

## E-learning Encounters in Malawi Higher Education Institutions

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### Abstract

*Higher Education is key to any country's economic growth and stability [1]. Countries flourish when their educational systems are doing well [2]. It is therefore worrisome that Malawi's higher education enrolment is among the lowest in the world (World Bank, 2016). Concurrently, UNDP (2014) Report outlines that Malawi is one of the poorest countries in the world and has a corresponding high level of high rate of illiteracy. Higher Institutions in Malawi like any other developing countries adopted e-learning in an effort to increase access to higher education in the year 2011 through both public and private universities [5]. The educational reform was established without e-learning basic requirement establishment. This paper will therefore discuss the importance of e-learning to a developing country like Malawi, its challenges and suggestions of how to overcome them in order to successfully implement e-learning. Further, the paper suggest that benefits and opportunities of e-learning by far outweighs its challenges hence the need to reinforce it. The paper will finally recommend other partners in education on how best they can work together with the Malawi Government to sustain e-learning system in higher education institutions in Malawi.*

### 1. Introduction

United Nations (1948) Article Number 26 stipulates that higher education will be likewise available to all on the foundation of excellence. Article 13 of the United Nations (1966) hinges on the same that higher education will be made similarly available to all on the foundation of ability by ever suitable resources. United Nations articles are contrary to the reality especially in developing countries like Malawi. A report by Commonwealth of Learning (2002), indicates that none of the Sub Saharan Countries (Malawi inclusive) have managed to provide higher education to the whole population through face to face mode of learning despite of the fact that education is a human right issue. This is enough evidence that conventional mode of learning is not coping with rapid

population growth of scholars. Disproportion of admittance to higher education is still a challenge worldwide but worse in Africa. This is echoed by Southern Africa Regional Universities Association (2011) which registered its disappointment on the too low recruitment to higher education. This paper will therefore discuss the need for adapting e-learning in Malawi, its challenges and the role of other education partners in reinforcing e-learning in the country on a conceptual basis.

### 2. Background

Malawi got its independence from the British on 6<sup>th</sup> July, 1964 under the leadership of a dictator (Dr. Hastings Kamuzu Banda) who established one party rule. At this time, the country had no university. However, in October, 1964, Malawi created its first Public University which adopted a conventional teaching and learning approach. At this time, the Malawi population was 3,963,423 (United Nations 1948). In 1994, the country adopted a multiparty democratic system, marking the end of dictatorial leadership. At this time, secondary school enrolment rate was 1.5 percent. The change of government from dictatorship to multi-party democracy has also accommodated the establishment of private Universities. As of 2018, there were twenty-one private universities in Malawi. In 2017, Malawi's population was estimated to be 17.2 million out of which 73 percent were under the age of thirty-five years (Malawi Government 2015). According to Malawi Demographics and Health Survey (2015-2016), thirty six percent of men and twenty six percent of women of age ranging from 15-49 had attended a secondary school education, a situation which is worrisome to the socio-economic development of the country. Worse, 0.8 percent of the population access higher education (Malawi Government, 2018). The Malawi Higher Education enrolment compares to an African contrary average of 13%, global average of 33% and a developed country average of above 60% (World Bank, 2010).

According to Malawi National Council for Higher Education (NCHE), in order to qualify for entry into a bachelor degree program at either a private or public university in Malawi, one requires to have six credits (English inclusive) as part of a Malawi School Certificate of Education (MSCE). This is often viewed as quality assurance check that a student may adequately handle degree level study. However, according to Manda (2019), the control measure of six credits is not necessarily quality related but due to necessity of restricting access because of limited space in universities country wide. This cut off point strategy to access higher education further hinders access to higher education in Malawi.

In order to increase access to higher education, Malawi has undergone several limited trials such as: Open Distance Learning (ODL); Malawi College of Distance Education (MCDE); Malawi Correspondence College of Distance Education (MCCDE) and Radio programs. However, many qualifying students still have no access to Higher Education and fail to meet the standards espoused in the United Nations Declarations of Human Rights (United Nations 1948). According to UNDP (2005); UNESCO (2005) and WSIS (2005), Education is an important influence for poverty alleviation and economic growth. The use of Information and Communication Technology (ICTs) to enhance information dissemination and teaching and learning (E-learning) has enormous potential in improving access to higher education despite of having problems and encounters in developing countries [13].

### 3. E-learning

Delamonica et al. [23] have indicated that a number of happenings by both local and international communities search for e-learning utilizations technology in order to escalate access to education. Régimes and educational establishments should therefore look at e-learning as one of the reliable options which can be subjected to attain the significance of millennium objective, called by some scholars as 'universal education'. The focus should be on extents that are supposed to increase admission to education and cost-effective liberation.

According to Britain and Liber [18], Virtual Learning Environment (VLE) encompasses both opportunities and threats. Transformational agents regards VLE as an opportunity to facilitate and increase efficiency in academia. Scholars who are dealing with the association between technology and the general public belong to one of the two terms called technophobia and technophilia. Technophobia regards technology as a desensitizing process. Such groups are technology barriers. They are afraid of

change and beliefs in the old and usual ways of conducting business. If such characters are in decision making positions, they make sure changes fails or delays. Technophilia regards technology as solution to human challenge or human development promoter.

Technophobia incorporates a variety of negative emotions nervousness, ineffectiveness, anxiety, pressure and uneasiness. In developing countries such as Malawi, the change through computerized systems in education system and organizations is somehow viewed negatively, especially in assessment understanding. It requires great sensitization campaign programs to pave the way for such implementation. The panic which comes due to uncertainties like losing jobs by redundancy process as a result of computerization technology is a corporate phenomenon. In Malawi like other developing countries, examination process such as assessment and invigilation is one of the many ways academicians benefit their subsistence allowances by leaving their work stations and availing themselves in examination formation, moderation, invigilation and marking. Nevertheless, as the labor force appreciates that expertise in computer management also aims at personal or individual development, opposition to the institution of computers is reduced while the beneficiaries eases their lives and others through innovations.

According to Soong [24], the technophobes are obviously to be those never touched and used computer during their early lifetime. They never even saw computers by then. Their personal hatred and nervousness about computers comes into being due to several assumed reasons. They wish not to be embarrassed with change by younger generation, a thing which brings humiliations. They would therefore like to resist change in order to retain their honor. The situation may force them to hate younger generation by trying to surpass their knowledge. Such people may not want to force their awkward hard work learn new technology. It might be that they feel their time of learning things which are new in nature is over. They may as well be afraid of embarrassment in situations where they may break new or part of working equipment due to lack of knowledge for handling them.

Technophobia reduce speed of innovations when employees are not eager to agree to take new responsibilities for the transformation to be effected. The following are some of the solutions to overcome technophobia: information sharing through conferences and workshops; providing evocative and unremitting sustenance to support entities to categorize and overawed their uncertainties and finally to generate an approachable scholarship atmosphere

and recompensing people's determinations through mentoring.

Davies et al. [25] have concurrently analyzed that e-learning encourages the distribution of educational learning resources which is demonstrated on noble teamwork well-defined as a means of online approaches in which scholars acquire knowledge within the absence of lecturers or tutors' instant involvement. A significant cooperation necessitates an associate with VLE. Scholars use it when it is essential and how best the system will detriment them. Motteram [26] however has shown that both lecturers and scholars favor blended learning system which incorporates the customary face to face and virtual collaboration. This might be the case that change is always slow or resisted. Clark [27] recommends a collective blend which enhances cohesion to the mechanisms and scholars by the provision of face-to-face, electrical teaching and mentoring amenities. Blended mode of teaching and learning provides an opportunity for asking questions while working in livelier scholarly environment with great confidence, without worries of missing noticeable opinions.

According to Prakash [19], there are numerous justifications of for e-learning promotion in developing countries. Access to higher education is very limited with less than five (5%) percent accessing tertiary education in contrast to world average sixteen (16) percent. The high demand in Africa for admission to higher education by far surpasses the capability to deliver and is again not proportional to the rapid growing of population [20]. Nevertheless, African scholars are starting to anticipate edification to emphasize the manner of learning somewhat the content as the 'shelf-life' of facts is restricted because of speedy modernisms or innovation [16]. Progressively, scholars anticipate technology to play an important part in their education as the ultimatum for progressions accessible by the African Virtual University (AVU) upsurges [21].

E-learning is referred to as the integration and utilization of Information Technology (IT) tools and facilities in education. It has the capacity of using various approaches to meaningfully and enable the efficiency and conveying the knowledge satisfaction and achieving enormous edification evidence if suitably used. It is signifying the digital age in which we are. Contrary to conventional, E-learning has the following advantages: it accommodates work and learning at the same time, Learning time is scheduled by the learner and not by the lecturer; it is economical in the sense that it reduces transportation and accommodation costs; It does not require the building of classrooms and provision of other facilities; It requires only tuition; It motivates learners to manage time well; it provides multiple choices of courses the

learner may want to take. It accommodates multiple enrolment at a time without space limitations as it is the case with conventional types of teaching and finally, e-learning provides an opportunity to access numerous, latest and updated information through published e-books and journals. However, though e-learning is seen to greatly improve higher education accessibility as an adaption to the world, it is facing enormous challenges to take off in Malawi [29]. Though, e-learning is convenient innovativeness, it is hard overlook the undesirable consequences of such a fury. As efforts are being made to adapt and access online schooling from academic institutions worldwide, there uncertainty about the genuineness of scholars' academic work and the excellence of the education obtained.

In academic world, the rise of computer-generated and business institution of higher education that offer rivalry to conservative tertiary institutions delivers chances for what Mason [30] regards as borderless education that crosses the limits in cooperation of time and space. This has given an increase to a changed background for teaching and learning, therefore altering the yet to come values, performs, strategies and the fundamental matters associated to knowledge achieved that describe the value, worth, meaning and distribution of scholastic facilities. The accumulative in integration of computers and Internet into education, has been a modification from an integrated teaching space-based education in the direction of dispersed e-learning courses. The rewards of e-learning stem from its net-worked setting where speedy informing, distribution of facts and teaching are suitably accomplished. It stimulates a players-knowledge education in which the basic emphasis is to reinforce a scholarship setting favorable to collection collaboration through teamwork and self-learning.

In higher institutions, Virtual Learning Environment (VLE) is continuously gaining grounds by progression administration providing computer-generated space where educational community discusses, networks and share thoughts and resources. Forums online are arranged in a convenient manner where the tutor may have a tangible time and asynchronous communication with particular offer or group of students. The online tutor can easily track scholars' advancement as they involve in virtual communiqué and offer response and provide teamwork through flagging. The tutor's roles alter (The Joint Information Systems Committee, 2005) since they come to be skilled questioners somewhat than answer providers and inventors of scholar's education involvements somewhat suppliers of content. They offer the original construction to a scholar's work, inspire self-track and continue being subtle to numerous learning elegances.

#### **4. Availability and Ease of Access to Internet in Malawi**

The General Administrator of the International Telecommunication Amalgamation has iterated that the challenge of digital divide can best be sorted out by yoking the influence of corporations. Constructing an empowering surroundings, willingness and the augmentation of ICT applications and facilities have need of collaboration. Privileges of corporations includes the following: collaboratively appealing educational and economic matters, consolidating methodological and humanoid ability constructing for education, knowledge and research. It is only over and done with corporations and all who have a role to play in promoting lives of people is when we can all speed up improvement. Corporation's harnesses state-of-the-art minds together with specialists from régimes, commercial, civil society, academic world and the intercontinental societies [34].

Higher institutions should partner with both private and public companies whose core occupation is technology. The said partnership may either across borders or within borders. Such partnership or consortium may benefit scholars more than partnering higher institution to another one of similar skills where scholars cater for lower outlay on possessions instead of enhancing institutional capacity [35]. The Cooperative Info Structured working group, for example, obliges the supplementary and advanced learning societies by providing calculated leadership, guidance and chances in the use of ICT to livelihood education, knowledge, investigation through research and management [36].

Steiner et al. [40] have concurrently emphasized that the mediocre African higher education institutions has bandwidth capability equal to a broadband residential linkage obtainable in Europe; pays fifty times extra for their bandwidth than their scholastic complements worldwide, and unable to monitor, let it be self-managed, the prevalent bandwidth. As such, the little bandwidth that is available becomes even less valuable for investigation and edification resolutions.

According to Kainja [28], average connection speed of internet had dropped from 1.8 Mbps (mega bites per second) in 2016 to 1.3 Mbps per second in 2017. This is in contradiction to the average global connectivity of 7.0 Mbps per second. The number of megabits per second in Malawi is regarded as the lowest and the least growing rate in the world, making it hard to facilitate expressive growth particularly in education (International Telecommunication Union, 2016).

Malawi still regards internet as a luxury facility despite the presence of Malawi National ICT Policy of

2013 where ICT is recognized as a potential tool for sustainable development and The Malawi Communications Regulatory Authority (2015-2020) vision "universal access and usage of ICT services in Malawi." The National ICT policy and Malawi Regulatory Authority (MACRA) are regarded as window dressers only. According to Tanner (2017), internet is a driving force to almost all socioeconomic undertakings and nationwide improvement. According to the era in which we are, investors are attracted by steady, reasonably priced and normal internet linking speed. Critical matters of entry and infrastructure enlargement that would escalate access quantitatively and qualitatively for all Malawians is essential if education is to be used as a tool for poverty alleviation and socioeconomic development. This would require good, efficient and affordable internet services.

According to Freedom House [31], causative aspects to low growth rate of internet to consumers are due to high service costs which include: seventeen and half (17.5) percent value added tax on mobile phones and services; sixteen and half (16.5) percent for VAT on internet services and on text messages on mobile phone of five and ten (5-10) percent exercise duty totaling to 44%. The high cost of internet services has made a lot of limitations to poor Malawians in accessing some necessary services which would have uplifted them from their poor economic status. As of June, 2017, one month data bundle for 20GB was costing \$47 for Airtel transactions and \$55 for TNM transactions respectively.

#### **5. Electricity derailing e-learning:**

Malawi is continuing to suffer from insufficient and unreliable source of electricity. The main source of hydroelectricity (Shire River) does not generate enough power to cater for the demand on the market. Above all, the country experiences several black outs per day resulting in disrupting developmental activities for hours and days at times. Malawi being a landlocked country also suffers from high cost of imported generators which act as backups in times of power cuts. The unreliable power and exorbitant costs of generators, limits the use of ICT services. Availability of electricity is a challenge to most Malawians. 10 % of the total population (from cities and towns) can easily access electricity. The absence of electricity in most rural areas where 80 percent of the population lives, forces people of all ages to flock to cities and towns in order to access e-learning facilities. The situation creates unfavorable learning environments and increases unemployment. Challenges of electricity faced by Malawians results into E-learning being very unfavorable.

Malawi being the tropics (tropical of cancer and equator) would have benefited from solar generation of power which originates from free natural resources such as strong sunshine with an average temperature of thirty degrees and many rivers by generating power from them instead of relying upon Shire River only.

## 6. ICT Policies

E-learning has been termed as borderless education which has procedural implications in relation to Technology dependency and partnership. Its policy is geared towards the removal of barriers if a unified worldwide delivery is to be attained.

According to Mason [30] subsequently, the anxiety about reduction of nationwide obstructions is a continuing deliberation in the World Trade Organization consultations on the over-all settlement over Profession and Amenities. Amongst issues to agree upon includes but not least the following: right of entry, impartiality, cost, equitability, excellence regulatory, content improvement and intelligence possessions privileges or rights. An excellent ICT policy would apart from reducing waste through concessionary duplications, develop the return on venture through better-quality liability and info distribution at the same time encouraging investment creativities and liberty of the satellites segment. The integration of ICT in education procedures solely hinge on the sustenance of the state, indigenous establishments and non-governmental organizations [15].

Most African countries have inefficient ICT-related infrastructure such as electricity, telecommunications, computers and trained personnel. A survey carried out by the AVU revealed that internet connectivity in tertiary institutions in Africa is inadequate, expensive and poorly managed. Twinomugisha et al. [33] have literated that utmost developing African countries have poor if any or insufficient CT related infrastructures to include: electrical energy, telecommunication, computers and well trained human resource. It is for this reason that ICT revolt such as connectivity, ability and content, will take ages to be recognized in Africa. African. Scholar's problem is not just the absence of e-learning opportunities, but also the incapability of scholars to gain access to though to the few that is available.

Each government or organization is compelled to put in place strategies to act as guides for its intended developments before implementation. Such purpose made strategies are called policies. Policies are guiding tools for both subjective and objective intentional processes of making decisions. They contain basic principles for direction and action.

ICT is a very new phenomena in Malawi, a situation which had compelled the country to develop a policy through Malawi Communications Regulatory Authority (MACRA) in the year 2013. The policy aims to address the following: insufficient market place information; brain drain in the ICT sector; insufficient officials at nationwide, sectorial and organizational levels; undesirable arrogances directed at technology change; small and underdeveloped telecommunication infrastructures [29]. MACRAS vision is to have collective entry and usage of ICT services in Malawi.

Despite the ICT policy being in place there are a few domestic efforts being made by the government, Malawi has very poor and below standards ICT infrastructures with the lowest levels of ICT access in learning organizations. The country has very inadequate humanoid resource capability which is worsened by actual great levels of being not conversant with ICT knowledge. The Malawi ICT Policy is sorely dependent upon external donor funding, a situation which puts ICT in Malawi at jeopardy. Very little if any of the ICT content is in the Malawi Education institutions syllabi, a situation which worsens the ICT illiterate rate in the country. It is over six years since the establishment of the said National ICT for Development Policy (ICT4DP). If the country had implemented the ICT policy, then something greater would have put e-learning at ease (The World Fact book 2007).

As information and knowledge changes, resources from outdated foundations of data and schoolbooks used in higher learning institutions turn out to be outdated in a diminutive time. Subsequently, it is problematic and luxurious to familiarize them to particularize contexts. Though, using expertise to provide the recycle and distribution of scholastic resources is now conceivable with interoperability values maturation in the ICT commerce. Such hard work does deliver a well-organized and price-operative update of information arrangements. The determination of e-learning interoperability values is to make available consistent data constructions and communication procedures for e-learning objects and cross-system workflows. This provides the lecture computer-based resources and affords suppleness for modifying, recycling and distributing scholastic resources. It further requires a contextualization of the educators' necessities into sharable curricular, object lessons and course procedures. Arrangements of this nature could lead to a refashioned lecturer's scholastic framework that incorporates pedagogics, skill and content.

## 7. Regulating Higher Institutions in Malawi

An act of parliament was enacted in 2011 with the aim of regulating higher institutions in Malawi. Following the establishment of the act, National Council for Higher Education (NCHE) was instituted as a quality assurance and enhancement of higher education in the country. NCHE's main responsibilities are as follows:

- i. Registration of new private higher education institutions
- ii. Accrediting higher education institutions
- iii. Harmonization of selection of students to all public universities in Malawi

The said regulatory authority structure is basically grounded on conventional mode of teaching and learning standards which require physical libraries, classrooms with furniture, boarding facilities; assembly halls to mention a few. The Council has no e-learning department where the mushrooming e-learning system in the country could be housed and harnessed. The system therefore puts e-learning in a dilemma because the Authority has less or no knowledge of regulating e-learning. Registration and accreditation of e-learning institutions is therefore disadvantaged. The e-learning act passed, requires to be amended to give room to e-learning system with well qualified personnel in the sector to regulate.

Unfortunately, parliamentary acts are enacted and amended by politicians who had gone through conventional education systems hence the negative impact on the credibility and reliability of e-learning. The formation of the NCHE is applauded and significant strides in the direction of improving the excellence and significance of both private and public higher education institutions. It should be noted here though that the Council is autonomous, impartial, and free from politics and exploitation, fully capable and well sponsored to allow it to efficiently execute and implement its obligation.

## 8. Authenticity of students' academic work and the quality of the education offered

The understanding of globalization has been misunderstood by the business world. It should be a source of bringing an idea of all knowledge to be categorized as "education" being commonly lawful and rationally sharable. Unfortunately, education content in knowledge acquirement in institutions is traditionally managed by teachers, lecturers, activists and librarians. It is in the same manner that the use of e-learning setting is having the same impact of its

content. The situation has compelled the creation, storage, accessibility and distribution of education resources through technology based structure in particular, the data based and the Web.

Modern improvements in open source and contented administration arrangements, proposes possible similar progresses in e-learning with respect to the accessibility of free educational assets (e-Learning Centre, 2005). According to Carson, (2005), the Open Progression Ware Association (OPWA) proposes to deliver free educational resources as systematized progressions to whoever has access to the Internet, a situation which can easily accommodate education extra reachable and reasonably priced. Matters of appropriateness and legitimacy and alteration may be determined by indigenous alterations suitable to the prevailing circumstances to evade what Ziguras (2001) regards as educational colonialism

Conventional way of administering both assignments and dissertations are contrary to e-learning system. Conventional means of assessment require physical evidence of students participating in the assignment of dissertation process by the assigned lecturer or tutor. The quality of work produced reflects the ability of the scholar/s. It is therefore physical evidenced based. E-learning means of administering both assignments and dissertations are more of remote. Both assignments and dissertation are carried out by scholars with a minimum supervision. It has a minimum supervision by the online or blended assigned lecturers or tutors, a situation which brings doubt to the originality of scholars work and quality of education obtained (Times Correspondent, 2017)

It is hypothesized by many educationist that on-line scholars submit their assignments and dissertations of other peoples work. The system of tracking plagiarism is defeated by what is called paraphrasing (smart copy write). Times Correspondent, (2017) argues that some e-learning scholars manage to graduate with credits and distinctions through other peoples' work. Institutions have so far, no means of combating the said high level of plagiarism and academic stealing to qualify e-learning products accepted by stakeholders without hesitation. Malawi National Council for Higher Education (NCHE) whose mandate is to regulate Higher education in the country has been taken by surprise with the system for there are no e-learning academic ethics and standards set yet. This situation is putting emerging E-learning institutions in dilemma for they are ahead of regulators in adapting academic global diversity. The implication of such dilemma is that regulators may be barriers for global academic change which has come to stay.

Working outside national and international regulations in academics has an implication of

compromising quality at the expense of promoting access to higher education. It is unfortunate that though e-learning is internationally recognized, each state or government would like to have local educational elements in their educational standards. The question may arise that why nations don't endorse international e-learning standards in order to hasten international educational changes. In doing so, quality of education may be unified allowing e-learners graduates to be accepted and trusted by all stakeholders. The negative perception of e-learning quality which traditional educators have may come to rest. The promotion process to allow access to all, should not be a scapegoat to lower standards for education. Educational change is inevitable and must be embraced quickly if scholars are to survive in an ongoing global employment circumstances, however, the impact of change should not compromise quality. Should e-learning be embraced by Malawi government regulators, it would act as a great and better alternative to combat classroom congestions in both public and private higher education institutions. It would be a solution to remove shame failing to construct more public educational institutions and tragedy or mismanagement of public funds through rehabilitation process of dilapidating infrastructures.

Globalization of information and different ways of obtaining knowledge is supposed to deliver arrangement of sieves that decides the legitimacy, dependability, connotations and insinuations of what is learned, how it is scholarly and subsequently reconstructed. Information based on methodical progression, ecological upkeep is a fit existence and social accountability.

## 9. Computer illiteracy

Literacy is key to social economic development in any society. According to Malawi Population and Housing census (2008), Malawi's education is classified into three categories namely: basic education (early childhood development, adult literacy and out of school youth literacy and primary education), Secondary Education and tertiary education. Ages between two to five is under preschool or nursery generally owned by private or public sector. There is no uniformity of curriculum for early childhood development program both private and public. The reason behind the variation in childhood development curriculum is the diversity in the multi ethical culture. Multi-ethical culture contributes to how differently people value formal education. It is therefore vital to understand the literacy level for different cultures in order to expedite better strategy in promoting education (Malawi Population and Housing Census, 2008).



*In some primary schools, lessons have to be taught outside due to a lack of classrooms*

The world is experiencing digital era, a situation which is compelling all nations towards electronic governments called e-governments. E-governance requires all its citizens to have high computer literate. Computer literacy is defined by Infodev et al. [37], as great competence with modern computers applications including the following usages: word processing, e-mails, and intranet. However, Lynch (2004) states that computer literate is the understanding and ability to maximally use computers in conjunction with related technology effectively and efficiently with variety of skills used in programming and general problem solving.

It is over twenty-four years since Malawi introduced Free Primary Education in 1994, however its objectives still remain mysterious. The introduction of Free Primary Education (FPE) negatively affected the quality of education which existed before due to high school enrolment. High school enrolment created school congestion, deficiency of teachers, shortage of teaching and learning resources, shortages of teaching space and other insufficiencies. See a pathetic situation below:



*Katenthene Pre-school which is held in a local church building*

Free Primary Education directly accounts for the current and ongoing state of both primary and secondary education in Malawi. Malawi Primary educational goals are analyzed by Milner et al. (2001) as follows: To improve excellence elementary education pertinent to the nation of Malawi, its community and to the individual children; to deliver education which progresses information, talents and morals which enables children to contribute in socio economic and political development.

According to Holkamp [41], primary school is a direct a feeder to Secondary education in Malawi. Secondary schools can only absorb thirty percent (30%) of the suitable primary school leaver. Due to limitation of brick and mortar space, Public Universities only absorb 4% of the eligible secondary school graduates leaving ninety six percent (96%).

According to Msiska [39], Malawi is experiencing un-equality of access to higher education through what is called quota system. Quota system allows primary school pupils to compete at district level for entrance to public universities, a situation which contributes to discriminations of access transversely in socioeconomic collections and outlying areas as well as between rural and urban areas where learning environments are contrary to each other. (Compare the below and above learning environments).



Msiska [39] argues that scholars who perform well in countrywide examinations but come from districts with great competitions are not selected to Universities while those from less competition areas with less performance at national examination levels are privileged to be selected. Such practices affect quality and quantity of higher education in Malawi.

Before the introduction of Free Primary Education, public Education system had already under pressure due to lack of teaching and learning resources. The system was additional worsened by the introduction of Free Primary Education. Aforementioned challenges included the following: right of entry (access), fairness, entree to special needs students to education, inadequate subsidy to education, inefficient use of the resources available such as computers, dilapidating infrastructure, and extensive poverty and healthiness issues (Ng'ambi, 2010).

Access to education still remains a grave matter at the secondary and higher education levels. The current privilege of greater primary education enrolment as compared to before free primary education access is being diminished by significant number of dropouts and repeaters of those enrolled in primary education. According to Ministry of Education Science and Technology (2008), Out of everyone hundred (100) primary children entering primary school, only forty six percent (46%) completes primary school level. Primary school repeater's average is twenty five percent (25%) (MoEST, 2008). Secondary school average dropouts is twelve percent (12%) (Ng'ambi, 2010). According to World Bank (2007), the main cause of dropouts in secondary schools is poverty which compels both young men and women to engage in early marriages worsening their poverty status (World Bank, 2007).

Malawi has the highest computer illiterate rate causing a lot of complications in implementing some programs such as information and communication technology. Such absence of knowledge fails to understand nor appreciate the importance of such programs. Computer illiterate in Malawi may take ages to be eradicated due to the fact that up to date, there is no universal computer literacy incorporated into both primary and secondary curriculum. This is contributing to the low computer literacy in the country causing e-learning a "taboo". There is need to review and introduce the Malawi education system with Information Communication Technology (ICT) in order to expedite the provision of education services in all while altering the country into an Information Communication Technology (ICT) literate society.

## 10. Building infrastructures

Though Malawi has a national policy for Information Communication Technology (ICT) which is intended to be implemented in all primary and secondary schools, a lot is to be desired if the policy is to be affected. Primary and secondary learning environment is not conducive for computer lessons in most schools, a situation which brings doubt to any immediate improvement for universal computer lessons in the country. Universal service is referred to by Infodev et al (2011), as the utilization of Information Communication Technology (ICT) by individuals or households. Common Computer Service and common computer Access determinations are mutual to formulate what is called as Common Computer Entree and Provision.

Challenges of computer education in Malawi is both administrative and educational. Computer accessories, Software and communication technologies are too expensive as compared to

financial resources for both primary and secondary education. Even if computers are donated by organizations and other well-wishers, inevitable maintenance could be challenged by such circumstances. The government has not yet reached a maximum investment in education, hence the failure to incorporate new but vital contents like computing in both primary and secondary curriculum, a basis for e-learning.

Malawi government introduced free primary education in un-planned manner. Most educational infrastructure in both primary and secondary schools are in shambles if any of standard quality in-existence, a situation which compels classrooms to be conducted under trees or sheds. Computers requires well protected environment from dust and moisture if they are to be secured. These requires sound infrastructures which can as well safeguard such equipment from thieves as the case with many un-ethical citizens in some poor countries where theft is one of the illegal ways to acquire possessions.

The waiver of primary school fees made children enrolment rise from 1.9 million to 3.2 million. a situation which forced physical facilities completely fail to absorb the circumstance. If space for learner become a challenge, then learning facilities like computers could not be a priority. Kattan & Burnett [42] stress that in some schools, number of pupils to a classroom is 119:1; Pupil desk ratio is 38:1; pupil chair ratio is 48:1; pupil/ book ratio is 24:12 and pupil teacher ratio is 99:1. The said situation forced government to employ un-qualified teachers who were being trained on job. Narayan (2012) confirms that students in several developing countries that espoused "Education For All" including Malawi, cannot read or write properly even after their completion of primary school education. The harm "lack of learning and teaching resources" does to the learning process cannot be overstated, particularly in an environment in which personal computers are entirely lacking. Poor performance in national examinations and the poor state of affairs in the primary school sector extends into the secondary education sector as well as higher education. The lack of computers in primary schools is the basis of poor performance in secondary schools and higher education. The saying that no quality of education can surpass the quality of its teacher proves to be real in such situations. Poor teaching compels scholars to be involved in cheating during examinations (Malawi Voice, 2013).

According to World Summit on the Information Society (WSIS) 2005, the construction of broad band infrastructures was prioritized for African Countries in order to connect Africa and reduce the digital divide as per Humanization of ICT policy. However, Mgombezulu (2014) literates that ICT policy

implementation without considering poverty reduction would not benefit all but marginalized one contrary to the Universal aims. This is in line with the International Telecommunication Union (ITU) which emphasizes that information communication should be affiliated to developmental issues for socio economic Societal desires (WSIS, 2005).

## **11. Challenges facing Computer Education in Malawi:**

Computers are multipurpose, and they facilitate several analyses and other similar in nature to human life thinking. They can be used to generate letters and make routine dissemination of information which was previously being manually done. Computers are taking more work which people used to do for much longer periods in short schedules. The introduction of computers is more like bringing challenges to those who have no such skills, hence fear creation which is dominating in most developing countries, a defensive mechanism. Such personnel negatively regard computers as redundancy agents [32].

According to Vidgen (1997), the introduction of computers in developing countries creates work uncertainties, feelings and psycho-social complications which negatively affects job performance. A mind full of altitudes accompanied by worries can hardly be creative and innovative, a situation which excels sells and profitability in today's global business. It is therefore imperative to use modern soft system methodology as resolutions to employee's insight for their wellbeing. Wells (2006) recommends the use of modern soft system methodology (SSM) as a better means to scrutinize the role and importance of modern undertakings in societies to operatives and clients. This is much useful in situations where the challenging issues of examinations are not clear and mutable.

As Information Communication Technology is at a great pace in advancement mainly in Western and Asian countries, developing countries like Malawi is still lagging behind in terms of implementations, a situation which is greatly widening the digital divide increasing digital literacy encounters. Kiptalam and Rodrigues [43] witnessed Information Communication Technology advancement amenities as the main challenge in African countries. Sectors to include: banking, transportation, communications, and medical services are in the forefront in such technology advancement. Computers are of great cost to be afforded by most institutions and scholars. Institutional funding by Government is so minute to have such purchase, despite the ICT tremendous need. Number of computer trainees is by far not meeting the

demand. More students are willing to learn computer abilities, a situation which is impropotional to teachers.

Many rural areas are not connected to electricity where the majority lives. It is for this reason that computers are regarded as luxuries. The price of computers is very high in a country where GDP is very low, enabling an individual to live on less than 1 United States Dollar per day. The low GDB is compelling poor countries to use second hand or used computers which are outdated. The cost of maintenance for used and outdated computers is much higher as compared to new ones. Procurement of old computers look more economical but maintenance outweighs the cost of new ones. Technicians who could be very reliable to fix and maintain such facilities have very low knowledge for expected best services and yet labor charge they still cost very high.

Fear of elders to expose young and capable generation is another perception which hinders the exposure of computers on the grounds of high skilled personnel to operate them. The perception of undesired computer programs sites to scholars is another challenge. In third world countries like Malawi, have challenges in computer infection of virus eradication. Teachers have the feeling of championing knowledge in classroom situation and have the fear of being challenged by computing new knowledge. Information Communication Technology (ICT) can be of great use in bridging gaps between marginalized groups and societies. The inconsistence comes in due to the fact that the marginalized groups are unable to cross the technology divide. Information Technology is up till now to further sideline them. it is therefore imperative that ICT should be part and parcel of both conveyance and content of education.

## 12. Conclusion

The major existing encounter, consequently, is to improve and support worth or additional corporations whereby associates have harmonizing skills and are eager to institute a native attendance in Malawi and Africa. It is imperative to have capacity building in place in order to independent in practical operators which may include the following: system proprietors, web inventors, computer programmer and databank managers and not forgetting end users such as: professors, lecturers scholars, overseers and to inspire structural fluctuations which comprises of novel constructions whereby new talents will be inserted in. It is also essential to generate sovereign e-learning midpoints by means of well-organized adaptable administration and distribution arrangements that can react expeditiously to the unavoidable ICT improvements in education.

Limitations in accessing higher education in Malawi is the main cause root of poverty. The deep-rooted conventional or traditional mode of teaching and learning is the main contributing factor. There is need for mass intellectual development which can constructively fuel the social economic development of the country. E- Learning has proved in many countries to be a means of easing the mass access higher education. The E-learning needs to be accommodated in Malawi by first removing its hindrances a process to be championed by the Government.

The Government of Malawi has the obligation to do more in terms of policy implementations by improving and providing ICT infrastructures, stable source and sufficient electricity and well qualified ICT personnel. The exorbitant cost of internet to users requires to be reconsidered if such facilities are to be utilized by the poor Malawians. Private sectors such as MACRA need to work hand in hand with the Malawi government if e-learning is to be of benefit to all Malawians.

## 13. Recommendations to Malawi Government

- Launch Nationwide Scholastic Funds (NSF) for assisting qualifying needy students with donations from the Malawi Government and private segments
- Create international acknowledgement of E-learning accreditation
- Encourage endorsement of training for Internet providers
- Champion edification reforms to improve advanced education convenience
- Invest in higher education technologies
- Partner with private Internet providers who have the technology and ability to the finance and to implement flexible delivery models.

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