

# An Assessment of E-Learning Strategies in Enhancing Quality Education in Cameroon During the COVID-19 Pandemic in Cameroon: Case of Government Bilingual High School Yaoundé

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## ABSTRACT

E-learning had been adopted to facilitate the teaching-learning process during the COVID-19 pandemic in Cameroon. This paper examines the effectiveness of the e-learning strategies vis-à-vis quality education in Government Bilingual High School (GBHS) Yaoundé. To achieve this objective, the exploratory method has been adopted, which is both qualitative and quantitative. Using a purposive sampling technique, 258 teachers and 750 students were selected for the study. The Statistical Package for Social Sciences (SPSS) was used for data analyses and the following results were obtained: e-learning strategies were ineffective in fostering the quality of education in G.B.H.S Yaoundé. In effect, e-learning exerted a mere 33.8 percent influence on quality education. Based on these findings, this study sees global investment in digital pedagogy as a privileged form in strengthening the resilience of school systems when faced with possible future educational emergencies such as those caused by the COVID-19 pandemic.

**Keywords:** COVID-19 pandemic; e-learning; quality education; secondary school

## INTRODUCTION

Electronic Learning is increasingly becoming the norm around the world partly because it is driven by information technology (Reimers, Schleicher, Saavedra & Tuominen, 2020). The integration of electronic technology into pedagogy is motivated by the determination of stakeholders to improve the efficiency of a hybrid educational system that combined the distance and in-person learning perspectives (Mishra, Gupta & Shree, 2020). Nevertheless, the integration of Information and Communication Technology (ICT) in the teaching and learning process in Cameroon, a microcosm of the African state, is still at its embryonic stage (Nsolly & Charlotte, 2016). It is therefore not surprising that the concept of distance learning is faced with significant challenges in terms of appeal and efficiency, despite its known advantages to enhance education and academic training (Abdel-Maksoud, 2018). The overall goal of e-learning is to reach learners who cannot participate in traditional in-person classes due to the prevalence of the COVID-19 pandemic by using ICT tools. Discussing the advantages of e-learning, Brookfield (1987) posits that with the e-learning approach, learners have to take control of the learning process, setting their own goals and determining which learning method to be used. This could pose a threat to its effectiveness in the sense that the majority of learners had not been using this platform before and so they would lack the ability to adequately control learning processes as propounded by Brookfield (1987). Just as every educational venture direly needs quality assurance and control mechanisms, the introduction of e-learning to mitigate the adverse effects of the COVID-19 pandemic had to meet required standards in order to enhance the overall quality of education.

Based on the definitions of quality education by Gatewood Shaver & Gartner (1995), Unicef (2000), and Jaiyeoba & Atanda (2005) the use of the e-learning approach with the upsurge of COVID-19 necessitated efficiency, excellence, relevance, and meeting of expected standards by the stakeholders involved. In effect, quality education is the success with which an institution provides an educational environment that enables students to effectively achieve worthwhile learning goals including appropriate academic standards. This according to Unicef (2000), is characterized by learning standards that someone can get from an institution.

UNESCO (2013) also indicates that Quality is at the heart of education and what takes place in classrooms and other learning environments is fundamentally important to the future well-being of children, young people, and adults. According to the education for all monitoring report (2005, p.17), learner's cognitive development is the major explicit objective of all educational systems and the role of education in promoting the values and attitudes of responsible citizenship and in nurturing creative and emotional development are the two principles characterizing the definition of quality (UNESCO, 2005). Quality education in this paper is therefore perceived as the quality of the teaching and learning processes; ascertaining a link to e-learning strategies adopted by the ministry of secondary education in Cameroon.

In her attempt to adhere to the COVID-19 preventive measures, and curb its spread, Cameroon like many other African countries has had its economic and educational sectors heavily impacted by the adverse effects of the virus (UNAIDS, 2020).

The challenge and inability to effectively enforce social distancing, as a key preventive measure, prompted the immediate and spontaneous shutdown of schools and public institutions nationwide in Cameroon. As a unanimous response to contain the pandemic, the international community through various governments opted for total or partial confinement to control the rapid spread of the virus. This required a move from traditional classroom teaching and learning to online teaching and learning or e-learning which according to UNESCO experts is learning through the internet and multimedia (Yanuschik, Pakhomova & Batbold, 2015). After a set of radical measures that included the closure of academic institutions across the country to curb the spread of this virus in Cameroon, the government decided to put in place e-learning strategies to uphold the educational sector. Nevertheless, to guarantee the continuity of education, public and private academic actors in Cameroon realized the urgent need to quickly switch to digital pedagogy in order to familiarize Cameroonian educational stakeholders with pedagogical practices that integrate ICT (Béché, 2019). Adopting distance learning or e-learning strategies, proved challenging to implement at various levels given a the relatively low internet penetration rate in Cameroon (Tchamabe, 2011). The low internet penetration into Cameroon's educational system thus explains the recent launch of a learning platform called Ohipopo in 2019 (Ngwa, 2020). Ohipopo is the first online learning platform customized for the Cameroonian system of education. The creation of more educational digital platforms and websites by young talented Cameroonians followed including [www.eduirbox.com](http://www.eduirbox.com), [www.sims.cm](http://www.sims.cm), [www.treehouse](http://www.treehouse), [www.learneverwhere.org](http://www.learneverwhere.org), and [www.cam-educ.com](http://www.cam-educ.com) (Ngwa, 2020). The dilemma of effectively implementing e-learning inspired us to analyze, in this paper, the effectiveness of the e-learning strategies put in place in Cameroon during the coronavirus crisis. Within the context of this study, it is important to note that during the COVID-19 crisis, so many countries in the world implemented a range of measures to curb the educational impact of the pandemic (Reimers et al., 2020).

In Cameroon, the situation has not been different, given that policymakers and education stakeholders had to bring to a halt every physical contact between learners and teachers. The imminent suspension of regular classroom lessons had severe negative effects on the educational sector in Cameroon, especially in terms of program coverage and skills acquisition. However, online teaching and learning were introduced by the Cameroon ministry of secondary education to help mitigate the nefarious impact of the COVID-19 pandemic on the attainment of educational objectives. Many school administrators including state media (CRTV) have stated severely that online teaching and learning were carried out in order to contribute to educational quality in terms of knowledge acquisition. This, the government saw as the best way to uphold the educational sector in Cameroon, though many learners especially in rural contexts may find themselves excluded from schooling and unable to access online resources due to the unavailability of infrastructure, electricity, electronic gadgets, and the lack qualified teachers who can assist with online learning (Dube, 2020). It appears that online learning favors urban and well-privileged learners; thus, widening the gap between the poor and the rich, instead of uniting the nation in the fight against COVID-19 (Dube, 2020). As a result, numerous questions continue to plague the minds of stakeholders as far as the effectiveness of this acclaimed online teaching is concerned. It is very unlikely that e-learning will on average replace the learning time lost from regular schooling (Burgess and Henrik, 2020). There will likely be substantial disparities between families regarding the extent to which they can guide their children during the learning process.

According to Oreopoulos, Page & Stevens (2003), key differences between regular classroom education and virtual education include the amount of time devoted to teaching, the non-cognitive skills of the parents, required resources, and also a certain degree of knowledge, given that it is hard for parents to help their child learn something new that they may not understand themselves.

A lot of financial and human resources were employed by stakeholders to enhance the success of online teaching and learning according to information gathered from Cameroon Radio Television (CRTV, 2020) during the month of April. This implies that there would be resource wastage in case this endeavor was ineffective. It will be a serious issue if resources are invested and the set objectives for which the resources were invested are not attained. This will not only affect educational enterprise in particular but will have a negative bearing on society. It is on the above backdrop that this paper assesses the effectiveness of the introduction of e-learning during the COVID-19 pandemic in Cameroon at the secondary school level. This, therefore, leads to the following research question which states: To what extent do the e-learning strategies introduced during the COVID-19 pandemic affect the quality of education in Government Bilingual High School (GBHS) Yaoundé? Consequently, the following research hypothesis ensues: there is a significant link between e-learning strategies (radio, television, and internet) and the quality of education in GBHS Yaoundé during the COVID-19 pandemic. This leads to the main objective of this work which is to show that there is a link between e-learning strategies and the quality of education in G.B.H.S Yaounde during the COVID-19 pandemic.

#### **Theoretical Framework and Methodology**

The theory of social constructivism is deployed to analyze the effects of e-learning strategies on quality education with the upsurge of the COVID-19 pandemic. The educational environment heralds the necessity for learner-centered education where the learner is the pivot of the social process and the focus is on learning rather than teaching as asserted (Young and Maxwell, 2007). Juniu (2006) argues that creating a learning environment that resembles real-life scenarios and settings is salient in assisting learners to integrate, analyze and apply concepts of a discipline.

According to Windschitl (2002), constructivist thinking is applied to classroom practice within a synthesis of cognitive and social perspectives; and this serves as an important intellectual basis. Oliver (2001) on his part states that the use of learning theories can contribute to quality e-learning courses by providing a framework that guides the development and implementation of appropriate teaching-learning activities. In his ideas which constitute the basis for cognitive constructivism, Piaget (1971) maintains that knowledge construction is located in a person's brain. When interacting with their environment, learners absorb or assimilate those ideas that agree with their current cognitive structures and change or accommodate those ideas that do not agree with what they already know. This view is further elaborated on by Vygotsky's (1978) social constructivism which states that cognitive growth occurs first on a social level, and then it can occur within the individual. To make sense of others and construct knowledge on such a social level, allow learners to relate themselves to circumstances (Vygotsky, 1978). Vygotsky, therefore, emphasizes that understanding human thinking and knowledge depends on an understanding of the social experience and the force of the cognitive process derives from social interaction (Vygotsky, 1978, p. 86).

This is traced to the work of Dewey (1933) which emphasizes that knowledge building is produced culturally through interactions with other people within a social context (Rogoff, 1990).

From of methodological point of view, this study was carried out at the Government Bilingual High School (GBHS) Yaoundé. The target population was made up of the teachers and students of GBHS Yaoundé. The school had 624 teachers and 4521 students for the 2019/2020 academic year. In order to obtain a representative sample for this study, the purposive sampling technique was used to select 258 teachers and 750 students. This sampling technique was used because it enabled us to deliberately select respondents who would enable us to meet the purpose of our study by providing salient information. Within the context of this paper, two types of instruments were used: a questionnaire and an interview guide. A questionnaire was elaborated for teachers and students to harness their views on the effectiveness of e-learning during COVID-19. An interview guide was also developed to collect qualitative data with the goal to complement and strengthen the quantitative data collected with the questionnaire. The reason for using a mixed method approach was to enable the collection of data using many tools which will ease understanding of the phenomenon under investigation from various foci.

Content validity of the instrument (CVI) was established. Content validity refers to the extent to which the questions on our questionnaire are related to the variables of the study, and really measure what they are supposed to. According to Marshall and Hales (1971), validity should indicate the relevance of a test for a specific purpose. The CVI for teachers' and students' questionnaires were 0.78 and 0.83 respectively. Based on this result, we, therefore, consider our instrument valid.

In order to establish the reliability of the instrument, we used the test-retest reliability type or the stability reliability type. We first administered the instrument to a group of fifteen teachers.

**Cronbach's coefficient alpha**

$$\alpha = \frac{k}{k - 1} \left( 1 - \frac{\sum \sigma_k^2}{\sigma^2} \right)$$

Where:

$\sum \sigma_k^2$  is the sum of the variances of the k parts which are the items of the test or instrument.

$\sigma$  = standard deviation of the test or instrument.

**TABLE 1:** Reliability Statistics

Instruments	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Teachers' questionnaire	.886	.836	36
Students' Questionnaire	.743	.735	36

Two weeks after the preliminary administration, we re-administered the instrument to the same group of people. The scores were computed to obtain the coefficient of stability index of 0.8. This coefficient of stability is significant because it shows that the instrument had a good test re-test reliability.

**Data Analysis Technique**

The data collected from the field with the use of questionnaires were analyzed using the Spearman correlation index and multiple regression analysis.

**Spearman Correlation**

Spearman Correlation is expressed as:

$$r_s = 1 - \frac{6\sum D^2}{n(n^2 - 1)}$$

Where:

$\Sigma$  = sum

D is the difference between the ranks of X and the corresponding ranks of Y

n= the number of paired ranks

**Data Collection with Questionnaires and interview guide**

As already mentioned above, the rationale for using questionnaires in this study is based on the fact that they facilitate data collection thereby economizing time and financial resources. A total number of 258 and 750 questionnaires for teachers and students respectively were administered to respondents with the intention to collect data. To that effect, we sought the collaboration of the Principal of the Institution who did not only give us the right to contact teachers and students for data collection but assisted in providing us with some contacts that facilitated our data collection phase. Some of the questionnaires were collected on the spot, others through WhatsApp, phone calls, and by rendezvous. Concerning data collection with the interview guide, interview sessions were carried out on arranged days and times.

**PRESENTATION AND ANALYSIS OF DATA**

This section deals with the presentation and analysis of data. It is divided into two sub aspects which are descriptive and inferential statistics. The descriptive statistics are presented using means and standard deviation while inferential statistics is done with spearman rank correlation. 1= strongly agree, 2= Agree, 3= disagree, 4=strongly disagree and Teachers = N: 258; Students = N: 750

TABLE 2: Descriptive statistics

N°	Items	Teachers' Views		Students' Views	
		Mean	Standard Deviation	Mean	Standard Deviation
1	Easy access to ICT tools for teaching and learning	3.5891	1.23574	3.8027	0.24812
2	Appropriateness of mobile phones for e-learning	3.9388	1.72880	3.5667	0.67769
3	Easy accessibility to teachers through an online platform	3.2829	1.45803	3.3653	1.42451
4	Lack of workable knowledge on usability of ICT tools to connect to online platforms for teaching and learning	3.6938	1.14669	3.8360	0.39081
5	Proper knowledge on how teaching-learning platforms operated	3.5969	1.34073	3.6507	0.50321
6	The CBA approach was appropriately used in the e-learning strategies	3.0814	1.20196	3.4653	1.19735
7	Prior training, teaching, and learning platforms	3.4884	1.05577	3.8573	1.05909
8	Course coverage through e-learning was effective	3.9915	1.62119	3.4533	1.58172
9	Teaching sessions more effective through WhatsApp than Zoom, Moodle, Google hangout	2.6434	1.51670	2.8240	1.50334
10	Teaching and learning through the Television was very effective and much was achieved through this medium	3.9915	0.62119	3.8867	0.20081
11	Teaching and learning through the Radio was very effective and much was achieved through this medium	3.6434	0.51670	3.6337	1.00321

The table above presents the global data of this research paper. The views of both teachers and students about the effectiveness of online teaching during the covid-19 pandemic in enhancing quality education in Cameroon are clearly demonstrated here.

From the perspective of teachers, it is seen in the first item that the bulk of the respondents did not have easy access to salient ICT tools which could permit them to actively participate in the teaching and learning exercise. Consequently, the mean of 3.8027 falls in the areas of disagreement. This indicates that most of the students do not have access to appropriate electronic gadgets that could enable effective e-learning or online learning. This corroborates with the findings of Fouda Ndjodo, Ngah & Zobo (2013) who found out that in Cameroon secondary schools; 66.6 per cent do not have computers, 6.2 per cent have a few computers, 9.3 per cent have access to Internet connection, only 3 per cent of public schools have access to limited ICTs, thus teaching remains purely theoretical.

In the second item, dealing with the appropriateness of mobile phones for e-Learning, we realized that teachers and students disagree (3.9388 and 3.5667 respectively) that the android phone was not appropriate for e-learning activities. The responses given by both groups of respondents including teachers and students could be attributed to ignorance and the lack of skills in using mobile androids for online teaching and learning transactions as observed.

The third item focuses on easy accessibility to teachers through online platforms. Here, we observed that teachers, as well as students, disagree on the fact that there is easy accessibility to teachers through online platforms for learning activities. This gave us a calculated mean of 3.2829 and 3.3653 respectively. The reason for these negative responses is the high cost involved in internet credit and the lack of motivation on the part of teachers.

The fourth and fifth items dealt with the lack of workable knowledge on the usability of ICT tools to connect to online platforms for teaching and learning, as well as the proper knowledge of how teaching-learning platforms operate. At this point, most teachers have the essential knowledge on how to connect to teaching and learning platforms and on how the teaching and learning platforms operate.

This is seen in the calculated mean of 3.6938 and 3.5969 which is explained by the fact that almost all of them have android phones, laptops, and e-mail addresses. This reason applies to most of the teachers interviewed, although they mostly use this knowledge for their personal research and interest rather than on teaching. Students on their own part have lesser knowledge on this, given their inaccessibility to ICT tools for teaching and learning. Hence, workable knowledge on usability of ICT tools to connect to online platforms for learning, and proper knowledge on how teaching-learning platforms operate have a mean of 3.8360 and 3.6507 for students.

Item six on the table stipulates that the CBA approach was appropriately used in the e-Learning strategies. But with close observation of the calculated means of 3.4884 and 3.8573 for both teachers and students respectively, it is clear that the CBA approach was not appropriately used in the e-learning strategies put in place during the COVID-19 pandemic. In item 7 which deals with prior training, teaching, and learning platforms, teachers and students strongly disagree with a mean of 3.4884 and 3.8573 respectively.

Item 8, which states that course coverage through e-learning was effective, was also strongly disagreed with by both groups. This is contrary to item 9 which says that teaching sessions were more effective through WhatsApp than Zoom, Moodle, and Google hangout. At this level, students strongly agree with this with a mean of 2.8240, while teachers agree with the calculated mean of 2.6434. It implies that learning through WhatsApp was interesting and preferable to teaching and learning through other platforms.

The tenth item which says teaching and learning through Television was very effective and much was achieved through this medium, contradicts the next point which talks about the effectiveness of teaching through radio. Regarding learning through the television, teachers strongly agree to give us a calculated mean of 3.9915 as well as students with 3.8867. On the other hand, it was strongly disagreed by both teachers and students on the point that teaching and learning through the radio was very effective and that much was achieved through it (3.6434 and 3.6337 respectively).

Hence, no positive results were received through radio teaching according to both teachers and students.

The eruption of COVID-19 took the educational system by surprise because the sector was ill-prepared to implement an elaborate e-learning strategy. We realized that most of the respondents lacked appropriate knowledge of educational ICTs. That holds true with online platforms such as Google hangouts, Moodle, etc. Worse still, prior training was not carried out in this domain to equip teachers and students on how to deploy relevant skills to enhance effective e-learning during the COVID-19 pandemic. Given the aforementioned scenario, e-learning was not very effective, as teachers and students disagreed that teaching through the television and radio was effective. They emphasize that they did not achieve much through the television and the radio which were used to teach learners at the primary and secondary grades. This was complimented by the views of some teachers who indicated that teaching through state media (television and radio) was absurd not effective because the coverage

of the curriculum was not systematic and did not give room for teachers to interact with learners. This could be a demotivating factor for learners to effectively participate in the process. From this perspective, it can be concluded that the usual classroom-based teaching and learning mode was more effective, less distractive and more preferable to both teachers and learners than the e-learning strategies put in place by the government during the COVID-19 pandemic period.

**Alternative hypothesis**

There is a link between e-learning strategies and the quality of education in GBHS Yaoundé during the COVID-19 pandemic.

**Statistical Hypothesis**

The limited supply and poor mastery of ICTs, poor internet connection and constant power cuts resulted to a weak relationship between e-learning strategies and the quality of education in GBHS Yaoundé during the COVID-19 pandemic.

**TABLE 3:** Correlations for hypothesis

		e-learning strategies	Educational quality
Spearman's rho	e-learning strategies	Correlation Coefficient Sig. (2-tailed) N	1.000 . 543
	Educational quality	Correlation Coefficient Sig. (2-tailed) N	0.338** 0.00 258
			0.338** . 546

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From the correlation table above, we deduced that the relationship between e-learning and the quality of education is significant. This is based on the fact that the level of significance is 0.00 thus, it is lesser than 0.05 which is the alpha and the standard error margin. Alternatively, looking at the spearman rank correlation index of 0.338, we can conclude that the bond between the two variables under study is weak, although it is positive. One can therefore submit that e-learning exerted a mere 33.8 percent influence on quality education. This indicates that the introduction of e-learning strategies in the institution of our case study was not efficiently implemented to enhance the quality of education, especially in the teaching and learning as processes. This information corroborates with the descriptive statistics presented above which highlight the fact that many of the respondents identified many lapses around the e-learning approaches implemented in the institution studied in this paper. The e-learning strategies used in Cameroon during the coronavirus crisis were to an extent effective in optimizing skills acquisition. It can thus be affirmed that there is a link between e-learning and the quality of education, especially in teaching-learning transactions in Government Bilingual High School Yaoundé during the COVID-19 pandemic.

**INTERVIEW RESULTS**

In the main question posed, we requested the respondents to assess the effectiveness of online teaching during the covid19 pandemic, and the following results were obtained:

**Respondent 1**

*“My children could not study at home because the environment at home was not very conducive and often, frequent blackouts constituted a major setback to follow the lessons consistently during lessons, frequent load shedding affected the television set. Consequently, the learning process was frequently interrupted”*

**Respondent 2**

*“Most of the lessons taught through the television and radio were void of the appropriate didactic materials and real substance and, the duration of the lessons was always very limited”*

**Respondent 3**

*“Qualitatively, very little was covered in terms of the implementation of the school curriculum. The lack of interaction between the teachers and students prevented teachers from delivering their lessons appropriately, and impeded students from absorbing the lessons appropriately. There was also a qualitative deficit in the teaching and learning process”.*

**Respondent 4**

*Online teaching increases the inequality gap between students from rich and poor homes. Most students from poorer homes did not have equal access to the learning platform at the same time as their counterparts from wealthier families. Unreliable and epileptic electricity supply impeded the effective implementation of the e-learning package.*

**Respondent 5**

*During the covid-19 pandemic, most of the children never had time to focus on the television to attend teaching session, as some of them were on the streets doing petit trade to support their families despite the counter measures put in place to fight the COVID-19 pandemic. Consequently, students from well to do homes benefited much more from the e-learning strategies than students from poor homes, whose major preoccupation was their subsistence even at the peril of their lives through exposure to the coronavirus”*

**Respondent 6**

*“Not every home has got a functional television or radio set. Therefore, government should not be confident that the teaching and learning process through the television was effective”*

The data in table above and the responses from interviewees, permits us to answer our first research question by affirming that the online teaching learning during the covid-19 pandemic lockdown was not very effective in improving quality education first because the educational actors were not technologically ready to carry out online teaching and learning. This is backed by several elements such as the dearth in available ICT learning and teaching platforms, technological illiteracy both for teachers and students, internet and electrical blackouts, and so on.

### DISCUSSION OF FINDINGS

This scientific paper sets out to assess the effects that e-learning has had on quality education in GBHS Yaoundé during the COVID-19 pandemic. Discussing our findings takes us to our alternative hypothesis which states: that there is a link between e-learning strategies and the quality of education in G.B.H.S Yaoundé during the COVID-19 pandemic. From the collected data, our statistical hypothesis revealed that there is a weak link or relationship between e-learning strategies put in place during the COVID-19 pandemic and the quality of education. This is explained by the limited supply and poor mastery of ICTs by both learners and teachers, poor internet connection, and constant power cuts. As a result, the introduction of e-learning teaching and learning option, did not improve the quality of education in the said institution (GBHS Yaoundé). From our statistical hypothesis, there is no doubt that the adoption and implementation of e-learning strategies as a teaching and learning approach were not effective in enhancing quality education in G.B.H.S Yaoundé. This ineffectiveness according to both learners and staff of G.B.H.S Yaoundé, was caused by several factors including; frequent power cuts, internet blackouts, Technological challenges such as insufficient, inadequate, and outdated computer equipment, the lack of techno-pedagogical skills by teachers; the lack of techno-pedagogical training and financial challenges. These factors according to Dube (2020), are impediments to an effective transition from the traditional approach to education to online teaching and learning during the COVID-19 pandemic. This to him contributes to widening the gap between the rich and the poor (Dube, 2020).

The fact that at this time e-learning is instructor-led, requires teachers to be more knowledgeable in information and communication technologies (ICT) in order to render the process more effective. This was not the case in G.B.H.S Yaoundé and so the lack of ICT skills by teachers prevented them from being actively involved in the process of social constructivism either through the zone of proximal development or by scaffolding (Vygotsky, 1978). The process of this theory assumes that cognitive growth first occurs on a social level and later on the individual level, therefore emphasizing the role of the Zone of proximal development (Vygotsky, 1978). Thus instructors who are facilitators in social constructivism first provide support and help for learners which later decreased and students learn independently. Teachers' inability to sustain these processes automatically impeded learning in general and the attainment of pedagogic objectives.

Looking at interviewee responses, as well as items 9 and 10 of table 2, one would realize that the choice of television and radio as main teaching and learning media was too limited to enhance quality of the teaching-learning process. From the collected data therefore, it was revealed that e-learning strategies influenced the quality of education in Government Bilingual High School Yaoundé during the COVID-19 just by 33.8 percent.

The fact that the degree of influence is below average, is indicative of the fact that e-learning would have had more positive fallouts on the quality of education if salient information and communication approaches were well integrated into the pedagogical process. The approach clearly lacked flexibility and was characterized by limited access to the internet. Consequently, it is important to restructure Cameroon's educational system to be ready for any unpredictable and unprecedented future occurrences.

### CONCLUSION

The objective of this paper was to investigate the effectiveness of the e-learning strategies put in place in Cameroon to enhance quality education in schools during the COVID-19 pandemic. In this vein, our inquiry focused on assessing the link between the e-learning strategies adopted in G.B.H.S Yaoundé during this period and the optimization of skills acquisition. The outcome of our inquiry showed that these e-learning strategies were ineffective in fostering the quality of education as expected. Reason is that teachers and students were not quite interactive in the existing learning platforms. Also, most students, as well as teachers, did not have access to salient ICT devices and most teachers lacked the skills to adequately use existing platforms such as Moodle, google hangouts, google meetings, and so on (Dube, 2020). To make things worse, the crisis in the Far North, East, Northwest and South west regions have sent a huge flux of students into urban area, especially Yaoundé. These learners under the canopy of internally displaced persons (IDPs) are mostly from the rural settings where contacts with ICT tools and even electricity supply is problematic thus e-learning became ineffective; widening the gap between e-learning and quality education in Yaoundé especially G.B.H.S Yaoundé. In this light, our findings indicated that e-learning strategies influenced the quality of education by a low rate of 33.8%. Despite the weak link between e-learning and quality education, the abrupt implementation of e-learning during COVID-19 at least took teachers and students from a low level of acquaintance with ICTs to a higher level of zeal and awareness of the necessity of this teaching and learning medium. This makes it mandatory for the state to take advantage of this awareness, zeal, and acquaintance to invest in this domain so that the teaching and learning process in this era of the competency-Base Approach (CBA) is more practical and flexible. As Young (2002) backs up: this flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more learners who previously were constrained by other commitments (Syed, 2013). By virtue of this, there is a need to highlight the necessity for the government to invest in digital pedagogy and make it more useful and effective by familiarizing educational actors with pedagogical practices that integrate ICT. These include student-teachers in teacher training colleges whose training programs must incorporate a good chunk of ICT content for them to be conversant with the necessary e-learning tools (Young, 2002). Teachers in the field should be provided with continuous in-service empowerment on e-learning tools. Meanwhile, the government should equip schools with modern ICT laboratories, and multimedia center and develop syllabi that will permit students to acquire the necessary skills to undertake online distance learning.

There is need for the government to restructure the content of professional growth programs by paying more attention to the training of teachers in e-learning strategies. This would enable teachers to obtain skills on various learning platforms which can be used to optimize teaching and learning processes.

In addition to professional programs, the government can equally introduce ICT training programs in teachers' training colleges across the country in order to beef up the e-learning potential of Cameroon in a globalizing and competitive world. The government needs to solve the problem of an electrical power outage by improving energy security which has a strong bearing on ICT operations. Students also need to have some ICT skills to enable them to participate in online lessons through various e-learning platforms.

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