RECENT DEVELOPMENTS IN e-LEARNING PEDAGOGY: ROLE OF KENYATTA UNIVERSITY IN TEACHER EDUCATION

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Abstract

Fundamentally education is the organized process of inquiry of knowledge with the sole aim of being enlightened and empowered for self-inner development, success and happiness in life. Education is a pillar for both human capital growth and development of society. Today, e-learning has been identified as the tool for human capital development. Universities in Kenya should be prepared to spearhead the training of teachers on how to integrate technology during classroom teaching. The greatest challenge is the lack of comprehensive policy on eLearning pedagogy in teacher training institutions of higher learning. The specific objectives of this study were to (a) To identify university policy on e-learning as a tool for training, (b) Establish the implementation policy on e-learning as a training tool, (c) Establish the training challenges experienced in implementing the policy and (d) Development model on the implementation of e-learning as a tool for pedagogical training. The study used exploratory design to investigate the state of teacher training through e-learning and targeted 100 graduate student teachers and 10 lecturers in the Department of Educational Communication & Technology, Kenyatta University. The study used three sets of instruments including questionnaires, interview guideline and documentary analysis guide to collect data. Descriptive analysis was used to summarize the views of the respondents.

Index Terms: eLearning Pedagogy; Policy Formulation and Implantation; Skills Development

I. INTRODUCTION

It is believed that educational goals are set within the framework of a prevailing accepted world view or paradigm that education enables the learner acquire the knowledge and skills necessary for playing a useful role in the human society as well as to be resourceful in the solution of problems connected with his own needs. Essentially then, the primary objective of teaching is to promote the acquisition of necessary knowledge, skills and attitudes of students who graduate to serve society. To achieve this objective, teachers play an important role in the teaching-learning context, where they continuously use and create different teaching models, strategies, and tools (Sife, 2007; Van Der Sijde1989). Apparently, teachers have to be adequately prepared to carry out their mandate in the classroom. Teachers must possess adequate skills and knowledge to use the necessary resource, technologies and relevant strategies in imparting content to the learners in the classroom. In modern classroom operations, teachers use different tools to improve their teaching skills in varied disciplines by widely integrating available ICTs to improve their teaching styles (Scudder, n.d.; Liu 2011; Hew & Brush 2007; Donnelly, McGarr & O'Reilly 2011).

The effective use of ICTs in the classroom generally contributes to emergence of reforms in teaching and learning processes in all sectors of education (Pulkkinen, 2007; Nicoll & Harrison, 2003; Flexible Learning Advisory Group, 2013). The world of work today needs graduates with technological knowhow to propel the industrial growth and development of nations. Institutions of learning have a responsibility to produce learners well equipped with technology for work. Universities are tasked to research and train teachers on how to effectively use the tools and wheels of technology to revolutionize society. Teacher training institutions and more particularly universities should spearhead the need to embrace technology in the teaching and learning processes where developed nations are way ahead in using eLearning to ease the processes of teaching and learning. However, the use of ICTs and eLearning pedagogy in particular can only be used cautiously where practical and applicable (Boyer, 1990; Ramsden, 1992; ondigi, 2015). The use of eLearning in teacher training and particularly in the department of pedagogy can only be limited to the integration of ICTs in training as guided by the institutional policies on technological advancement of the said institution or accepted practices as dictated by relevant prevailing circumstances.

II. RESEARCH PROBLEM

The authors of this paper believe that a university policy on eLearning pedagogy is one that provides guidance on the use of eLearning where appropriate to support the achievement of its goals in providing learner-centred learning experiences that are flexible, responsive and effective to meet the needs of all its learners in the society long after schooling and as then best fits the job-market requirements. The element of eLearning is used to innovate both learning and its delivery mechanisms that make effective and efficient use of all resources whilst maintaining the quality standards the university is committed to in upholding global image since the student teacher trainees can opt for jobs where available.

Where an institution proposes to implement an eLearning pedagogical approach for training teachers, it must use a holistic policy initiative that caters for the interest of all parties involved in the processing of training and learning skills that can be used for in content delivery in the classroom. Therefore, the instituted policy should stand the challenges of modern times in the preparation of student teachers for purposes of effective and efficient delivery of content in the classroom. This study therefore addresses the issue of formulation and implantation of eLearning policy for effective and efficient training of student teachers who can handle content in the classroom in this 21st century.

III. RESEARCH OBJECTIVES

The specific objectives of this study were to:
i. To identify university policy on e-learning as a tool for training;
ii. Establish the implementation policy on e-learning as a training tool;
iii. Establish the training challenges experienced in implementing the policy and
iv. Development model on the implementation of e-learning as a tool for pedagogical training.

IV. LITERATURE REVIEW

Evidently, policy aspects pertaining to eLearning should and where relevant be embedded in all university policies and procedures to ensure a consistent and corporate approach to associated systems, processes and responsibilities of all internal organs of the system in place. A well stipulated policy embedded in sound principles of pedagogical training of teachers will guide the processes of skills development among the trainees without compromising the professional standards expected of the teachers when in the field (Ondigi, 2015; Australian flexible Learning Framework. 2011). Thus, Kenyatta University in its quest to modernize teacher education and in particular the training of teacher has given guidelines which though meant to assist schools as whereas departments in the training processes, these guidelines do not spell out clearly the anticipated aims and goals of eLearning as highlighted in an Internal communication memo (n.d.) below:

Guidelines for online Instruction stipulates that lectures in the department teaching a unit online should: (a) provide (online) the students taking the unit a course outline; (b) co-ordinate the lecturers teaching the same unit in other digital school in regional centres with regard to the course outline, tutorials, CATs and Examinations; (c) administer Face to Face tutorials to students taking the unit; undertake (online): 2 quizzes, one assignment in the unit taught, 2chats and 4 discussion forums; (d) responsible to questions, clarification or issues raised by students taking the unit; (e) administer and make online assignments of the students taking the unit and vii] submit examination marks and scripts within the stipulated time frame.

This framework does not embrace a clear policy guided by principles of eLearning namely: establishing Learner Knowledge; Staff Commitment to eLearning; Resources Available and Time Available for the eLearning processes

A departmental ad hoc committee report on eLearning issues that must be attended to when implementing an eLearning Policy that can work outlined the following challenges that compound effective implementation of an eLearning Policy (Ondigi, 2015) namely:

Infrastructure: There is need to have a complete infrastructure to fully support the eLearning endeavours

Resources: Availability and easy access to the resources such as computers, modems and all full net-working, internet connectivity, time among others are necessary,

Mode of delivery: This must be clearly expressed for there is need for a uniform mode of delivery, e.g. lecture by lecture mode or whole unit mode in online learning,

Capacity building of staff: The academic staff, students, and technicians need the skills if the learners have to gain from eLearning,

Authorship of Content: It should be clarified whether the content is the property of the author or University. If it is for the University to own it, then it has to pay well to the authors of the content. Any uncompromising process on this point is bound to produce sub-standard products.

Skills building instruction: Respective departments in the university have their mandate and role to play in the education system, for example, the department of educational Communication and Technology is tasked with the training of teachers on pedagogy in regard to delivery of subject content in the classroom which cannot be done through eLearning. The department of pedagogy, which is a skills department, requires face-to-face training and integration of ICTs while other forms of learning can be managed by use of eLearning. Apparently, the pedagogy department trains teachers on how to integrate technology in the classroom and does emphasize on blending technology in teaching and learning.

Finally, Policy on eLearning: There is need to come up with a policy to guide the schools and departments in an institution on the general policy on eLearning. The policy should include: standards, awards and rewarding systems for the lecturers, and uniformity in the structure on eLearning.

It is further argued that established Principles of the eLearning Policy and their Context must provide for the following if effective integration of ICT in training is to be provided to the teacher trainees during the training (An eLearning Policy for Staffordshire University, 2004):

Principle 1: The University should ensure that its eLearning provision could meet the needs of a full range of flexible and independent learning experiences. This will include on and off campus learners in local, regional, national and international settings and cover both blended and fully eLearning courses ranging from full awards to informal and individual learning.

Principle 2: The University should ensure that students taking eLearning courses have equity of opportunity with those taking courses delivered in more traditional ways, and that its marketing, recruitment, administrative and support procedures and provision are fully aligned to the needs of the eLearner.

Principle 3: The University should continually work towards ensuring that all systems, both manual and electronic, used in the eLearning context interoperate in the most effective way to provide learners with an effective and increasingly individualised learning environment encompassing all aspects of their experience as a student of the University, as part of a holistic Managed Environment for Learners (MEfL).

Principle 4: The University should exploit the range of technologies used in the eLearning context to work with partner organisations, employers and individuals to assist it in meeting its goals of supporting the independent and lifelong learner and continuing professional development.

Principle 5: The University should ensure that as far as possible, resources for both tutors and learners, including eLearning course content, University eResources, and those provides from external sources are easily accessed from point of need. In addition, it will via the use of managed

repositories, ensure that University owned eContent and eResources are readily available for repurposing and reuse by those entitled to do so, and will thus actively support cross discipline and Faculty developments.

Principle 6: The University, through its quality processes, should ensure that eLearning provision meets the standards expected by the University, funding bodies and relevant legislation, and that it is accessible, educationally sound, engaging and appropriate to its target populations, whilst ensuring that course developers and those facilitating learning have the scope to innovate and fully employ their professional skills and judgement.

Principle 7: To ensure that the potential of eLearning to innovate learning and meet the needs of an increasingly diverse range of potential learners is realised, the University will actively encourage research, scholarship and development in all aspects of eLearning, and in particular, pedagogy for eLearning. In addition, it should, via appropriate staff development, ensure all management, administrative, support and teaching staff has the skills, and understanding of each other's roles, required to play their part effectively in the provision of eLearning.

Principle 8: The University should monitor and evaluate the use of all systems and practices contributing to its learners' eLearning experiences, to ensure that practice, policy and strategy are responsive to lessons learned and agile in respect of new opportunities, and will actively seek to remove barriers that impede or restrict effective eLearning.

Principle 9: The University should ensure, assist by the use of monitoring and evaluation, that the resources required to support eLearning, in human, technical and infrastructural aspects, are appropriate to its requirements and will allow it to provide its eLearners with realistic definitions of the levels of service they can expect, and

Principle 10: The University should ensure that, by using effective costing models and market research, the pricing of eLearning offerings is both competitive and appropriate to the target populations.

Therefore, a well-articulated eLearning pedagogical policy for implementation should consider questions like:

i. Who are the learners undertaking the programme, in which case the teacher training programme will require face to face training since it is hands-on experiences?

ii. What are the learner characteristics and demographics in regard to the new ventures of teacher training for the job-market requires employees who are responsive to changes in society?

iii. How do they prefer to access their learning and what is the practice during the training and in the job-market?

iv. Why are they enrolling in the eLearning programme?

v. What special needs might they have to be able to do their profession more efficiently and effectively in today's world of work?

V.   RESEARCH METHODOLOGY

This study was guided by the Human Capital formation and knowledge acquisition theories. The study used an exploratory design to investigate the state of formulation and implementation of eLearning pedagogical policy for teacher

training whereby the authors considered four issues as adapted from Awidi (2012) in figure 1below:

Figure 1: Showing Research Design on eLearning Pedagogical Policy Formulation and Implementation
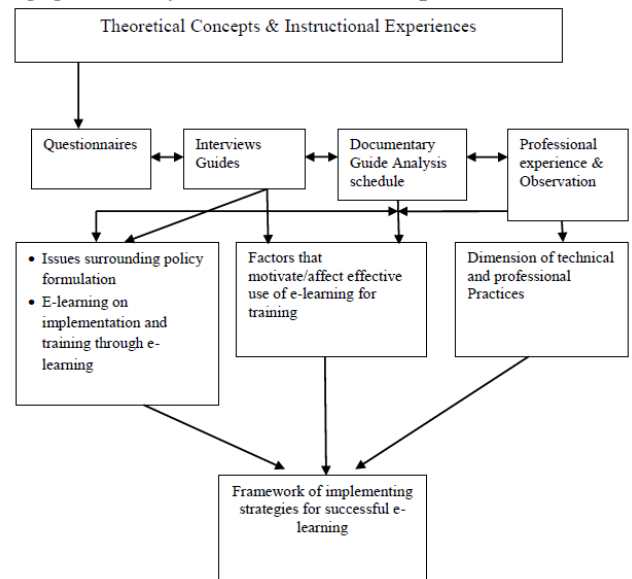
The study targeted 100 graduate student teachers and 23 lecturers in the Department of Educational Communicational and Technology that is responsible for training skills development. The study used three sets of instruments including: questionnaires for graduate student teachers and lecturers; interview guideline for dean of the school of education and a documentary analysis guide to collect data. Descriptive analysis was used to analyze and summarize the views of the respondents and reporting was done using figures and tables.

VI.   DATA ANALYSIS, FINDINGS AND DISCUSSIONS

Introduction

The findings of this study indicate that the question of formulation of eLearning policy is very critical in making decisions about eLearning pedagogical training and development of skills to classroom teachers. When the respondents were asked to identify university policy on e-learning as a tool for training of teachers, their responses were as shown in table 1 below:

Table 1 Responses on Formulated University of eLearning Policy

Statement	Lecturers				Students			
	SA	A	D	SD	SA	A	D	SD
There is a clear university policy on e-learning	3	2	12	6	10	7	39	6
The established e-learning policy is working well for me	1	4	15	3	2	8	41	12
The e-learning policy has been explained to me for my training	2	2	10	9	6	4	18	35

The responses by the Lecturers indicate that 18/23 (78.2%) that the university policy on eLearning was not clear. Majority of the graduate student teachers 45/63 (71.4%) said the policy was not made clear to them either. Further, both respondents lecturers 18/23 (78.3%) and graduate student teachers 53/63 (84.1%) claimed the established eLearning

policy does not work well for them, while lecturers 19/23 (82.6%) and graduate student teachers 53/63 (84.1%) claimed the eLearning policy had not been explained to them. The Policy that guides the use of eLearning for training teachers should provide a clear framework on the implementation that will not compromises the existing practices (Donnelly et-al, 2011; Ondigi et-al, 2015 and National Research Council, 2000).

The policy on eLearning though good it falls sorts of realizing that some departments are skills oriented and thus use of eLearning as a prime course of training will limit the student teachers. A classroom teacher needs skills on how to handle content and this is best done through face to face. The respondents' were asked to indicate their opinion about training through eLearning and their responses are as indicated in table 2 below where both lecturers and graduate student teachers preferred face to face training as opposed to eLearning pedagogy.

Table 2 Responses on eLearning Policies for training skills

Statement	Lecturers				Students			
	SA	A	D	SD	SA	A	D	SD
I have enough exposure to e-learning in my department	3		4	9	7	5		10
I prefer face to face training with my lecturers for skills development	14		1	2	6	22		20
I have access to e-learning resources in the department	3		5	14	1	7		11

The respondents, that is, Lecturers 16/23 (69.6%) and graduate student teachers 48/63 (76.2%), had no enough exposure to eLearning. Yet Lecturers 15/23 (65.2%) and graduate student teachers 42/63 (66.7%) preferred face-to-face training for skills development. Whilst, Lecturers 15/23 (65.2%) and graduate student teachers 45/63 (71.4%) said they didn't have access to eLearning resources in the department. The use of the documentary analysis schedule to identify the existing infrastructure, the availability and access to eLearning resources in the department revealed that there are no adequate ranges of eLearning resources that can sustain a comprehensive training programme. The expectations of access and availing the following eLearning resources namely: computers and soft wares; high speed internet connectivity; media lab, recording studio for audio and video technologies; audio-video equipment, media science labs and equipment; human resource, that is, both technical and human knowhow were exceedingly lacking for an effective eLearning approach for training teachers.

Further the lecturers' views about eLearning pedagogy on training of teachers were sought and these are indicated in table 3 below.

The results indicate that Lecturers 18/23 (78.3%) are competent in ICT integration for training teachers; while 21/23 (91.3%) agreed that eLearning can achieve much in the training of teachers and 19/23 (82.6%) indicated that the use of eLearning in the training of teachers is time consuming. This is due to high enrolment levels in the department and a depleted staff to handle the large classes. Measures of ensuring that the learning environment is favourable and all mechanisms are put in place to support the eLearning processes should be clearly provided for and evidently

subjected to rigorous attempts of certainty to meet international standards (Ondigi et al, 2015; Quality Assurance Task Force, 2006; Schon, 1983).

Table3 Lecturers views about eLearning Poly

Statement	Lecturers			
	SA	A	D	SD
I am competent in ICT integration for training pre-service teachers	5		13	4
e-learning can achieve much in training of pre-service teachers	8		13	2
Use if e-learning in training pre-service teachers is time consuming	9		10	4

Some of the reasons the Lecturers gave for not preferring eLearning Pedagogy were as indicated in table 4 below:

Table 4 Lecturers reasons for not preferring the eLearning Policy

Statement	Lecturers			
	SA	A	D	SD
My department is supportive of the e-learning policy used in training teachers	3		4	9
e-learning resources are adequate in the department	2		6	14
Face to face training of pre-service teachers is effective and efficient	7		13	2
Pre service teachers have limited competences in e-learning	8		14	0
Use of e-learning is quite challenging in class	6		13	2
My department has enough e-learning resources	2		2	10
e-learning technology is expensive and time consuming	3		2	4

The results indicate that Lecturers 16/23 (69.6%) said the department is not supportive of the eLearning policy; 15/23 (65.2) said eLearning resources are not adequate; 20/23 (87%) indicated that face to face is effective and efficient; 22/23 (95.7%) said trainees have limited competences in eLearning; 19/23 (82.6%) indicated use of eLearning is quite challenging in class; 19/23 (82.6%) indicated the department doesn't have enough eLearning resources and 18/23 (78.3%) said eLearning technology is expensive and time consuming. There is need for understanding and cooperation among lecturers, student trainees and the university on ways of implementing the eLearning policy for Boyer (1990) stress on reconsidering the priorities of professionals, the beneficiaries and society which is to benefit from the processes of educating.

As for graduate student teachers' opinion about eLearning policy, their responses are as indicated in figure 5 below:

Table 5 Graduate student teachers' opinion about the eLearning Policy

Statement	Graduate Students			
	SA	A	D	SD
Integration of ICT in teaching contents is all necessary in my profession.	36		14	9
Time element is of essential in e-learning	38		14	8
Use of e-learning will be challenging in class	33		16	9
Integration of ICT will suffice e-learning	19		30	8

The results indicate that the graduate student teachers 50/63 (77.4%) agreed that integration of ICT in teaching content is all necessary in their profession. The respondents further indicated 52/63 (82.5%) that time element is of essence in eLearning, and 49/63 (77.8%) showed that use of eLearning would be challenging in class while 49/63 (77.8%) said that integration of ICT would suffice eLearning. The

integration of technologies in training is compounded by lack of technological knowhow, availability and accessibility of the eLearning resources, attitude to usage of the technologies and institutional support (Gonzalez, 2010, 2012; Grabe, 2001; Liu, 2011; Mumtaz, 2000).

Some of the reasons graduate students gave for not liking the policy on eLearning pedagogy are as shown in figure 6 below:

Table 6 Graduate students' reasons for not liking the eLearning Policy

Statement	Graduate Students			
	SA	A	D	SD
I do not have enough skills in e-learning	19	28	5	8
I handle content better through face to face	23	31	5	4
Students must have competence in e-learning	41	10	8	4
My department is not well equipped for e-learning at the moment	36	14	10	3
e-learning technology is expensive and time consuming	28	13	6	11

The results indicated that 47/63 (74.6%) of the graduate student teachers accepted they didn't have enough skills in eLearning; 54/63 (85.7%) said they handle content better through face to face; 51/63 (81%) argued that students must have competences in eLearning for one to use it. Majority 50/63 (79.4%) indicated the department is not well equipped for eLearning at the moment and 41/63 (65.1%) indicated that eLearning is expensive and time consuming. When thinking about the pedagogy of university teaching, it ought to be clear what the policy on eLearning is, why it is necessary to adopt it in pedagogical training and the consequences should be comprehended (Deeson, 2006; Gonzalez, 2009, 2012).

When respondents were asked what they felt about the implementation of policy on eLearning as a training tool for training skills to the graduate student teachers, their responses are as shown in table 7 below:

Table 7 Responses on eLearning Policies for training skills

| Statement	Lecturers				Students			
	SA	A	D	SD	SA	A	D	SD
I train graduate teachers face to face for skills development	8	13	1	1	-	-	-	-
Face-to-face training equips me better for my teaching	6	11	4	2	-	-	-	-
e-learning policy needs ample time to implement	-	-	-	-	16	31	14	2
Face-to-face training equips me better for my teaching	-	-	-	-	27	23	10	3

The Lecturers 21/23 (91.3%) indicated they train teachers face to face for skills development and 17/23 (73.9%) indicated that face to training equips them better for their teaching and training of teachers. On the other hand, graduate student teachers 47/63 (74.6%) indicated that eLearning policy needs ample time to implement; while 50/63 (79.4%) said that face-to-face training equips them better for their teaching. Hence, this makes policy implementation challenging among the users of the facility (King et al., 2000; Mahmud & Gope, 2009).

According to Awidi (2012), a good implementation policy for eLearning training could be as illustrated in figure 2 below:
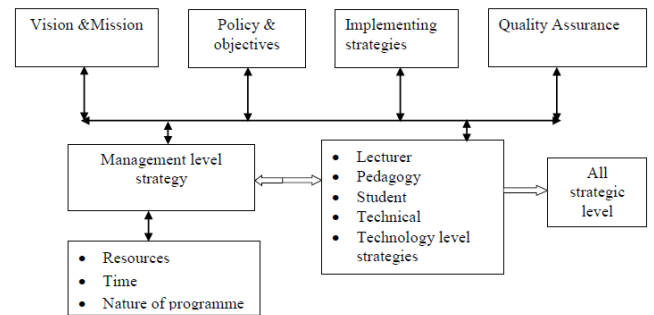
In essence, the integration of ICT in the teachers' training programmes ought to focuses on incorporating essential subject content, knowledge from their particular disciplines and also requires more hands-on practice on using ICT in their particular disciplines. Ordinarily, the teachers' ability to use ICT in their administrative activities is not a condition to successful integrate ICT in teaching. However, Bingimlas (2009) argues that the development of proper pedagogical knowledge and its appropriate application to ICT are considered to be more crucial than the technical ability of using ICT. Thus, a good framework for implementing an eLearning strategy will involve the steps adapted from Awidi (2012) outlined in figure 3 below:

Figure 3: Showing the eLearning Implementation Policy
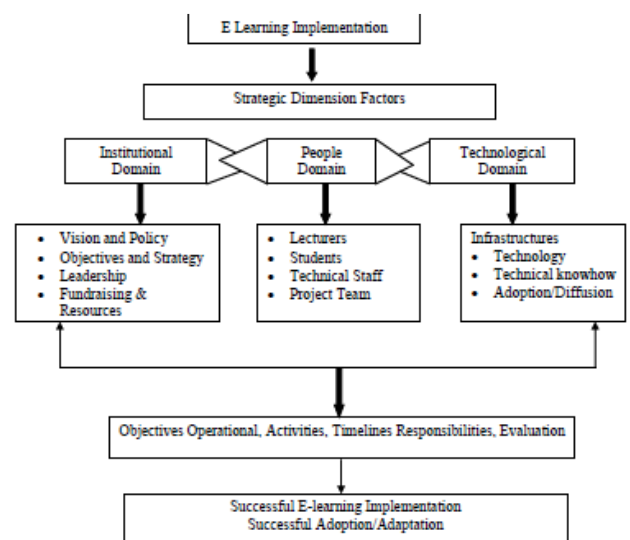
According to Callan and Bowman (2010), the effectiveness to implement a good eLearning policy will greatly depend on a sound framework of the toolkit that is based on project management processes, the ADDIE (analyse, design, develop, implement, evaluate) instructional design model and research into factors that sustain e-learning. According to this Koehler and Mishra model on ICT integration, institutions undertaking teacher training should provide better access to resource materials that relate to the subject content and other related resources relevant to training of skills that the teacher trainees require (Koehler & Mishra 2005). Similarly, Grabe (2001) reiterates that the integration of ICT should be involved in the process of teaching in every subject and in every classroom, because of the very fact that ICT facilitates students' engagement in problem solving activities; decision-making to improve their thinking skills.

When respondents were asked to indicate the challenges to

the implementation of eLearning policy in their institution of learning, their responses are summarized in table 8 below:

Table 8 Challenges Facing Implantation of eLearning Policy	
Challenges to the Implementations of eLearning Policy and training	Implantation of eLearning policy and training
Lack of a clearly established policy and guidelines to provide direction in training	Proper policies and guidelines be established and provided as necessary
Lack of adequate eLearning facilities to provide a comfortable learning environment	Establish adequate facilities for use as and whenever necessary by both the academic staff and students
Lack of technical manpower to train and guide the users of eLearning facilities	Establish a pool of resourceful manpower in the eLearning centers
Lack of organized eLearnin pgrogramme management personnel	Source and equip the facilities for full utilization of the resources available
Lack of established promotional processes, e.g. workshops/seminars	Establish regular staff training workshops/seminars
Low rewarding system for innovativeness among staff and students	Reward talents for effort and time put in eLearning
No adequate eLearning equipment and resources in the departments and schools	Purchase eLearning equipment and train staff and students on development of eLearning resource
Lack of proper communication channels in the hierarchy of commanding	Develop good communication channels and have consensus on operations of eLearning
High student enrolment that increases the lecturer- student ration	Have enough staff to make eLearning effect by reducing lecturer-student ration
Attitude towards eLearning as held by Lecturers and students	Sensitize both lecturers and students on the advantages of eLearning
Lack of access to eLearning resources	Expand accessibility in terms of facilities, equipment,, time and points of accessibility to the internet connectivity

Evidently so, research has shown that despite these challenges experienced in eLearning approaches, teacher trainers can use ICT to facilitate student-centered active learning and to engage students in collaborative learning that enhance their social interaction not only in the classroom but beyond the classroom rims so as to improve their cognitive development, increase creativity, as well as improved problem solving skills among learners (Khan, 2014; Okojie et al., 2006; Khan, Hasan & Clement, 2012). The pedagogy of technology integration should be clear to those engaged in the processes of training (Jung, 2015; Perry & Johnson, 2004).

According to the findings of this study, a more workable model for eLearning as a tool for pedagogical training is as adopted from Awidi (2012) and presented in Figure 4 below:

Figure 4.4 Showing: A Workable Model for Use in the Training of Graduate Student Teachers
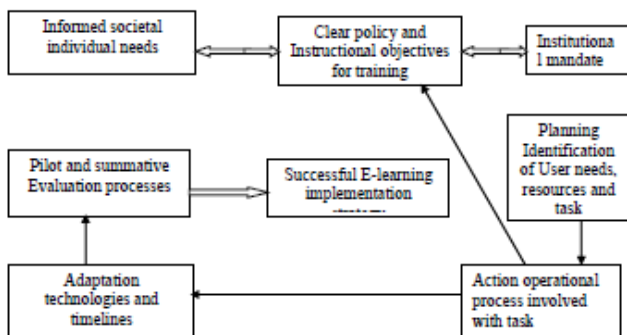
VII.   SUMMARY AND CONCLUSIONS

The findings of the study indicate that with this increasing transformation in the society and the education sector that propels this change, teacher-training institutions should rethink their role in imparting knowledge and skills to the teachers who deliver content in the classroom. Ideally, universities need to invest in adequately in preparing their teachers for the changes in society through a transformational approach than a transactional approach to eLearning strategies. Afshari et al. (2009) acknowledges that the teachers' academic and professional development becomes an integral part of any successful technology and education-training program. Second, universities need to invest adequately in identifying comprehensive and effective teacher training programmes that ensure both Lecturers and teacher trainees attain clear skills in the integration of ICTs and where appropriate realize some eLearning strategies that are relevant to their specializations. According to Ramsden (1992) both the trainers and the trainees need to possess knowledge of how the subjects are best learned and taught in schools.

The established policies on eLearning approaches should ensure the programmes have a potential to influence on how effectively ICT can be integrated in the teaching-learning situation and not online training that replaces the classroom teacher. Essentially, ICT integration in teaching and learning has a great impact on student learning much more than eLearning that would only be limited to those with access to technology. Further, complexity and inappropriate training of teachers compound the integration of technology in education. Under these circumstances, the proposed simple model in figure 4 would open up new experiences, inspiration or blessings for eLearning pedagogical training in our institutions of learning. In order to make this model effective for teacher training programs, the above stated model strategies should be carried out to eliminate the constraints and accelerate the provision of all possibilities to improve quality of teacher training in universities. This study already recognizes that ICT in education is a comparatively new arena in Kenya and educators as well as learners should move cautiously to realize the much anticipated benefits of technology and eLearning in particular and as supported by research works (Khan, Hasan & Clement 2012; Banu, 2012) for the barriers to implementing technology in the developing worlds are enormous.

REFERENCES

[1] Afshari, M, Bakar, K.A, Su Luan, W, Samah, B.A.& Fooi, F.S.(2009). 'Factors affecting teachers' useof information and communication technology', *International Journal of Instruction*, vol. 2,no. 1, pp. 77-104.

[2] An eLearning Policy for Staffordshire University (2004.). http://www.col.org/progserv/policy/pages/e-learning.aspx downloaded on 22nd may 2015.

[3] Australian Flexible Learning Framework, (2011). E-assessment guidelines for the VET sector.

[4] http://flexiblelearning.net.au/tools-and-resources/assessment/ downloaded on 4th march 2015.

[5] Awidi, I.T. (2012). E-Learning Implementation Strategy for ICT Challenged Environment. http://ro.ecu.edu.au/crje/3 (downloaded 0n 3rd june 2015).

[6] Callan, V and Bowman, K,(2010). Sustaining E-learning Innovations: A review of the evidence and future directions.

http://flexiblelearning.net.au/about/research/ downloaded 5th may 2015.

[7] Carver, Larry. (n.d.) Proposal for adaptation of online course development and guidelines. Hutchinson Community College. Retrieved June 10, 2006, from http://www.hutchcc.edu/itde/staff/larry/TaskforcePaper.htm

[8] Chickering, A. W.,& Ehrmann, S. C. (1996). Implementing the seven principles: technology as a lever. *AAHE Bulletin*, 36.

[9] Banu, S, (2012), 'Teachers readiness for computer education classes in the secondary schools of Bangladesh', *Bangladesh education journal* vol. 11, no. 1.

[10] Bingimlas, K.A.(2009).Barriers to the Successful Integration of ICT in Teaching and Learning Environments: A Review of the Literature, vol. 5, EURASIA. http://www.ejmste.com

[11] Boyer, E.L. (199). Scholarship Reconsidered: Priorities of the professionate. The Carnegie foundation for the Advancement of Teaching.

[12] Deeson, E.(2006). Technology, e-learning and distance education – A W (Tony) Bates', *British Journal of Educational Technology*, vol. 37, no. 6, pp. 975-976.

[13] Donnelly, D.; McGarr, O.& O'Reilly, J.(2011). A framework for teachers' integration of ICT into their classroom practice, *Computers & Education*, vol. 57, no. 2, pp. 1469-1483.

[14] Flexible Learning Advisory Group, 2013, 2013 E-learning Benchmarking Survey. http://flexiblelearning.net.au/about/research/

[15] González, C.(2009). Conceptions of and approaches to, teaching online: a study of lecturers teaching postgraduate distance courses', *Higher Education*, vol. 57, no. 3, pp. 299-314.

[16] González, C (2010). What do University teachers think eLearning is good for in their teaching?', *Studies in Higher Education*, vol. 35, no. 1, pp. 61-78. [6/6/2015].

[17] González, C. (2012). The relationship between approaches to teaching, approaches to e-teaching and perceptions of the teaching situation in relation to e-learning among higher education teachers', *Instructional Science*, vol. 40, no. 6, pp. 975-998.

[18] Grabe, M (2001)Integrating technology for meaningful learning / Mark Grabe, Cindy Grabe, 3[rd]ed. edn, Houghton Mifflin, Boston .

[19] Gonzale Z. (2009). Conceptions of and approaches to teaching postgraduates online.

[20] Gonzale, Z. (2010). What do Universities teachers think eLearning is good for their teaching.

[21] Gonzale, Z. (2012). The relationship between approaches to and eLearning and perceptions

[22] Jung, I (2005). 'ICT-Pedagogy Integration in Teacher Training: Application Cases Worldwide', *Educational Technology & Society, 8 (2), 94-101*.

[23] Khan, S.H. (2014). A model for integrating ICT into teacher training programs in Bangladesh based on TPCK. *International Journal of Education and Development using Information and Communication Technology(IJEDICT)*, Vol. 10, Issue 3, pp. 21-3.

[24] Khan, S.H., Hasan, M.& Clement, C.K . (2012). 'Barriers to the introduction of ICT into education in developing countries: the example of Bangladesh ', *International Journal of Instruction*, vol. 5, no. 2, pp. 61-80.

[25] King, J., Nugent, G., Russell, E., Eich, J. & Lacy, D. (2000). A policy framework for distance education: implications for decision makers.

Distance Learning Administration, 3(2). Retrieved June 1st 2015, from http://www.westga.edu/~distance/king32.html

[26] Koehler, M.J.& Mishra, P.(2005). 'What Happens when Teachers Design Educational Technology? The Development of Technological Pedagogical Content Knowledge', *Journal of Educational Computing Research*, vol. 32, no. 2, pp. 131-152.

[27] Liu, S.H.(2011). 'Factors related to pedagogical beliefs of teachers and technology integration', *Computers & Education*, vol. 56, no. 4, pp. 1012-1022.

[28] Mahmud, K & Gope, K (2009). 'Challenges of Implementing E-learning for Higher Education in Least Developed Countries: A Case Study on Bangladesh', in *Information and Multimedia Technology, 2009. ICIMT '09. International Conference on*, pp. 155-159.

[29] Mumtaz, S. (2000). 'Factors affecting teachers' use of Information and Communications Technology:a review of the literature', *Journal of Information Technology for Teacher Education*, vol. 9,no. 3, pp. 319-342.

[30] National Research Council (2000). How People Learn: Brain, Mind, experience and school. Washington DC: National Academy Press.

[31] Nicoll, K. & Harrison, R. (2003). Constructing the good teacher in higher education:The Discursive work of standards. Studies in Higher education, vol. 25, No. 1 pp. 23 – 35.

[32] Okojie, M.C.P.O.; Olinzock, A.A.& Okojie-Boulder, T.C.(2006). 'The Pedagogy of Technology Integration', *Journal of Technology Studies*, vol. 32, no. 2, pp. 66-71.

[33] PerryJohnson,A. (2004). Regents recognize 'best practices' within university system. Retrieved May 30th 2015, from Board of Regents of the University System of Georgia Web site http://www.usg.edu/news/2004/111704.phtml Quality Assurance Task Force (2006).Quality Assuarance Policy. Makerere University.

[34] Ramsden, P. (1992). Learning to teach in higher education. London: Routlrdge. Schon, D.A. (1983). The Reflective Practitioner: How professionals think in action. London Temple Smith.

[35] Sife, A.S.; Lwoga, E.T. and Sanga, C. (3007). New technologies for teaching and learning: Challenges for higher learning institutions in developing countries. International journal of education and development using Information Technology. vol. 3 issue2 pp. 57 – 67.