



Life Long Learning and E-Learning in Tanzania: A Globalization Potential to Shape Education Sector through ODL?

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Abstract: Open and Distance learning (ODL) practices have evolved over time into the sophisticated fifth generation. This generation takes advantage of ICT revolutions, a catalytic element of globalisation. The first generations of ODL evolved in the order of: first is the Correspondence Model; second, is the Multi-media Model; third, is the Telelearning Model, and fourth, is the Flexible Learning Model. This article aims at presenting the characteristics of the fifth generation of ODL, compare with features of the life long learning and e-learning as discourses. The discussion will therefore build on the globalisation conceptual impact on the issues on education sector developments. Furthermore, this article will embark on a theoretical reflection of Open and Distance Learning practices in Tanzanian settings from both the learner and an institutional perspective. The central argument in this paper is that demands of lifelong learning and e-learning challenges in Tanzania, reflect a globalisation pressure on education development as well as highlighting a stage for the possible leap frogging into higher ground given the responsive policy reforms.

Keywords: Lifelong learning, E-learning, Open and distance learning, Globalization, 5th generation ODL, Education in Tanzania

1. Introduction

This article is on life long learning and e-learning in Tanzania, a globalisation mapping exercise in education sector through ODL. The article has six sections, with an introduction as a first part. Other sections include Open and Distance Learning (ODL) evolution: a global perspective, as a second section; Mapping ODL generations in a Tanzanian context as a third; Features and characteristics of the lifelong learning as a fourth section; Globalisation on education developments is a fifth; and Conclusion as last section if we do not consider the bibliography section. This article is built on the review of existing literature packages as a method of information collection while thematic and discourse analysis approached was employed to enable a detailed understanding of the gathered information.

2. ODL Evolutions: A global Perspective

Elsewhere, I have tried to define the Open and Distance learning [education], as a field of education that focuses on the andragogy, technology, and instructional systems design that is effectively incorporated in delivering education to learners who are not physically "on delivery site" to receive their education (Yaqub, 2009, Ogbonna, Ibezim, & Obi, 2019; Uğur, & Kurubacak, 2019, and Xu, *et al.*, 2019). Pedagogy was deliberately removed from this definition, as an emphasis that Open and Distance Learning (ODL) is essentially an adult education phenomenon. The advocates and activists in favour of lifelong learning and its overlap into open and distance learning will have to take some time before they subscribe to this definition and its emphasis (Kaye & Harry, 2018; Glover, 2019; Rumble & Harry, 2018; Kaye

& Rumble, 2018; Biao, & Maruatona, 2018; and Al-Samarraie, 2019). As we debate on this overlap, it is safe to borrow an ancient idea that *...there are many ways to Rome...*

Andragogy, technology and instructional design as the focus in the ODL definition, it is the technological changes that over time has marked the evolutionary trend of ODL. This evolution, is briefly presented in terms of ODL generations. It is the nature of integration of these three elements that form a basis on which this generational classification of ODL is building on. The brief presentation is influenced by Professor James Taylor's work on distance education. Remarkably, the trend in ODL, as Taylor has argued, is as of today, evolved into the fifth generation. The generation based description of ODL, as presented by Taylor, is subscribed by a long list of authors including though not limited to the following: Blessinger & Bliss, 2016; Kaye & Harry, 2018; Glover, 2019; Kaveri, Gupta, Gunasekar & Pratap, 2016; Rumble & Harry, 2018; Kaye & Rumble, 2018; Biao & Maruatona, 2018; Al-Samarraie, 2019; Fongkong-Munga & Emmanuel, 2019; Teo, Zhou, Fan & Huang, 2019, Yaqub, 2009, Ogbonna, Ibezim & Obi, 2019; Uğur & Kurubacak, 2019; and Xu, Glick, Rodriguez, Cung, Li & Warschauer, 2019. Though, it is the fifth generation that forms a base of this presentation, I wish to recap a bit on the earlier four generations of ODL, from ODL *generation one* to *generation four* through *generation two* and *generation three*, as follows:

The first generation of ODL, builds on a *distance education* component of open and distance learning. Technology of learning material delivery under this generation was based on correspondence systems (postage arrangements and systems) as an interaction method between the learner and an instructor. It is from this angle; the generation has acquired a '*Correspondence Model*' with learning materials being by and large print materials. This model is said to have originated at the end of nineteenth century.

The second generation of ODL, is basically an extension of the first generation (a correspondence model) where print materials have value added through a better integration of technology resulting into the *Multi-media model* of Open and Distance learning. The model had television and radio systems as drivers of the learning delivery technologies. It should be noted that print materials were transformed into lectures, recorded or live to learners either individual home based or groups of learners in distant classrooms where face to face supports are organized. Common feature of this model includes audiotape, videotape; computer based learning and interactive video (disc and tape).

Third generation of ODL, has technology-based features of learning delivery described as: Audio teleconferencing; Videoconferencing; Audio graphic Communication; and Broadcast TV/Radio. Common to

these features are the two-way synchronous telelearning systems (technology) using audio or video-conferencing, as opposed to one way in the second generation. It is therefore an advanced interactive delivery mode of Open and Distance Learning (ODL) sophisticated than the earlier two, requiring educational instruction design and technology investment. Based on this technological setting, this generation of Open and Distance Learning (ODL) has acquired a *Telelearning Model* as its label.

Fourth Generation of Open and Distance Learning (ODL) is also referred to as *The Flexible Learning Model*. It is a flexible learning based on asynchronous (with a room for synchronous setting) online learning combined with online. In this generation computer technology has significantly occupied a space between the learner and an instructor. Internet- based systems in which multi-media (text, audio, video and computer-based) materials in electronic format are delivered to individuals through computers, along with access to databases and electronic libraries, and which facilitate teacher-student and student-student, one-to-one, one-to-many exchanges, synchronously or asynchronously. Features in this generation are Interactive multimedia, Internet-based access to WWW resources and Computer mediated communication

The fifth generation is seen to take advantages of features established under the fourth generation. Like the fourth generation, the fifth generation carries Interactive multimedia, internet-based access to WWW resources and computer mediated communication with the use of automated response system as an exceptional to this model. It is therefore labeled as the *Intelligent Flexible Learning* model. In practical terms, in this generation of Open and Distance Learning (ODL), means not only a computer facilitated interaction between a learner and an instructor but also a computer with high degree of automation with more control of student in asynchronous online learning. This means that in this two-way interaction for learning purpose, a learner has much more autonomy of the process taking a significant portion of teacher's autonomy without necessarily replacing him.

3. Mapping ODL generations in a Tanzanian context

Kolimba, Kigadye and Reuben (2011), Sife, Lwoga, & Sanga (2007), and Ntirukigwa (1986): arguably, link Open and Distance Learning (ODL) developments in Tanzania to the end of World War II after which the correspondence colleges started to operation in the then Tanganyika part of Tanzania. The list of these colleges includes British Tutorial College, International Correspondence School, Rapid Results College, and the

Oxford Open Learning. As a first generation Open and Distance Learning (ODL), this model has survived the test of time in different institutions such as the Moshi Cooperative college which came into being in 1963, the National Correspondence Institution (NCI) as a constituent of the Institute of Adult Education (IAE) in 1970, as we speak, the Open University of Tanzania had been operating under this model of Open and Distance Learning (ODL) since its inception in 1993. Unsicker (2017) have the similar pattern along adult education in Tanzania.

Broadcast technologies, have been deployed in the Tanzanian Open and Distance Learning (ODL) settings. It started with school broadcasting programme established by the government in 1961. Then, the South African Extension Unit (SAEU) which was established by the Commonwealth Secretariat in 1984, tailored for South African exiles in other African countries including Tanzania. There are records indicating that Sokoine University of Agriculture (SUA) officiated in 1984, through its Institute of Continuing Education (ICE) have been providing training and extension services to farmers using, among other methods, broadcast media. These descriptions, on broadcast technologies building on the print learning materials, denotes the second generation of Open and Distance Learning (ODL)- the Multi-media model.

The fast pacing ICT developments have not spared Open and Distance Learning (ODL) evolution in Tanzania. Its influence over broadcast technology, seems to provide a much wider room a more or less automatic transformation from one way to two ways synchronous telelearning systems (. i.e. audio and video conferencing). This is typical of third generation features of Open and Distance Learning (ODL). Setting of the Tanzania Global Development Learning Centre (TGDLC) with a help of World Bank, to provide a forum for global dialogues, video conferencing and online education, among others, operationalises the telelearning model of Open and Distance Learning (ODL). Note that there is a significant absence of integrated radio and television broadcast embedded in Open and Distance Learning (ODL)

Within ICT settings of revolutions, invention of internet has added value to computer as a learning tool, or media, if you like. Integrating internet into computers has facilitated learners' access to broadcast materials, WWW resources in addition to communication between learners and instructors and/ or facilitators. There are cases, as well, of facilitated communication among learners in a cause of learning. This is a computer mediated communication, breaking down the learning process through Open and Distance Learning (ODL) into flexible synchronized settings, capturing features of the fourth ODL generation. TGDLC, the Open University of

Tanzania (OUT) and University of Dar es Salaam (UDSM), in some areas in collaboration with the African Virtual University (AVU), are examples of institutions in the fourth ODL generation. It is worth noting, , that there is a trend of universities to establish radio and television broadcasting, as well. This is evident at UDSM and Sokoine University of Agriculture where Mlimani TV and SUA TV respectively are operational, Mzumbe University and Open University of Tanzania are at advanced stage into this trend. If this trend is well integrated and /or supported by appropriate instructional design, it can be used to un-earth the missed potentials of the third-generation model of Open and Distance Learning (ODL)

We, at society level, have noted a combination of ICT revolutions in relation to Open and Distance Learning (ODL). Phenomenon in these revolutions is the qualitative move overtime from online learning to e-learning. The former is simplified into a combination of computer as a tool through which the learning is taking place and internet (web-based technologies) as a reservoir for learning materials. The later is known for its reservoir of knowledge to expand beyond the internet (web-based technologies), in an electronic format. Electronic formats of learning materials include though are not limited to Compact Discs (CDs), Digital Versatile Discs (DVDs) and electronic learning platforms. These electronic learning platforms are also in some cases, referred to as the Learning Management Systems (LMS)

Developments in learning management systems, as is seen at the Open University of Tanzania, Tanzania Global Development Learning Center (TGDLC)at the University of Dar es Salaam, is in line with roll out in electronic learning (e-learning) as a practice to e-learning as the discourse. As a discourse e-learning is defined to include learning tools other than computers, two ways messaging pagers, internet enabled cell phones, and personal digital assistants (PDAs) enabling the learning process to proceed wherever the learners are and willing to learn. Nature and portability of the potential learning devices, has opened up yet another angle of e-learning to include everybody who have on one way or the other access to these learning devices, meaning an opening to learning venues. Age is no longer seen as limiting factor, given resources availability. Practically means the learning (e-learning), as the fifth generation of Open and Distance Learning (ODL) is reflected, is opening to everybody and is everywhere in a life time. Does this move to close to the lifelong learning? May be, yes. Before we answer this question let's have a glance on lifelong learning based on its features and characteristics (Kaye & Harry, 2018)

4. Features and characteristics of the lifelong learning

Lifelong learning has been defined in different ways

based on the contexts it is defined. Some of the institutionalized definition of lifelong learning is mentioned to involve the World Bank, OECD, UNESCO, European Commission and in the African setting there is a SADC view on this matter. For the purpose of this presentation, lifelong learning is defined as a continuous building of skills and knowledge throughout the lifespan (time between birth and death) of a person (Aitchison, 2003). This is happening through experiences in the course of a lifetime, which includes training, counseling, tutoring, mentoring, apprenticeship, situations. These are either formal or informal (or both) learning opportunities in the learners' lives for the purpose of unremitting development and improvement of the knowledge and skills needed for employment and personal fulfillment. This operational definition is deliberated deviating from the EU definition which labels lifelong learning (ESAE, 2005)

All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal civic social and/or employment-related perspective'

It is the employment focus and its connection to schooling, of the definition that suggested a deviation, in an effort to bold an understanding that learning is not necessarily the same as schooling. In African context schooling is associated with colonial entry in the continent while learning has always been part of life. In his speech for education for self reliance, in 1967, Nyerere pointed out that:

The fact that pre-colonial did not have schools-except for short periods of initiation in some tribes- did not mean that the children were not educated. They learned by living and doing. In their homes and on farm they were taught skills of the society, and the behavior expected of its members (Nyerere, 1967).

I have fully subscribed to this argument, in a course defining the lifelong learning as both a concept and as a practice.

With a changing way of life in African setting, influences by globalization forces, harmonization of culture and to a larger extent, formalization of life, employment (of either form and preference of some) as a mechanism to earn a living is becoming more or less a destination. In this case therefore, schooling and learning have grown so wide enough to overlap one another. Learning has proved to stand the test of time over schooling, and is increasingly moving towards an individual as opposed to institutions and society.

As individualized practice, lifelong learning is emerging as a voluntary and self motivated. It is the extension of these two factors that form pillars for its features and characteristics which are universal participation, self motivated learning, described as follows:

Universal participation:

Lifelong learning is deliberately aiming at involving everyone in the society. Its operations are taking advantage of *education for all* as a discourse. It is promoted at state level, through policy infrastructures, legal and operational frameworks. State authorities are motivated by non monetary benefits of education in one side and the increasing demand for new skills as results of the constantly changing technologies.

Informal Learning

Lifelong learning has a characteristic of moving beyond the institutionalized schooling system, and more often than not, building a larger territory there. This characteristic constitutes what is referred to as non formal and informal beside the formal component of lifelong learning. The latter, is based on individual efforts to acquire skills through the structured and institutionalized school system, while the former two are based on structured learning in an informal setting (for informal) as well as the learning in unstructured setting, which is either part of life or working settings.

Self-motivated learning:

Lifelong learning is operationalised on the field at individual level. Being disengaged from schooling in most cases (refer to the informal feature of the lifelong learning), the learner needs to take full control of the process for the ultimate goal to be achieved. An ultimate reward in a learning process builds as a base to justify this feature of the lifelong learning. Striving for better socio-economic status through upgrading skills and advance knowledge within as well as between professional lines, serves as end while lifelong learning remains to be a means towards it.

Self-funded learning

Life learning is more or less integrated in work and life settings, with most of its components being outside the institutionalized school system where most of public funding on education is focused. This adds to fact that lifelong learning is self motivated at individual speed, it leaves therefore cost elements of learning to the learner, as the financing in this case is detached from a range of formal public financial arrangements. As a self-motivated learner, in an informally organized learning allowing everyone to participate, it requires a learner to invest time, and money as part of inputs into the process.

5. Globalization on Education Developments

Activation of the society into a constant learning scenario

is one effect of globalization. The activation to learn at society wide builds on fast changing technological transformation. Learning is taken as a survival skill that each and every person needs to possess. As such and in line with globalisation demands, education sector is under pressure to implement reforms. These reforms according to Carnoy (1999) are operationalised into frameworks which are either quality driven; financial driven reforms; and Access/equity driven reforms.

Quality driven reforms aims at improving the competitive element of education through-put. Across the education sector, a look on pedagogical issues as a reflection of quality of teaching and learning is seen as an assessment of sector performance on efficient transfer of knowledge and skills. Integration of learners and teachers for a better learning across the globe is being tilted towards the learner. In this case the learner takes a full control of the process with teacher playing the facilitation role. There is a concern as well on what is being learned in relation to its potentials for future use in a labour market as well as at individual levels. Promoting science subjects (including mathematics), English language for global culture and emphasis on Information and Communication Technology (ICT) are seen as strategies to improve skill compatibility at global level. The latter is manifested through computer teachings in schools.

On another angle, financial driven reforms which aim at addressing issues related to solving the cost aspect of education. Introduction of user fees in social services (education, water and health) provision, aimed at spreading the running cost on users' heads as a support for continual provision of the services by the government. A change of education policy frameworks to allow privatization of education provision is notably an effort to attract more funding in education. These measures have played, a restrictive role in all levels of schooling, leading to its reversal in basic education through Education For All (EFA) campaigns (back into the Universal Primary Education (UPE) setting, as pioneered by Mwalimu Julius Kambarage Nyerere).

The last, but not the least, in reforms is the access and equity driven element aiming at opening more venues into school system to ensure more learners are accommodated with special concerns to assist the less privileged and historically, socially excluded members of the society. Education provision is seen to be concentrated in some areas hence adding a geographic element as a prohibitive factor a considerable segment of a Tanzanian society. This element is significant following a big area coverage that constitutes Tanzania as a country. On equity part of the reforms, there is a call to as much as possible to mainstream special needs into schooling, leading to inclusive education. Campaigns for wheel friendly school infrastructure is part of strategies

Evolution of ODL into the fifth generation from the

fourth generation has significantly involved an update of online learning into e-learning. E-learning as discourse, given that an access to web-supported communication gadgets, is not limiting and is used to support one way of learning or the other. This means as many learners as possible, regardless of their age and socio-economic status, are able to use these gadgets and fully exploit the potentials for ODL. At operational level, ODL is able therefore to keep many learners in a knowledge acquiring cycle, breaking the access and equity barriers as an ODL class is never full to its capacity as one given time. As for virtual classes, the only limiting factor is connectivity Xu, *et al.*, (2019)

Concerns on quality of e-learning is enhanced given its operational across the borders hence a pressure to prove its worthy at globe level before it is certified. The pressure is a result of difference legal and operational frameworks which are more often than not subjected to different national policy machinery across countries. Another contribution to pressure is added by decreased trust on internet-based courses and programmes associated with the shoddy degrees (from the e-diploma mills). The two, have forced ODL, especially at e-learning level, focus on its quality, within national framework recognition with acceptability degree across the borders.

6. Conclusion

Is this a globalization mapping in education sector development? Arguably, yes! It is a yes partly because it reflects a development in line with information and technology revolution, a central drive of the globalization process. As pointed earlier on, with influence from globalization, education reforms are zeroing into financial, quality and equity drives. ODL through e-learning is making it easier (faster) and even cheaper to deliver quality learning materials to big number of learners across the globe. By education institutions facilitating learning across the globe, they subjected into a constant monitoring and evaluation for conformity and standard in a varying policy landscape. Quality assurance bodies and mechanisms are also on alert to protect consumers.

Lifelong learning and e-learning are part of the recipe for a learning society, a precursor for globalization responsive education sector. When learners in an education system are properly taught how to learn, learning became a life time duty, with learning as vehicle to facility a duty performance. The government on the other hand is required to provide infrastructures necessary for e-learning in terms of internet connectivity and electric supply, at its optimal value, e-learning become one of the cheapest alternatives to education for all. One of the calculations on how cheap is e-learning is reflected on out-of-the-box kind of thinking, where a

person pointed out that:

Billioni 100 zinazopotea pale mlimani kila mwaka, tutapata latest DELL Computers Zaidi ya 125,000 kila mwaka. Baada ya miaka minne tutakuwa Na Computer bora kabisa laki tano zikitupa uwezo wa kufundisha wanafunzi zaidi ya milioni moja kila siku huku kila mmoja akipata saa 12 kila siku na akijifunza kwa njia ya ELEARNING. Ili tupate wahitimu Millions Moja Toka Mlimani Tutahitaji Miaka 200 wakati kwa elearning-- mingi sana itakuwa 7 na ikitoa ubora ulotukuka

With 100 billion of shillings spent at the Hill every year, we will acquire more than 125,000 latest Dell computers every year. In five years, we will have 500000 state-of-the-art computers giving us ability to teach more than one million learners every day with every one spending 12 hours of learning through e-learning. To get one million graduates from the Hill, we will need 200 years while through e-learning it can take a maximum of 7 years delivering in glorified quality (my translation).

While this argument is seen as a joke, coursera project on improving access to high quality programs in privileged universities has produced a similar result in a *Machine Learning* course. This course under conventional setting is able to enroll a maximum of 400 students in a physical class, under coursera online arrangement, the course has managed to enroll a record 100,000 students. This number of students would have taken a total of 250 years to be achieved in a conventional setting

There is good much and an indication that, what could have seen as a joke email, Dalphine Koller and Andrew Ng founders of *coursera* have proved beyond reasonable doubts that, given a proper and supportive technological investment, we should expect an even larger influx of graduates through e-learning as an element of ODL, provided that Life long learning spirit is left to fill the social atmosphere. The influx, might not be as high as the sender projected but significantly higher than the current flow at a relatively lower running cost. This therefore underlines the argument that e-learning supported by the life-long learning spirit, stands a better chance to shape education sector in Tanzania, like in other countries, as a response to globalization forces.

It is recommended that policies and operations frameworks in education need to accommodate needs and demands of e-learning with time. By appropriately, accommodating these waves of changes in education sector, it will keep the sector ahead in globalization forces of change at a given time. This means a closer eye on e-learning frameworks is actually an eye on globalization pressure on education

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