instructors inside the classroom. One such method is known as *Centra* which creates a virtual seminar room that allows participants to use presence awareness, voice and video over the Internet. The classes involve a combination of lecture, discussion, and synchronous group work along with asynchronous individual and group work during the course. Trainers can easily minimize the duplication of effort required to develop materials. A success story is found at the United States International University (www.usiu.ac.ke) where all MBA students learn strategic management through a capstone simulation program offered online by Capsim in the US (www.capsim.com). The problem with this level of online education is that it is extremely expensive and so very few universities can afford it. The *Commonwealth of Learning* (COL), for example, worked with the eight countries of the Southern African Development Community to develop training materials to enable trainers to enhance their professional skills through distance and open learning. The COL has also initiated the *Virtual University for Small States of the Commonwealth*, which is a collaborative initiative to develop and share courseware, and the *WikiEducator*, which is a collaborative initiative to develop and make available a free education curriculum by 2015. However, it may take up to a decade before its impact can be felt because most students and trainers have little knowledge about the technology.

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