Influence of New Technology on Learners and Teachers' Professional Development-Kenya.

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Abstract.

As the world we are living in experience fast changes in our economic, political and social lives, there is need for a new perspective in the manner in which teachers approach teaching and learning in their classroom environments. This thus calls for the creation of learning networks for Kenyan teachers so as to enhance their individual technological development and that of their learners. Rather than clinging to the current educational practices that aims at improving the current situation, there is need for us to approach the crisis of schooling from a completely different perspective. The need to learn how to learn and to provide multichannel learning opportunities through a variety of flexible delivery mechanism forms the basis of this new perspective. How can we teach teachers how to learn? Ongoing professional development through the establishment of collaborative learning networks promise to provide incentives for change not perceived before. An important driving force behind these professional networks is the emerging information and communication technologies. Modalities on how best we can make our teachers in schools embrace new technology in their classroom content delivery and in their own career development in the current digital world, is the ultimate concern of this concept paper.

1.1 Introduction

With the advancement in automation in everyday life; office, business and in learning, it has indeed become absolutely necessary that everyone gains adequate skills in computing. We are living in a world that has become increasingly challenging hence our approach to learning, especially in schools need to be commensurate to the social, economic and political dynamics witnessed in our global community. The current crisis of schooling, should be approached from a completely different perspective instead of tinkering with our current educational practices with a sole aim of improving the situation.

Our learning institutions especially at primary and secondary school levels, there is need for teachers and students to learn how to learn. The growing desire to have a variety of flexible classroom content delivery mechanism has made it absolutely important for African Governments and especially the Kenya Government to ensure provision of multichannel learning opportunities which in essence will form the basis of this new perspective (Keffan, 2008). If we are to succeed in doing this, there is need to first think on how we can teach teachers how to acquire computer and internet

skills so that they can apply those e-learning skills in teaching their students in schools. Without acquisition of e-learning skills, our students in schools sooner or later will find themselves irrelevant in their approach to life issues in future.

There is an ongoing professional development that has been brought about through the establishment of collaborative learning networks that has give promise to provide incentives for change not seen before. The emerging information and communication technologies is the major driving force behind these professional networks. In regard to this observation UNESCO has developed and implemented a project in Africa, with a pilot in Zimbabwe. The project aims at benefiting from the emerging propelling powers of current modern information and communication technologies and to stimulate processes of change which is within the broader goal of rethinking education and learning.

If Africa is to achieve Millenium Development Goals (MDGs) by 2030, it goes without saying that, African Governments then need to have motivated and well trained teachers. Teachers being the chief implementers of any school-based curriculum, there is need to ensure they have e-learning skills. In Kenya, the current

Jubilee government has promised to introduce e-learning in Primary School starting from 2014. The Government has promised to ensure pupils entering class one have lap-tops, an ambitious initiative that is aimed at equipping children with e-learning skills from that very early age.

However, this cannot be achieved if teachers first are not equipped with the very skills. This initiative is bound to face many challenges but it is a step towards the right direction. If teachers are not successfully taken through e-learning teacher training programmes, it will be practically impossible to ensure all girls and boys complete a full course of primary school education. Besides, it will be impossible to eliminate gender disparity in primary and secondary education (UNESCO, 2003).

Given the very significance of teacher training on e-learning, it is shocking that no emphasis has been placed on its enhancement by national governments, donors and even by civil society organizations. Teacher training is neglected in the face of more immediately visible educational goals and objectives. Kenya is not exceptional either.

1.2 Modern Learning and Teaching in a Dynamic World

The world we are living in today is fast moving towards becoming a more open and smaller global society. This scenario has brought about opportunities for economic development, international partnerships, human freedoms/rights and peace. However, this has also brought about creation of new sets of challenges that are related to the changing patterns of multicultural communities, labour and environmental disrutions. Teachers and all learners have to note that knowledge is dynamic since it has become common knowledge that what is reality currently may not necessarily be reality tomorrow hence, what is of value today may become valueless tomorrow. Gaining access to right information is seen to be critical to economic and social development and power.

Due to the increasing media houses/sources that provide a variety of information and the increasing amount of data which is accessible, a situation has been created whereby an individual person or community at the receiving end is increasingly fast becoming responsible for the selection of most current and relevant, useful and accurate information, which is a responsibility that requires critical media awareness. Besides information and communication technologies allowing many people to generate and pass information from one destination to another therefore playing an active role in interaction process between professionals, laymen, policy makers, peers and learners, it calls for knowledge, skills and access to resources in order for it to be done effectively and efficiently.

In the world today, learning has increasingly become an essential requirement or a pre-condition for individual and societal growth and general development. Current pressures of the contemporary age expects all people, communities and institutions of learning to continuously grow, develop and utilize a variety of knowledge frameworks, intelligences, value systems and skills in order to make sense of, meaningfully contribute and adapt to change in a constructive and non-violent ways.

There is need for people to learn how to deal with the changing demands of our society. At the same time, learn how to develop the capacity that allows them to change in order to be fully in control. According to Delors *et.al.,*(19969), the vision of the coming century is defined as one in which the strive for learning is valued by individual persons and by the authorities all over the world, not only as a means to an end, but also as an end in itself. This is why teachers need to individually develop by equipping themselves with e-learning skills which will improve their level of knowledge and competence in their approach to academic issues.

1.3 Creating Flexible and Conducive Open and Classroom Learning Environments

According to Fagerland and Saha, (1983), education received much attention as one major contributing factor towards development in the second half of the 20th century and this was mainly

driven by the thinking which was represented in the emerging human capital and modernization theories. This led to increases on pupils/students' enrolment and also inevitable increases in educational expenditures on global levels. Such actions were brought about and reinforced by international conferences which were held around that time i.e World Conference on Education for All (Jomtien, Thailand, 1990) and the mid-decade meeting of the International Consultative Forum on Education for All (Amman, June 1996).

While these actions have to be commended for achieving higher pupils/students' enrolment figures, we see at the same time how schools increasingly fail to provide the learning opportunities required in today's communities. Educationists have criticized Modernization Theory and Human Capital Theories on their failure to point out clearly the role of schooling in development. Fägerlind and Saha (1983) argue that schooling is mostly adaptive in nature and reproduces existing social and economic systems rather than triggering change and development. Besides that theoretical critique, it is important for us to note that, reality has also proven us wrong in our belief on the expansion of schools. In the 70s and 80s, Africa had the highest growth figures in educational enrolment at all levels as well as in expenditures for education as a percentage of GNP.

However, since the year 2002, these figures have reduced significantly(UNESCO 2004). In Africa, it is estimated that more than 200 million which translates to 44% of the adult population are illiterate. The gross pupils/students' school enrolment figures in sub-saharan Africa stand at 73% at primary school level, 23.1% at secondary school level and 3.3% at tertiary level education. We have also witnessed increasing numbers of drop outs not forgetting the alarming high unemployment figures among educated youth. Moreover, the fast increasing pupils'/students' enrolment has resulted into the ever increasing excessive pressures on school systems which has also brought about the increased need for training new teachers and re-training of the already trained teachers, for more primary and secondary schools, for adaptation of curricula, for more textbooks ,learning materials,

for improved communications and administration systems.

From this example of Africa, it can therefore be observed that the society's learning needs and interests cannot be addressed by the expansion of the formal education system only. It requires a new look at both access to and the quality of education and learning that is offered in all educational institutions more especially at primary and secondary school levels. We should not just aim at building more schools and the training of more teachers so as to allow for more higher enrolment figures but also a new perspective is required in which we look at how we can create more open and flexible learning opportunities for all. Our argument on this matter is that, it is not so significant to have as many pupils/students as possible in class, but rather we strongly believe that the focus should be on the creation of conducive learning environments.

According to UNESCO, (1969a), the Amman Affirmation states that:

> *'Given the trend toward more open societies and global economies, we must emphasise the forms of learning and critical thinking that enable individuals to understand changing environments, create new knowledge and shape their own destinies. We must respond to new challenges by promoting learning in all aspects of life, through all institutions of society, in effect, creating environments in which living is learning.'*

From the statement given above, we are going to give a more elaborate explanation based on how the Amman Affirmation provides the basis for shaping a new learning environment. At the same time, their statement gives us an opportunity to present three interrelated principles that underlies UNESCO's Learning Without Frontiers Programme.

2.1 The need for Learners and Teachers to learn how to learn

If you look at the world we are living in currently, you will realize that the world has dramatically changed, and so fast that, it is clearly different from the world we lived in just ten years ago and especially on the time one takes to complete primary school level. This rate of change is so dramatic that we are left to wonder whether it suffices to teach our school going children what we as adults think is important. Rather than us preparing our children for their life tomorrow, we have to give this task in the hands of the coming generations themselves. While we know change in the past could be managed through generational processes with each generation preparing the conditions for the next generation to adapt to change, the process has now changed to an intra-generational one' (Visser, 1997b). This is therefore why, the capability to cope with change now requires one's capacity to not only learn but learn appropriately. It is important for one to develop in himself or herself the concept of self-as-learner. Learning to learn simply involves developing oneself to engage in critical reflection and creative thinking. Such processes can be stimulated through approaches that are learner-centred, self-directed and focus on problem- and activity-based learning. A big challenge lies in stimulating the learners' ability to build and enhance their own knowledge structures that are flexible and adaptable.

2.2 Application of Multichannel Learning Approaches to Classroom Instruction.

A professional teacher entering a class for the first time in a new school will expect to meet children of diverse ethnic backgrounds and thus must be prepared to meet challenges that have been brought about by modern technology. This means that he/she must be technologically suitable in order for him/her to handle children who are technologically exposed. People are part of different communities with diverse social and cultural backgrounds and are therefore at times exposed to different situations from which one can learn. Most of the time, children in developing countries and also in urban areas of less developed countries, spend 3-4 hours watching TV per day. Teachers often feel they are competing with modern media for children's attention and interest.

Instead of trying to compete with learners in class technologically, we strongly believe that the teacher can very much benefit from such 'outside' influences in a constructive way. For instance, the teacher can create effective learning opportunities for such learners so that they can even enjoy their learning and equip themselves with more technological knowledge and skills that will make them relevant and technologically responsive to the rapidly changing world. Learning process facilitators should build on these experiences and stimulate the development of an integrated model of learning which involves classroom teaching as well as interaction with other learning channels such as family members, others in the community, social experiences, other learners and a variety of media (Anzalone, 1995). Within this framework, teachers should be encouraged and link up more actively with the communities they belong to and build a multichannel learning approach. At the same time, they should assist learners in developing a critical eye in judging the varying, and sometimes conflicting, information that these different channels provide.

2.3 How to apply effective and efficient content delivery measures

It is important for everyone to understand that learning should not be viewed as a routine ritual that one involves himself or herself in during only the early part of one's life but rather a continuous necessary process. Conducive learning opportunities need to be provided that are more effective, efficient, flexible and open to the specific needs and interests of individuals or groups of learners. All learners should have the opportunity to get involved in learning whenever and where-ever required without hindrances such as age, distance, time, social, economic and cultural circumstances. The three principles given above show that a suitable approach to learning which promotes the constructive and active contribution of individuals to their dynamic environments is needed. Besides, the principles reflect an approach to learning which is able to continually adapt itself to the needs of the learners.

2.3 Conclusion

In conclusion, we have handled a number of issues in this paper and of importance to note is that, the emerging powers of modern communication and information technologies in the global community which is intended to enhance communication and facilitate access to information, could play a very important role in building such partnerships. Teacher development, if enhanced in all basic education and training institutions could be accelerated through networking and collaboration amongst peers, researchers and learners. An expanded vision on lifelong learning requires an attitudinal and a perceptual change among all professional teachers to see themselves as learners, as well as facilitators of learning processes that focus on developing capacities among learners. There is need for all teachers to construct their own knowledge base for future development. Teacher development programmes should have as its main focus teachers' professional growth and educational reform, rather than transfer of knowledge and skill training. However, past experiences have taught us that introducing ICTs in education is a complex process and its success does not only depend on the technology itself, but rather on sets of attitudes and expectations of the different actors involved, as well as on the organisational and managerial context in which the technology is being introduced.

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