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The State and Challenges of Technology Enhanced Learning in Cameroon's English Subsystem of Education: Case Study of Colleges

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***Abstract*—Technology enhanced learning refers to the support of teaching and learning through the use of technology and can be used synonymously with e-learning. The thesis of this paper is that technology enhanced learning is still at its premature stage in Cameroon and that despite the rapid paradigm shift of traditional method of teaching and learning in the classroom to modern method of teaching and learning, many teachers still show great opposition to the current method and many student still practice the old style of learning. A brief online survey was done to find out what extend some schools in Cameroon specifically in Bamenda, the capital city of the Northwest region has partially or fully incorporated the new system of technology enhanced leaning style such as the use of information communication technologies into their schools. From the results obtained, it was observed that many schools still practice the old system of learning, mainly by using textbooks and lecture materials given by teachers for learning. Meanwhile some of the teachers still maintained that they prefer the old method of teaching (in this case the chalk-chalk, textbooks, face to face approach, etc) given that they lack the time, human, and financial resources to train themselves on such a domain.**

Keywords: Cameroon, education, technology, enhance learning

I. INTRODUCTION

A. Background

The development of the information and communication technology industry at this time is very fast, especially in terms of internet usage which experienced a significant increase in the current era. Quoting from the kominfo.go.id page, Indonesia itself was recorded in 2018 as the 6th largest internet user in the world, with 123 million people active in utilizing this network-based technology. Space and time are no longer limiting in the 21st century, this is a result of the increasing development that is being experienced by the information and communication technology industry. The role of technology is inseparable from the role of humans who continue to experiment to meet these human needs to be more effective and efficient. In addition, the development of technology has become a shift from community life, beginning with the ease of communication between humans with the presence of e-mails that can quickly send messages from islands to continents.

In many countries in the world, learning is the focus of concern. Technology is used as a means to help and enhanced people to learn. There are several methods of technology enhanced learning namely; Computer Assisted Instruction (CAI), Computer Aided Learning (CAL), network or online learning, and e-learning. Using technology to help others learn is a very complex process. It needs to be approached in a plan spirit. Learning can be implicit, informal, and formal. Technology can enhance all three kinds of learning as well as their combination. Technology can be applied in different scenarios. Firstly, it can be used to tightened or slacken the bonds between perceiving, learning, knowing, and action. Secondly, it can provide scaffolding for our unsteady attempts at tracking new problems. Lastly, it can be designed into artefacts to shape our behaviours in ways that we only subsequently come to understand and endorse or reject.

The progressive shift of the traditional method of classroom learning to the technological approach method of learning is becoming overwhelming, creating new educational practices, and new global communities of learners in developed nations of the world. The reverse is true with most developing nations especially in many sub-Sahara African countries where the contributions of these changes to formal education is largely unexplored along with possibilities for deepening learners understanding of what and how to learn. On the other hand, the convergence of personal technologies offers new opportunities for informal, conversational, and situated learning. Unfortunately, this is widening the gap between daily learning and formal education, which is struggling to adapt pedagogies and curriculum that were established in a pre-digital era. Many 21st century students receive education that is developed without benefit of existing evidence-based research. Teachers as experts in their own disciplines tend not to be trained in learning educational technology. Therefore, fundamentally, applying technological enhanced learning design effectively demands that we acknowledge there are gaps in the current system of education and a need to take steps to address them [3].

Majority of sub-Saharan African countries are still in the pre-matured stage of integrating technology into their educational systems, particularly in the nursery, primary, secondary, and tertiary level of learning. The new paradigm shift of learning can be seen in both the private and public schools with the sole purpose of enhancing technology learning approach both in and out of the learning environment but yet still facing a lot of difficulties. The

Republic of Cameroon a sub-Sahara African country is also not left out.

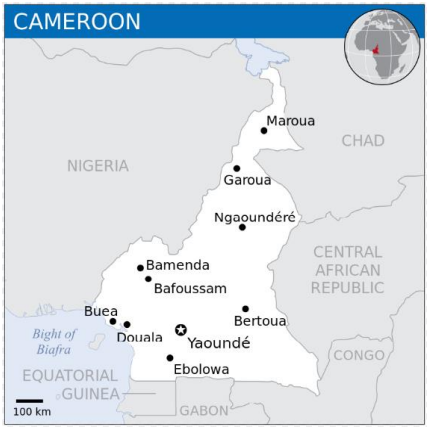

Fig. 1. Map of Cameroon [5]

B. Cameroon Educational System

The educational system of Cameroon is a legacy of the British and French colonial administrations. Therefore, the educational system is divided into two sub-systems namely the French (Francophone) sub-system and the English (Anglophone) sub-system respectively. Currently, there are eight state run universities and a good number of private universities. There are two Anglo-Saxon style universities and six others run purely on the francophone model. Table I is a summary of both structures of education in Cameroon.

TABLE I. THE STRUCTURE OF PRIMARY AND SECONDARY EDUCATION OF THE TWO SUB-SYSTEM [4]

French-Speaking Sub-System		**English-Speaking Sub-System**	
Duration	***Certificate***	***Duration***	***Certificate***
2-3 years nursery education (Kindergarten)	No Certificate	2-3 years nursery education (Kindergarten)	No Certificate
6 years of primary elementary education	CEP (Certificat d'Études Primaires)	6 years of primary elementary education	First School Leaving Certificate
2 years of post primary rural artisan training nursery	Testimonial	2 years of post primary rural artisan training	Testimonial
4 years of middle school training (General Education)	BEPC (Brevet d'Étude du Premier Cycle)	5 years of middle school training (General Education)	General Certificate of Education, Ordinary Level Certificate
3 years post secondary education (General Education)	Certificat Probatoire et Baccalauréat	2 years post secondary education (High School) (General Education)	General Certificate of Education (GCE A' LEVEL)
4 years of middle school training (Technical Education)	CAP (Capacite d'Aptitude Professionnelle)	4 years of middle school training (Technical Education)	CAP (Capacite d'Aptitude Professionnelle)
3 years post secondary education (Technical Education)	Certificat Probatoire et Baccalauréat	3 years post secondary education (Technical Education)	Certificat Probatoire et Baccalauréat

As a way forward to solve some of her technological enhance learning difficulties, technology enhanced learning approach such as Information Communication Technology (ICT) was introduced in the educational curriculum in the 1990s, with no specific policy guiding the teaching of information communication technology. This led to each private and public school applying its own teaching methods and syllabuses. In 2001, ICT programs were officially introduced into the educational curriculum of middle secondary education (commonly called secondary school) and post-secondary education (commonly called high school) by the Ministry of Basic and the Ministry of Secondary Education respectively. Many other initiatives such as the introduction and use of mobile phones and distribution of free laptops computers by the government of Cameroon as a means to enhance learning in schools is yielding little results especially in the English sub-system of education. The difficulties to properly implement of these technologies supersede the progress [4].

Many remote and urban schools in Cameroon are very unattractive when it comes to teaching and learning facilities. This is common in regions of the country where education is the main industry such as the Northwest region. In most of the schools in this region, there is lack of electricity, computers, and poor or no internet connection. Where few computers exist, there are untrained teachers to trained the students. Teachers posted to such schools find teaching a frustrating profession. They find it difficult to teach ICTs or to integrate in subject teaching. Hence there is a great need for an alternative strategy to foster technology enhanced learning in the classrooms across many schools in this region and others [6].

C. Problem Identification

The use of technological enhanced learning materials has been in existence in Cameroon for over 29 years running. On or before the introduction of technological enhanced learning material such as ICTs into the Anglophone sub-system and Francophone sub-system of education by the government of Cameroon, student of both systems was already learning ICT programs but without a unique or harmonised structure from the appropriate authority, in this case the Ministry of Basic and Secondary Education respectively. Many of these students who acquired ICTs skills especially in the 1990s and early 20s, did so for the purpose of financial acquisition and online or internet fraud. They had little idea as to how this technological facility could assist them in enhancing their learning in and out of their learning environment. This attitudes of online or internet fraud till date has permanently become a profession to many students. As such, many of them have dropped out from schools given their level of internet fraud addictions and poverty resulting from internal armed conflicts. Generally, a good number of students in both sub-systems of education of Cameroon lacks the technology enhanced style of learning which is currently being introduced and practice in other parts of the world. This has now become a major challenge to both the government and parents.

Another great challenge is the use of technology devices such as mobile phones and laptops computers by students not for the greater purpose of learning but for relaxation. Most of them spend 90 percent of their time when out of school and even at times during lectures on social media.

The effects of this can be seen in the academic performance of the students and their social behaviour. Marginalization of the minority anglophones schools is one of the challenging problems in the country. The problems ranges from lack of trained teachers in the domain of technology enhanced learning, some teachers resisting to upgrade to new teaching technology, poor and out dated technology learning facilities and language skills in teaching. As such many of the schools in the country especially remote schools and some or almost all of the schools in urban settlement are still using the traditional method of teaching and learning. Finally, technological teaching materials such as the nature and contents of overhead slides presentation used by some teachers to teach students during teaching periods post a great problem to some of the students, especially slow learners. Many of the students complained that the materials displayed during teaching are very few and make them to think narrowly and that the teachers are using them as experimental units to trained themselves on how to teach with overhead slide presentation, thereby making the subject more difficult for them. The idea is that many teachers do not spend enough time to practice and prepare teaching slides or many lack the expertise knowledge of slides preparation presentation.

D. Objective of The Study

From the aforementioned problems therefore, the objectives of this paper will be elaborate to:

- Learning futures that incorporate digital technologies in innovative and transformative ways.
- Issues including the design of learning experiences that connect formal and informal learning.
- The evaluation of learning and technology.
- New social and cultural contexts for learning with technology.
- Social exclusion in an age of personal and mobile technology.
- Attempts to broaden practical and theoretical perspectives on cognition, community and epistemology.

E. Hypothesis

Considering that this paper will be focus on the current problem of technology enhance learning in Cameroon and also to convinced those teachers who still sit on the fence resisting the introduction of technology enhance learning specifically in schools in Bamenda, Northwest region of Cameroon. The following null hypothesis test that there is no problem with the current educational style of learning which is majority traditional in this case will be tested against the alternative hypothesis test that there is indeed a problem with the present style of learning in schools.

F. Significant of The Study

This paper will be of interest to schools, researchers, teachers and students in education and computing, to educational policy makers, and to the general public with an interest in the future of learning with technology.

G. Limitation and Challenge

The researcher faced challenges when this study started. One of such challenge was the time for respondents to respond to questionnaires given to them. The reason for this is obvious. Many of the respondent complaint that their mobile phones have been down for several weeks due to low voltages, consistent light outage or no electricity at all, and in addition they could not give a good respond to the questions because schools have been shot down for more than three years. Direct contact was not possible because the researcher is base in Indonesia meanwhile the research is supposed to be done in Bamenda, the regional headquarter of the Northwest, Cameroon.

II. METHODOLOGY

The information for this study was obtain using survey method through various social media platforms such as WhatsApp individual and group discussions, Facebook forum, and Telegram. A five-points Likert scale questionnaire was used to obtain information from respondents. The researcher successful contacted 47 respondents, among them were 34 secondary school students currently not going to school, and 13 teachers.

III. SURVEY RESULT

TABLE II. SAMPLE RESULT OF THE SURVEY

Observation	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Students	19	16	4	3	2
Teachers	2	1	1	2	7

IV. DISCUSSION AND CONCLUSION

From the results of the survey, it can be seen that majority of the student respondent replied that the old system of learning (that is the traditional system) is still being practiced in many schools across the country and that in schools having technological enhanced learning facilities, there are no teachers to teach the subjects. Among the 13 teachers contacted, 7 of them strongly disagreed that there is no problem with the current style of learning and still maintained the point that the old system of teaching and learning be maintained given that most of them do not have what it takes to gain such technological skills or lack of time. It should be noted in this paper that enough data for proper analysis to show elaborative proof of this claim was difficult to get given the fact that firstly, internet connections in Cameroon are extremely poor and in addition there is constant power outage. Secondly majority schools in that part of the country has been completely shot down for more than three years due to the current crisis pledging the country as such respondent had no means to visit many of the schools. Therefore, the researcher recommends that this topic should be given much longer time and finances so as to obtain proper results for a better conclusion and recommendation to the public and government.

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