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Investigating Challenges Facing Virtual and Open Learning in Kenyan Universities: A Case of Kenyatta University, Kenya

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Abstract:

Virtual and Open Education has recently become a recognized field of education across the globe as the mode of education which helps large number of students to access quality educational opportunities. The purpose of was study to establish the influence of virtual and open learning to private demand for education: The objectives of the project included the following; to determine the current status of enrollment of open and distance learning in Kenyatta University; extent to which Virtual and open learning influence enrollment; challenges facing Virtual and open learning in Kenyan universities. The study was guided by Industrial production model of Otto Peters (1994). The research utilized Descriptive survey method as the main study. The target subject under study consisted of 400 virtual and open students from Kenyatta University. Through random sampling technique and proportional two hundreds (200) open and distant learners from Kenyatta University were identified. The study used purposive sampling to choose three Digital School co-coordinators. The process of data collection involved administering questionnaires and scheduling interviews with the selected individuals. The study relied on both qualitative and quantitative data. When analyzing quantitative the research used descriptive statistics and Statistical Package for Social Science (SPSS version 17). Qualitative data was analyzed by establishing the categories and themes, relationships/patterns and conclusions in line with the study objectives. Results indicated that virtual and open learning influence enrollment at Kenya Universities, where about 6248 virtual and open students have enrolled to the program. Various challenges touching on inadequate funding, network problem, delayed feedback and low teaching staff levels were identified. The study also established that the institutions offering virtual and open learning in Kenya are governed by their own institutional policies .It is articulated that the findings of this study and the recommendations therefore suggested would aid the government and universities in Kenya to achieve their goal of providing quality virtual and open education at affordable cost. It would benefit in policy on guiding on financial provision for virtual and open learning programmes, creating national Open university as well as the articulation of nationwide policies for virtual and open education and efficient use of virtual and open learning resources in providing student support services.

Keywords: To establish challenges facing virtual and open learning in Kenyan universities

1. Background to the Study

McConnell, (2014) describes contemporary Virtual and Open Learning (VOL) as planned a teaching situation which uses a broad scope of telecommunications to arrive at the students at a distance and is devised to uplift interactions of the learners and learning certification. Shin and Chan (2004) assert that the term virtual and distance learning has been applicable in various pedagogies. Even though, its main feature is that there is segregation between the teacher and the student regarding space and time. Mignon and Jurie (2012) provide the most accurate explanation. They uphold that virtual and distance learning and training comes from technical separation of the instructor and learners geographically. As a result, learners have an opportunity to carry out their studies at their own convenience irrespective of time and location. From these explanations, the detachment between the learner and the lecturer is not time but space.

Virtual and Open Education is currently known all over the globe as the approach of education that assists many students to access quality education (McConnell, 2014). It makes quality education accessible at low costs to learners whose work and family engagements cannot be overlooked. They bar them from attending college on full time basis (Simonson, et al, 2014). Since Distance Education is inexpensive to assist and is not limited by geographical deliberations, it creates opportunities where traditional education has difficult in terms of its operations.

Virtual and Open education keeps it attainable for secondary school students to study without going away from home since only limited chance in the universities. This type of education has several merits over the common educational system, encompassing; accessing the teaching personnel virtually all over the globe; foundation of current interactive methodology (less reliance on rote memorization, more hands-on learning opportunities and independent research.); and,

the establishment institutions and correlation with virtual resources that could be dispense among individuals and organizations who live in disconnected areas.(Oladejo, Adewole, Fagunwa and Arewa, 2010).

Virtual and distance learning seems to provide students with an option for to offer an option for students pursuing university education but who are unable to get admission into residential mode of education which appears to be competitive due to limited chances. Virtual and Open learning can give pedagogies characterized specialized interactive learning outcomes that are coherent, equitable, and concurs with the student's need (Rumble, 2012). Research indicates that open learning is more worthwhile than common programmes, particularly with high student enrolments and a favorable encourage learner hook-up experiences. With slashed cost per unit compared to learners of residential programmes (Simpson, 2013).

Virtual and Open education has witnessed tremendous growth worldwide in the 21st Century. It is rising so fast and has been fundamental part of the educational system mainstream, in both developing and developed nations Virtual and Open learning has been made easy by the development of computers and fast internet. More so, it has given rise to the virtual university whereby all learning takes place online. Currently, there are many private and public institutions that offer virtual and open education from certificates level to doctoral level. Virtual and Open learning has been in transcendence for over 100 years although it has been identified as a new term.Keegan (2013) asserted that it started in what was initially referred to as correspondence education that started in Europe. The University of London alleges to be the premier institution to provide VOL regarding its External programme 1858. This programme is currently recognized at the University of London and encompasses Diploma, Undergraduate and Post graduate studies. Virtual and Open learning has been utilized in many countries especially at tertiary education. In the United Kingdom and the United States of America , the University of Georgia and the Open University (UK) have pioneered in facilitating this mode of education in those countries respectively (Oladejo, Adewole, Fagunwa and Arewa, 2010). In Asia, the Open University of Japan and the India Gandhi National Open University of India lead the way in this endeavor.

Chen, Lambert and Guidry (2010) shows that over three million students in USA have been registered currently in VOL established academic courses, with an estimation of 20% of the courses being offered using technology. China has also not been left behind the central radio and television university of China (CRT) is offering various multimedia distance houses with the radio and television support by using printed and auditory education resources. Currently it is leading in modern distance education system.

Thailand also introduced open learning in the year 1971 in Ramkhamhaeng University (RU). It was designed as an "academic market". For instance, in its Open University admissions were measureless. Students were not obligated to go to classes and the fee was sensible. To do well in Exam was not compulsory for a learner to get admission. Textbooks, guideline sheets and the handbooks were the important teaching and education resources reproduced by the same university press. The major teaching method was teacher centered with the assistance of closed-circuit television applied in a conventional classroom set up. The students were also offered with laboratory facilities by the university. Ramkhamhaeng University (RU) started administering distance education system in 1995 (Miyahara, 2015).

Before virtual and open learning providers emerged in Africa, many African students attained different credentials via VOL providers in Europe and North America. University of South Africa (UNISA) was one of the leading universities to tender distance learning in the African continent, that has been offering correspondence courses since 1946. UNISA's success enabled the emergence of other VOL providers in the African continent. Examples of these are the open universities in Zimbabwe Nigeria and Tanzania which started out as providers of regular programmes and have now manifold into providing VOL as well (Perraton,2012). The University of South Africa (UNISA) has pioneered this mode of education. Other African Open Universities incorporate the Open University of Nigeria and the Open University of Tanzania.

According to Nyerere, et al, (2012) Kenyan Universities are turning to e-learning as a tool to facilitate improved education. Virtual and Open learning is quickly becoming the preferred mode of study in Kenya since it has several benefits including programmes flexibility and courses especially with regarding what, where and when to take the study. Additionally, a learner can take other roles while studying at the same time. Some of the Kenyan universities which have introduced open learning include; Kenyatta University, Jomo Kenyatta University of Agriculture and Technology, Moi University, University of Nairobi, Kenya Methodist University and Mount Kenya University (Tarus, Gichoya and Muumbo, 2015). The virtual and open learning programs at the University intents to: provide learning spaces for aspiring learners are unable to secure chance in the internal faculties that are existing in public universities providing a chance for the adults to learn at their own rate, giving them a chance to use of the modest educational human and material resources effectively by making university education not only in classroom but also outside the school (Tarus, Gichoya and Muumbo, 2015).

In the past ten years, Kenya has evolved enormously as far as the tertiary education is concerned. Generally enrolment of learners joining the university has increased by approximately 35% with the number reaching over 324, 000 in the academic year 2013/2014 up from 240,551 in 2012/13 (Nyangau, 2014). The number further increased to 536,000 in 2015/2016. The increase more than 115% enrolment is attributed to the Free Primary Education which was introduced in 2003 giving more children from poor backgrounds an opportunity to access education and the increase in number of institutions of higher education by 320% in the last ten years. The increased enrolment has also been as a result of expansion of industrialization creating need for more qualified manpower to stir the economy a notch higher in the various fields. Expansion reaction has been a requirement for further innovations regarding educational draw close to arrive at a miscellaneous population with various demands ranging from reaction to this growth has been the demand for more unconventional educational advance towards to reach a diverse residents with many different request, ranging from

strict operational hours and family roles to economic elements. It's against this back drop that this research seeks to investigate the current status of enrollment in virtual and open learning, the influence of virtual and open learning on enrolment and the challenges that are facing virtual and open learning in Kenyan institutions.

2. Literature Review

2.1. The Challenges Facing Virtual and Open Learning

In an era of globalization and competition for strategic gains and materials, even the longest and enacted and most successful institutions must guard their positions through continuous enhancement. The distance education providers and advocates of information communication Technology (ICT) integration need to tell the world their success story. Realities in our universities show a higher market. The potential of the market and the education and logistical issues are underestimated. Furthermore, the realities of ICT infrastructure, accessibility and costs and overestimation of learner readiness for e-learning are ignored. There is embankment on large scale online learning programmes and programs without previous try outs. At issue is the insensitivity or slowness in responding to customers' expectation and essence of not obtaining accreditation. Equally perplexing in most of our universities is the fact that they do not adhere to the learner's expectations, especially regarding support of the learners, likewise do offer incentives for endless private sector involvement in the partnership (Mpofu et al., 2012).

Virtual education holds promises; however, a few obstacles must be taken into consideration before it can be wholly utilized in Africa. There is an issue in making a national distance educational strategy which is the connectivity beyond main capital towns. Another problem is inadequate cadre expert to second the execution of the distance education. A research done in Zimbabwe shows that many instructors (97.5%) teaching VOL did not need expertise in VOL (Mpofu et al., 2012). Effective use of VOL technologies commands that teaching personnel be adequately acquire skills through the utilization of distance learning. Today, a limited number of African tutors have acquired competency of online instructional techniques. Such a situation has presented a crucial problem in the introduction of VOL education in African Universities. According to a study carried by the United States' National Education Association (NEA) teaching personnel are concerned the workload and the amount of money paid. The NEA (2000) realized lecturers do spend a lot of time on their distance courses than regular courses, and 84% of them do not get a minimal workload. Correspondingly, 63% of lecturers get an addition compensation for their distance programs.

One must develop digital learning artifacts such as units (programs) and learning objects due to linked e-learning (IEL). A critical issue for organizations when introducing e-learning is dealing with the development procedure of digital learning artifacts. The development process is complicated and expensive. Possibly, the most challenging point is that the teacher is traditionally responsible cannot offer the anticipated quality of the units of learning.

Another challenge is caused by lack of clear national policy regarding distance education in most African nations. Favorable policies should be put in place to enhance a structure facilitating the development of virtual and open learning programs. Except for South Africa, only a few African nations have appropriately described national programs to act as a guide to the improvement of distance education. Lack of these policies indicates constraint to the advancement of Virtual and open learning. For example, problems in regard to the learner empowering services as demonstrated in a study conducted in Botswana which revealed that the biggest problem which VOL instructors are facing is the minimum student support (Sikwibele and Mungoo, 2009). However, it can be solved by creation and mediation of different connectivity among the institutions and learners. The learners' core support can be attained through strong connectivity on with their personal tutors (Macintyre & Macdonald, 2011). In addition, it may perhaps improve along providing internet connection that remains to be major issues in Africa particularly, in rural settings.

A study by Akande (2011) exploring the usage of library and information materials by open learning students of three Nigerian higher institutions. Their search utilized questionnaires and observations as data collection methods. According to the study the selected institutions did not give the information needs of the open learners appropriately. The findings of Akande's study were later confirmed by Adesoye and Musa (2010) who also used questionnaires to investigate the information demands of sandwich and part-time learners of two public institutions in Nigeria. Their research established that the selected institutional libraries did not encounter the students information needs mainly because of insufficient library facilities, ICT and library use prowess. These two studies carried out in Nigeria utilized questionnaire method, while the current study will utilize questionnaire and interview methods. The study population of the current study will comprise of VOL students, the virtual and open learning coordinators unlike in the foregoing Nigerian studies which surveyed distance students only.

Oladokun and Aina (2011) carried out a study on VOL about the effect of digital divide on data access in Botswana. The study used the questionnaire to survey students from four institutions namely, the University of South Africa (UNISA), the University of Botswana (UB), the Management College of South Africa (MANCOSA) and the University of Derby (UD). The study addressed issues like use of ICTS to adhere to open learners' data needs, access to information materials and services by virtual and open learners and also investigated on whether distance learners were equipped appropriately to make use of the ICT. The findings of the research disclosed that there exists a digital divide between the learners in the city and those in rural location. Accessibility and availability to digital materials by open learners is seen to have a location aspect, in that case it is more available to access information in urban areas than in rural locations.

A research was carried out by Nyaoga et al (2010) to investigate administration of distance education at the University of Nairobi, found out that One of the vital findings of the study was that access to library was a big problem to VOL students of the University of Nairobi as in most cases they came from far places some from remote areas where libraries were not

available, hence they could not do their assignments well or get books for reference. A study was conducted by Kavulya (2004) to investigate the issues in the access of library services for VOL. This was a multiple cases study of preferred universities in Kenya namely, the African Virtual University (AVU), United States International University-Africa (USIUA), Kenyatta University and the University of Nairobi. Data collection was done through interviews with the University Librarians of the selected cases. The main challenges unearthed by the study were: lack of institutional programs that act as a guide to the provision of information for virtual and open learners; inadequate planning of open education courses; insufficient physical structures and professional personnel; inadequate funding of university libraries and weakly developed internet infrastructure in Kenya.

According to a study by Nyerere, Gravenir and Mse (2012) 68% of the Lecturers who teach these courses had not been provided with unique preparation on the implementation of viable Virtual and open learning strategies. It necessary to note down that proper training is vital in supplying quality virtual and open learning yet in the effort to get virtual and open learning courses into existence in Kenya, lack of composition period and financing has been given to staff development. Feedback from the study's respondents revealed that they agreed to having received preparation on this mode of education delivery substantially through indoor sessions that was done by the University of Nairobi Centre for Virtual and open learning. Majority of the respondents had feeling that it would be indispensable for them to receive get training on the VOL teaching methods.

According to a study done at the University of Ghana to investigate the challenges facing open and distance student by Martey (2004) the study observed that virtual and open student faced challenges like inadequate infrastructure and info-structure, inadequate staff appraisal for sustainable career structure, lack of enough instructional resources, teaching and learning necessities, reducing standards in quality with student attainment exam outcome comparing unfavorably with other nations in the region, insufficient financial aid from the government, insufficient monitoring of the management, inadequate directional, meaningful and functional curriculum and lack of orderly method in ICT use in distance education settings in mandate to find out the potential of ICTs to curb issues in the distance education structure.

2.2. Statement of the Research Problem

As evidenced from the background, the demand for university education in Kenya has been increasing over the years. More individuals are enrolling for university education currently compared to any time in the Kenyan history. Despite the overwhelming effort of converting Universities constituency colleges to fully pledged University in many county by the government the demand for more institutions of higher learning has outgrown the number of available fully-fledged and interim universities. To cope with the increased demand for high education universities have taken measures to absorb as many students as possible. Among the measures include, change in the method of delivery of content from the traditional face-to-face to virtual and open learning. Distance education enrollment in Kenyan universities growth rates are accelerating. A study by Duke, Francis and Nagro (2017) revealed that virtual and open education enrollments increased for the seventh straight year and thus the need for the study to investigate the influence of virtual and open learning on private education for demand in Kenyatta University.

2.3. Purpose and Objectives of the Study

The core purpose of this research was investigating the challenges facing virtual and open learning at Kenyatta University

2.4. Theoretical Framework

This study was supported on the industrial production model of Otto Peters. This model, which, according to Garrison (2000), was realized in 1960s. It focuses on the analysis of the virtual and open education structure and approves the contingency of industrial production methods adoption like division of labor; minimize unit cost, organization to recognize economies of scale and mass production. (Peters, 1994). This approach is about organization of educational procedures for the realization of economies of scale. The background of this study being a growing nation, inadequate resources have prevented the satisfactory provision of university education to concur with the demand. Hence there is a need to search for other methods or strategies of providing higher education like virtual and open learning program, a method that has an ability of escalating access with no expanding the available amenities. Thus, the economies of scales advantageous to this mode of delivery.

Peters argues that this model, which had a great impact and still controls the context of distance education today, is excellent due of the structural hindrance and the depend on self-instructional print packages. However, the model is not a theory of teaching or learning, according to Garrison (2000), but it has contributed to clear information regarding the open education organization. Peters (1994) also explains the industrial approach as "objectification of the teaching process," which minimizes the types shared learning and keeps students away from personal interactions and vital discourse.

3. Research Methodology

3.1. Research Design

According to Orodho (2005) research can be viewed as outline, schemes or plans that are utilized in the creation of solutions to tackle research problems. The project used descriptive survey design that is deemed ideal for amassing information concerning the attitudes, perceptions, opinion, knowledge habits or any other social and education issue of

people (Orodho and Kombo 2002). The choice for this design was suitable because it allowed the researcher to collect in-depth information on respondent's attitudes, opinions and perceptions concerning the influence of virtual and learning on private demand for education.

3.2. Location of the Study

The location of the study was in Kiambu County at Kenyatta University. KU is situated approximately 23 kilometers away from the central business district of Nairobi along Thika Super Highway on a 1,100 acre land. The mandate of the university includes teaching, research and community service (KU, 2011). Kenyatta University is the core of Africa Virtual University in Kenya. The university has rebranded its virtual and open learning to include e-learning (digital school) which is geared towards improving the delivery of educational services to students. Kenyatta University is one best public University in Kenya and has well established digital school; therefore the findings can be generalized for other universities in Kenya.

3.3. Target Population

The aim population of this research was 400 students enrolled in digital school from Kenyatta University. The study also involved three digital school coordinators from Kenyatta University to act as key informant.

3.4. Research Instruments

The researcher used two research instruments interviews for virtual and open learning coordinator and research questionnaires for Virtual and open learning students. Quantative data collected was analysed using statistical package of social science (SPSS) and presented in frequency tables and pie charts. The qualitative data was analysed thematically and was presented in narrations.

4. Discussion of Research Results

4.1. Satisfaction with Virtual and Open Learning

The study also required the respondents to comment on their level of satisfaction with their mode of study. This was deemed important because it gives insight into the intrinsic relevance of the skills passed to the respondents by the university and also the level recommending the program to others. Consequently, the variable clarifies if or not students would seek further qualifications in the same mode of study. The findings of the survey are discussed below.

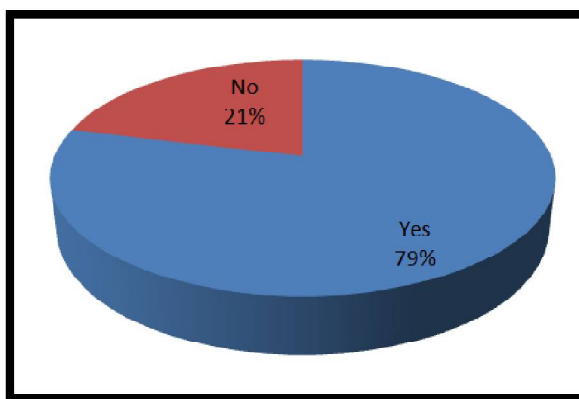


Figure 1: Level of Satisfaction with Virtual and Open Learning

Study findings revealed that 79% of the respondents were satisfied with virtual and open learning mode which was associated with active learning, active discussions, students centered and the feeling to express ideas without criticism as well as studying at individual convenience while 21% indicated that they were not satisfied with the mode of the study. The level of dissatisfaction was associated with challenges delayed reply on the assignment, lack of experienced lectures, less time allocated to learning and failure to cover the syllabus. Findings from key informants indicated that despite the variant challenges facing the VOL platform there has been consisted training focusing on improved services to the students and this has increased the confidence of the services provided to the students. One of coordinator indicated that:

Introduction quality assurance in VOL has led to increase of quality of education hence Improving the satisfaction level to student.

Another coordinator had following to say:

Sensitization of lecturers and students has led increase of enrollment of Students at VOL due to increase satisfaction level.

Another coordinator had following to say:

Kenyatta University have deployed over 800 plus lecturers who are facilitating VOL and they gave been give special training on VOL which have led to improvement satisfaction level of students towards VOL programmes.

VOL was viewed advantageous from the reduced cost of high education to the trainees and given them a chance to focus with their carriers and continue improving their skills. Due to the introduction of the VOL platform students have been able to recognize and appreciate the need of technology toward achieving the technological divide needed to improve the economy. This study concurs with Hart (2012) who argues that through VOL society in general can greatly access education and increase their literacy skills.

4.2. Challenges Facing the Virtual and Open Learning Plat Form

This study established that there high dropout rate of VOL students, where 200 students in every academic year dropout which 0.02% of the total number of VOL students due to lack of support from teaching staff and feeling that they are not fully engaged. One of the coordinator indicated that:

High dropout rate of the VOL students is the main challenges facing VOL due to lack of support from the lecturers.

The study also established that there was no national education principles that governed VOL in Kenya and that the learning institutions facilitating these programmes were guided by their own policies. This is an agreement Sikwibele and Mungoo (2009) that argued that lack of policies indicates constraints to the development of VOL.

Technology is extremely changing and tertiary learning institutions in the country cannot cope with the rapid changes in terms of cost wise and appropriateness in spite of effective application of information technology being important in ensuring quality virtual and open learning, as (Mpofu et al., 2012) argues.

There is no specified budget allocated to VOL programmes according to the study findings and most of the virtual and open learning programmes have been launched as means of generating income to public universities beat by declining budgetary allocations.

The facilitators who responded in this study also felt that the workload was too much given that they were the same lecturers facilitating the residential mode of education among other responsibilities like research and publications. They also raised the issue of compensation with the majority feeling that it was too low compared to the workload, as Nyerere (2012) argues that too much workload to lecturers was problem facing VOL.

The study did establish that most of the teaching staff that facilitates these programmes has not been given enough special training and in-service training on the delivery of virtual and open learning technique. This is an agreement with Nyerere, Gravenir and Mse (2012) that argued that 68% of the Lecturers who teach these courses had not been provided with unique preparation on the implementation of viable VOL strategies.

They also argued the need to train the lectures for most of them lack good IT skills and this affected the delivery mode and there is need to expose them to more skills to ensure they are conversant with the platform well. This is an agreement NEA (2000) which revealed that only limited number of African tutors have acquired competency of online instructional techniques. Such a situation has presented a crucial problem in the introduction of VOL education in African Universities.

In most cases there were no direct policies and framework to deal with challenges facing VOL and this creates non conducive environment for learning. This study concur with Sikwibele and Mungoo (2009) noted that only a few African nations have appropriate described national programs to act as a guide to the improvement of virtual and open education. Lack of these policies indicates unambiguous constraint to the growth of VOL.

The study also established that despite the effort of university sensitizing the students and lecturers about advantages of VOL, attitudes of society towards the VOL is still a major problem facing due lack of knowledge about VOL. This because society still that believes for one to learn must be a face to face learning and have very knowledge about VOL. One of coordinator indicated that:

- *Attitude of society and stake holder is still problem facing VOL due to lack knowledge about VOL.*

5. Conclusions of the Study

The study also established that distance learners encounter a number of challenges. The level of dissatisfaction was associated with challenges delayed reply on the assignment, lack of experienced lectures, less time allocated to learning and failure to cover the syllabus. More surprisingly Straggles in Adapting to the program was experienced by a majority of the respondents due to the changes of timetable without notice, Lack of Computer literacy for both the students and lecturers and detachment due to limited teacher-student contact.

The learners indicated that there were increases disruption at home by the kids causing loss of focus and this was a significant burden especially when preparing for exams and in some cases, it was hard to access study materials and inadequate resources. Some cases were reported of insufficient support from university and internet connection problem leading to disconnections during the studies it students were left behind, and in some instances, they could not understand their courses well. Additionally, most of the respondents reported they had the responsibility of family provision, and this created a significant burden to finance virtual and open learners. Although some had managed, it was through thick and thin; they tried to make ends meet in order to finance distance education.

6. Recommendations of the Study

The university ought to concentrates on sensitization on distance education to totally different completely different individuals by victimization different mean that of communication to extend the come about.

The government ought to take into account funding virtual and open learners through loans from teaching loans board to ease the burden of trying to find education fee. This may cause maintaining the space learners and inspiring additional to

affix the program and thus scale back drop out. There would like for awareness campaigns targeting the community, parents, directors, lecturers, and students.

The government ought to intensify the virtual and open education program together with the university at the O level to scale back the extent of illiteracy. The study also recommends the need for technical support for both students and staff to ensure better delivery. This will multiply the morale of the learners and build on the reputation of the VOL program

The study recommends establishment and implementation of nationwide policies on VOL to tackle among other issues, programmes financially supporting, human resource development, and quality assurance. This research thus recommends the government to mobilize all the stakeholders to establish infrastructure that would enhance the application of technology in the provision of VOL.

The study recommends that VOL programmes be considered in the country's budgetary allocations to support especially the programs' human capital development.

The study recommendation that the lecturer levels be raised to reduce individual workload. The programme administrators should also respond to the issue of low compensation to ensure staff motivation

7. References

- i. Adesoye, A. E., & Amusa, O. I. (2011). Investigating the information needs of sandwich and part-time students of two public universities in Ogun State, Nigeria. *Library Philosophy and Practice*.
- ii. Agalo, J., & Agalo, J. (2014). Increasing equity and access to education in Kenya: The role of open and distance learning in teacher development. *Research Journal in Organizational Psychology and Educational Studies (RJOPES)*, 3(2), 62.
- iii. Akande, S. O. (2011). Computer and internet facilities use in distance education: a survey of sandwich students of university of Ado-Ekiti, Nigeria. *Library Philosophy and Practice*.
- iv. Akeusola, O., Daniel, I. O., & Iyere, T. (2011). Analytical Studies of Various Marketing Approaches That Could Assist The Growth of Educational Programmes of the Open and Distance Learning Institutions. *International Journal of Academic Research*, 3(3).
- v. Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *The International Review of Research in Open and Distributed Learning*, 12(3), 80-97.
- vi. Button, D., Harrington, A., & Belan, I. (2014). E-learning & information communication technology (ICT) in nursing education: A review of the literature. *Nurse education today*, 34(10), 1311-1323.
- vii. Chen, P. S. D., Lambert, A. D., & Guidry, K. R. (2010). Engaging online learners: The impact of Web-based learning technology on college student engagement. *Computers & Education*, 54(4), 1222-1232.
- viii. Duke, J., Francis, G., & Nagro, S. (2017, June). Student Engagement across Distance Learning Models. In *Innovations in Teaching & Learning Conference Proceedings* (Vol. 9, pp. OF-TEACHING).
- ix. Garrison, R. (2000). Theoretical challenges for distance education in the 21st century: A shift from structural to transactional issues. *The International Review of Research in Open and Distributed Learning*, 1(1).
- x. Guy, R. (Ed.). (2009). *The evolution of mobile teaching and learning*. Informing Science.
- xi. Hart, C. (2012). Factors associated with student persistence in an online program of study: A review of the literature. *Journal of Interactive Online Learning*, 11(1).
- xii. HUANG, R., YANG, J., & HU, Y. (2012). From Digital to Smart: The Evolution and Trends of Learning Environment [J]. *Open Education Research*, 1, 75-84.
- xiii. Kavulya, J. M. (2004). Challenges in the provision of library services for distance education: A case study of selected universities in Kenya. *African Journal of Library, Archives and Information Science*, 14(1), 15-28.
- xiv. Kombo, D. K., & Tromp, D. L. (2006). Proposal and thesis writing: An introduction. *Nairobi: Paulines Publications Africa*, 5, 814-30.
- xv. Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- xvi. Mabawonku, I. (2004). Library use in distance learning: A survey of undergraduates in three Nigerian universities. *African Journal of Library, Archives and Information Science*, 14(2), 151-165.
- xvii. Macintyre, R., & Macdonald, J. R. (2011). 'Remote from what? 'Perspectives of distance learning students in remote rural areas of Scotland. *The International Review of Research in Open and Distributed Learning*, 12(4), 1-16.
- xviii. Maclean, E., & Dew, S. H. (2008). Assessing the library needs and preferences of off-campus students. *Journal of Library Administration*, 41(1-2), 265-302.
- xix. Martey, A. (2004). ICT in distance education in Ghana. *Library Hi Tech News*, 21(5), 16-18.
- xx. Mayeku, B., & Odera, F. (2011). Policy guidelines and challenges in quality assurance in distance learning in Kenyan public universities. *International Journal of Information and Communication Technology*, 1(8).
- xxi. McConnell, D. (2014). *Implementing computing supported cooperative learning*. Routledge.
- xxii. Mehdipour, Y., & Zerehkafi, H. (2013). Mobile learning for education: Benefits and challenges. *International Journal of Computational Engineering Research*, 3(6), 93-101.
- xxiii. Mignon, A., & Jurie, F. (2012, June). PCCA: A new approach for distance learning from sparse pairwise constraints. In *2012 IEEE conference on computer vision and pattern recognition* (pp. 2666-2672). IEEE.
- xxiv. Miyahara, M. M. S. (2015). Quality Assurance in LIS Education.
- xxv. Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, 14(2), 129-135.

- xxvi. 26. Mupinga, D. M. (2005). Distance education in high schools: Benefits, challenges, and suggestions. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 78(3), 105-109.
- xxvii. 27. Nyangau, J. Z. (2014). Higher education as an instrument of economic growth in Kenya. In *FIRE: Forum for International Research in Education* (Vol. 1, No. 1, p. 3).
- xxviii. 28. Nyaoga, R. B., Nyamwange, O., Onger, R. N., & Ombati, T. O. (2010). Quality management practices in Kenyan educational institutions: The case of the University of Nairobi. *African journal of business & management*, 1, 14-28.
- xxix. 29. Nyerere, J. (2016). Open and distance learning in Kenya: A baseline survey report commissioned by the Commonwealth of Learning.
- xxx. 30. Nyerere, J. A., Gravenir, F. Q., & Mse, G. S. (2012). Delivery of open, distance, and e-learning in Kenya. *The International Review of Research in Open and Distributed Learning*, 13(3), 185-205.
- xxxi. 31. Nyerere, J. A., Gravenir, F. Q., & Mse, G. S. (2012). Delivery of open, distance, and e-learning in Kenya. *The International Review of Research in Open and Distributed Learning*, 13(3), 185-205.
- xxxii. 32. Nyerere, J. A., Gravenir, F. Q., & Mse, G. S. (2012). Delivery of open, distance, and e-learning in Kenya. *The International Review of Research in Open and Distributed Learning*, 13(3), 185-205.
- xxxiii. 33. Ogunlela, V. B., & Ogunleye, B. O. (2015). Promoting Quality Assurance Practices for ODL Programmes in West African Higher Education Institutions: The Role of RETRIDAL. *International Open and Distance Learning Journal*, 1(1).
- xxxiv. 34. Orodho, A. J., & Kombo, D. K. (2002). Research methods. *Nairobi: Kenyatta University, institute of open learning*.
- xxxv. 35. Simonson, M., Smaldino, S., & Zvacek, S. M. (Eds.). (2014). *Teaching and learning at a distance: Foundations of distance education*. IAP.
- xxxvi. 36. Valentine, D. (2002). Distance learning: Promises, problems, and possibilities. *Online Journal of Distance Learning Administration*, 5(3), 1-11.