

E-learning Transforming Economies

¹Barasa Wawire Peter, ²Owoche Patrick and ³Nambiro Alice Wechuli,

¹Department Computer Science, Kibabii University, Bungoma, Kenya

^{2,3}Department Information Technology, Kibabii University, Bungoma, Kenya

Abstract—as E-learning technology has quickly evolved into more sophisticated forms, it is opening the options for educators and business professionals to expand learning opportunities and transform economies globally. The ability to transform economies from low income, to more vibrant growing economies which can generate employment and growing incomes to citizens generally, has been described as economic development. It is recognized that ‘Human Capital,’ a term attributed to economist Theodore Schultz, is a reflection on the human capacities. Schultz believed human capital was like any form of capital. It could be invested in through education, training and enhanced benefits that would lead to an improvement on the quality and level of production.

In this paper the authors make a case of how a nation’s education system that is E-learning relates to its economic performance

Keywords—E-learning ; economies;human capital;

I. INTRODUCTION

Globalization and international trade requires economies to compete with each other. Economically successful countries generally tend to hold competitive and comparative advantages over the less vibrant economies – even though no single country will rarely specialize in a particular or even a single industry.

Most successful countries economies are usually made up of various industries that have different advantages and disadvantages in the global market place. The level of education and training of the country’s workforce is a major factor in determining how well a country’s economy will perform.

The central thesis in development economics is that Human capital is an indispensable and indeed an unsubstitutable input in the process of economic transformation from ‘low income’ to ‘developed’ status.

The economies of African countries have been variously referred to as ‘backward’, ‘less developed’ or ‘low income’. All these terms may sound pejorative but they accurately describe the capacities of economies of most African countries in terms of generating jobs, incomes and innovations that characterize the economies of the developed and the newly industrializing countries(NICs) and the emerging economies – Brazil, Russia, India China and South Africa (BRICS) [8].

Reference [7] , a Nobel Prize Laureate in economics 1974 – co-winner with Sir Arthur Lewis – recognized the importance of ‘Human Capital’. The author emphasizes that development depends on acquiring skills and knowledge –‘Investment in Human Capital’. The author further argues that the quality of the workforce embodied in health, education and skills is a major ingredient in the process of economic transformation of countries[7].

Education and training must necessarily play a central role in the development of human capital. The Less Development Countries (L.D.Cs) are backward because the opportunities and resources which enable a large and growing number of

citizens to obtain education and acquire skills through training are scarce.

E-learning refers to the teaching and learning behavior in the information technology environment[1]. E-learning tools are interesting in their own right. It is interesting to reflect on how they transform economies. The E-learning are evident in many initiatives in both higher education and also in the modern workplace to transform economies around the world.

In the fast-paced world of e-learning the available technologies to make a course exciting are always changing, and course content can and should be updated quickly to give students the very latest information[2]. This is especially important if the e-learning training is being given to employees in a sector where keeping up-to-date on industry developments is of the utmost importance. This is one of the reasons why many businesses are now offering training via e-learning - other reasons includes low costs and the ability for employees to study in their own time and place[2]. Overall, traditional learning is expensive, takes a long time and the results can vary. E-learning offers an alternative that is faster, cheaper and potentially better[2].

The opportunities created by E-learning tools such as PowerPoint, enabling authoring and presentation, twitter/ facebook facilitating discussions and other tools enabling quizzing, testing and assessment of on-line courses and training programmes, internet, used along with computers, mobile communication devices and other telecommunication equipment, have opened avenues for poor countries of the world to access affordable education and training for their citizens and undertake human capital development[5]. The promise of economic transformation is already visible in many of these countries, and their potential in generating greater productivity, creating employment and boosting incomes is evident due to increased exposure and use of the tools of e-learning.

II. EDUCATION, TRAINING AND THE ECONOMY

The underlying question that this study seeks to unravel or answer is how a nation’s education system relates to its economic performance. Differences in training levels have been cited as a significant factor that separates rich and poor countries. It is noted that although other factors such as Geography and the availability of resources and climatic conditions are definitely at play, having better-trained workers creates important spillovers and externalities which impact positively on the level of economic development in a country[6].

It is also noteworthy that better trained or educated labour attract higher wages. The advantage of this, apart from translating into higher national income, is that industries requiring higher levels of education and training from employees also have higher ‘barrier to entry’ meaning that they are likely to operate with minimal competition, and hence enjoy higher profit levels.

Industries with higher requirements tend to pay workers higher wages both because there is a smaller labour supply capable of

operating in these industries and because the required education and training carries significant costs. The study of economics of education and training involves an analysis of the economy as a whole, of employers and workers. Two major concepts that influence the wage rate are training and education. In general well-trained workers tend to be more productive and earn more money than workers with poor training and education. *Ibid*

It is therefore in the interest of countries to invest in programmes that result in better educated and trained workers. Employer want workers who are more productive and require less supervision and management. Employers must consider the following factors when deciding on whether to pay for an employees training or not:-

- Will the training programme increase the productivity of the worker?
- Will the increase on productivity warrant the cost of paying for its training programme?
- Will the newly trained worker be able to command a higher wage?

The main thrust of the paper is concerned with economic transformation of countries. Many countries – and in particular the less developed countries – have placed great emphasis on developing an education system that can produce workers able to function in new industries, such as in the field of science and technology. It is generally accepted that a country's economy becomes more productive as the proportion of educated workers increases since educated workers are able to carry out tasks more efficiently, especially tasks that require literacy, numeracy and critical thinking[6]. It is however, note that obtaining a higher level of education also carries a cost.

III. TOOLS OF E-LEARNING

It is from the cited in [4], that e-learning and its tools become important. As it has been pointed out, the high cost of education and training has traditionally kept citizens of the LDCs out of school and training institutions. The LDCs are poor and the majority of their citizens cannot afford to finance education as we know it. Tools of e-learning are increasingly becoming available to the masses in LDCs as their prices fall with advances in technology. There tools include software alongside computers, internet, mobile telephones and related electronic and telecommunication equipment. Indeed, many LDCs have embarked on nationwide programmes to promote and exploit the benefits of e-learning and multimedia learning.

Specifically, tools of e-learning refer to the various uses, the equipment and software for the delivery of e-learning. These tools can be broadly classified into five (5) areas that facilitate learning. The tools can be used for:-

Authoring – For example power point for creating and making presentations.
Interactivity – Facilitating communication between the tutor and learners conveniently across distances.
Social activity – Allowing for group discussions eg twitter/facebook.
Quizzing and Assessment of learners by instructors.
Blogs - Tools that allow delivery of courses/lessons, discussions and a wide range of activities which all go towards increasing knowledge and skills of users.

Tools of e-learning have widened the horizon and extended the frontiers of imparting and accessing education, training and general knowledge that have hitherto been out of reach of a vast majority of the citizens of poor countries. Further, it is

important to recognise the fact that many people in the LDCs of Africa are not full time students. Many are working people enrolled in programmes of continuing education [8]. For these growing number of people, investing in education involves an opportunity cost. Time spent in the classroom cannot also be spent working for a wage. The opportunities offered by tools of e-learning are clearly a big boost to such part-time students. The opportunity cost of acquiring education, and skills is significantly lowered by the e-learning tools to the advantage of both employers and employees.

In a paper 'E-learning and Economic Development' in [3], explore the experience of Bosnia (part of former Yugoslavia). They note that E-learning has had a significant impact in the transition of the former socialist states to free-market economy. They cite several lessons they have learnt from their study thus[4]:-

- a. It is possible to organise good e-learning with relatively modest technologies and tools.
- b. It is possible to transfer modern knowledge and skills to developing environment and places destroyed by war.
- c. E-learning can play an important role in the economic development of transitioning economies.
- d. Face-to-face meeting remain an important component in the educational process.

These observations are important in the African context. This paper argues that African countries whose economies have been ravaged by corruption, war, misrule and fragmented by internal strifes can rebuild and regain stability and sustainable economic transformation through the adoption and encouragement of e-learning.

Many African countries having emerged from the colonial era in the late 1950s and early 1960s looked forward to a phase of rapid economic development peace and prosperity. The true liberation of these countries will only come when their economies are transformed and their citizens begin to enjoy the benefits of economic development, growing employment opportunities and higher incomes it has been argued that 'Human Capital' development is a major ingredient in the realisation of economic growth and development. E-learning tools therefore have a crucial role to play in this journey.

With E-learning being implement and used around the globe by many countries, it is apt to quote reference[4].

"The knowledge society will inevitably become far more competitive than any society we have known – for the simple reason that with the knowledge universally accessible, there are no excuses for non-performance. There will be no poor countries. There will only be ignorant countries" [4].

IV. CONCLUSION

In the study we have indicated the direction of research to show E-learning is transforming economies in the world. Therefore, we conclude that E-learning is a viable concept transforming economies and more research is needed to determine the actual savings over time in monetary in our educational institutions, our organizations, and on our world.

References

- [1] Omulayi, G.N. & Barasa, P.W. " Integrated multi-agent e-learning system as a strategy to promote access to higher education in Africa. In F.M. Nafukho B. Irby (Eds.). Research Handbook on integrating technology into higher education. " New York: IGI.2015.
- [2] L.L.C. Epignosis, "eLearning concepts, trends, application", available on <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=>

1&cad=rja&uact=8&ved=0ahUKEwir3Muj3mQAhUdTI8KHa0dAs4QFggiMAA&url=http%3A%2F%2Fwww.talentlms.com%2Flearning%2Flearning-101-an2014."2014

London – Unwin Hyman

V. DEFINITION& ACRONYMS

E-learning:(Eletronic Learning) Used to refer to educational processes that utilize information and communications technology to mediate asynchronous as wellas synchronous learning and teaching activities.

LDCS:Less Developed Countries

- [3] Carey, K and Blatnik, S , “E-learning and Economic Develpment.”2004
- [4] Drucker, P (1996) ,“ Managing in a Time of Great Change”, Oxford, Butterworth – Heinemann Ltd, 1996
- [5] Lipton, M (1989) , “Why Poor People Stay Poor”, Avebury London, 1996
- [6] Radcliffe, B (2012) , “How Education and Training Affect the Economy,” Investopedia, February 25 2012.
- [7] Schultz, T. W. (1993) Economics of Being Poor Blackwell Publishers, London. 1993
- [8] Singer H. W. and Ansari J. A. (1988) Rich and Poor Countries