Attitude Toward Technology Integration And Effective Technology Usage In The Teaching And Learning Process: The Case Of Primary School Teachers In Cameroon

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Abstract: The aim of this study is to examine teachers' attitude toward technology integration and the level of effective technology usage during COVID - 19 in primary schools. The ineffectiveness of primary school teachers to integrate educational technologies and build E- learning platforms during COVID - 19 to facilitate distance learning with their learners motivated the study. The study made use of a survey research design. Data was collected using the level of computer use for instructional teachers and attitude toward technology questionnaire scales. Related literature was reviewed based on technology integration and attitude toward technology integration. The samples were 398 primary school teachers selected for the study through simple random sampling procedure. Data was collected from teacher-respondents using tables, percentages, charts, mean, standard deviations and independent t-test. The findings indicated an average attitude towards technology integration and effective technology usage. There is high attitude toward technology integration and average effective technology usage indicating that there is a need to improve on effective technology usage in the teaching learning process. The study strongly recommends that teachers should teach using computers as tools for demonstration and presentations and to teach new subject knowledge, financial support should be provided for teachers to attend conferences and pedagogic seminars on technology integration. Schools should provide consistent hardware and software application updates for teachers and learners.

Keywords: Attitude, technology integration, effective technology usage, primary school teachers, Cameroon.

I. INTRODUCTION

In an interconnected world, which is transforming into a global village, caused by the application of ICT to all sectors of the society, quality teaching and learning need effective technology integration in education. Technology integration concerns the use of technology to achieve learning outcome expectations and empower learners learning throughout the teaching program (Cartwright & Hammond, 2003; Koçak-Usluel, Kuúkaya-Mumcu, & Demiraslan, 2007). The integration of ICT occurs when school instructors are trained in a wide range of ICT uses and in the decision of their effective roles and applications (Summaka et al, 2010). According to Kozma and Anderson (2002), schools and classrooms are transformed through ICTs by bringing in new

programs based on real problems around the world, providing tools to enhance teaching and learning, giving learners and their instructors opportunities for reflection and feedback, constructing local and global societies that concern learners, teachers, parents, scientists, and other interested stakeholders.

Technology has undergone through evolution and changed the society that has totally transformed people ways of working, thinking and living (Grabe, 2007). Educational institutions like schools and many others that are entrusted to prepare learners to live in "a knowledge society" should consider technology integration in their curricula (Ghavifekr, Afshari & Amla Salleh, 2012). Educational technologies help pupils to develop their thinking skills, enhance their motivation and increased their knowledge and intelligence (Grabe & Grabe, 2007; Hussain et al., 2011). ICTs are of great

important in primary teaching and learning because it help pupils to search for relevant information and organize what they have found.

In Cameroon, ICT was introduced in Basic education following Order no 5592/B1/780/MINEDUB/CAB of 24 September 2007. The ICT National Sequential Schemes of work and educational programs were published in 2008. They were made accessible and available to Nursery, Primary and Teacher Training institution (Ngajie & Ngo, 2016). To Mbangwana (2008), textbooks on ICT have been written and made available by the National Book Commission to enhance ICT teaching in schools. The draft strategy for the implementation of ICT national policy in the ministry of basic education which was made available from 2007- 2015 was drawn up in 2007 (Ngajie & Ngo, 2016). This strategy was targeted at training primary school administrators and teachers, the benefits of ICTs and how to integrate technology in the teaching and learning process. According Nkwenti (2015), ICT in basic education is implemented in the form of organised pedagogic seminars by the Ministry of Basic Education through ICT experts and pedagogic inspectors. Since the outbreak of coronavirus (COVID-19) in Cameroon and other African countries, there is greater need for ICT integration and E-learning platforms to facilitate the teaching and learning process. Teachers and learners need to effectively facilitate the teaching learning process through these platforms and develop positive attitude toward educational technology and distance learning. Primary school teachers still face difficulties to transform their pupils learning through E-learning with digital technology during COVID-19. This research study provides insight in better understanding teachers' attitude toward technology integration and the level of effective technology usage in the teaching learning process.

A. EFFECTIVE TECHNOLOGY INTEGRATION

According to Ghavifekr & Rosdy (2015), nearly all school subjects starting from languages, mathematics, arts, science, humanistic and other areas can be studied effectively through ICTs tools and equipment. Technology helps to provide complement and supports for both instructors and their learners. This is done through effective teaching and learning with computers as learning materials (Jorge et al., 2003). Computers technology are add-on supplements needed for the better teaching and learning. The integration of ICT in education is necessary because teaching and learning take place in the school environment and when teachers and students are not physically presence in class but at a distance (Ghavifekr & Rosdy, 2015). Teaching and learning with technology offers interesting ways such educational videos, storage of data, simulation, the usage of databases, guided discovery, mind-mapping, music, brainstorming, World Wide Web (www) making the learning environment more meaningful and fulfilling (Finger & Trinidad, 2002). Gülbahar (2008), points out that effective ICT integration in education needs the availability of hardware and software applications, usage of resources, adequate opportunities for in-service training and well-prepared teachers that are innovative and have good knowledge of implementation strategies of technologies. The perceptions of teachers, ICT competences

level and difficulties they encounter are some of the challenges to investigate carefully to suggest effective strategies for the integration of ICT in education. (Gülbahar, 2008). Teachers need to have a good knowledge of the pedagogical role of technology because it will enable them to effective use technology during their teaching activities and practices (Hennessy et al., 2005). Teachers who have done ICT courses and training teach effective with technology more than those that have not undergone ICT training and courses (Winzenried, Dalgarno & Tinkler, 2010). Teachers need to understand the advantages of technology to conduct and teach meaningful lessons with technology. They should also attend training pedagogic courses to learn about the integration of ICT in education because most educational institutions used peer-tutoring systems (Warwick & Kershner, 2008).

According Agbatogun (2012), there are many factors that enable the integration of ICT in the teaching and learning process such to policy of education, updates of ICT hardware and software facilities, readiness and competences of teachers to use ICT into pedagogical practices, continuous professional training and technical support. Teachers should be provided with the necessary opportunities for them to develop and implement ICT-rich teaching activities as they will enable them to integrate right technologies into the classrooms (Brush, Igoe, Brinkerhoff, Glazewski & et. al., 2001; Robyler, 2003). The ICT-enhanced teaching and learning practices can occur when teachers experience and practice a variety of computer technology usage (Wheatly, 2003). The training for the use of technology should be made available to teachers as an element of the courses consistently as Collier, Weinburgh & Rivera (2004), opine that developing programs that will provide teachers with enough, real-world opportunities for learning and applying technology skills constructively and systematically to scaffold the mastery of advanced technologies. Staples et al. (2005), outline three scaffolds that have a significant effect on the integration of ICT which include teacher leadership, alignment with the curriculum mission and public private roles for the recognition of technology. Rowley, Dysard & Arnold (2005), provide an infusion technology program for teachers to integrate technology through the provision of online technology-enhanced learning topics and practices.

Jones & Preece (2006), point out that both learners and teachers need to trust the technology for better technological performance and reduce resistance to technology. Teachers should have competent in the integration of ICT tools and build trust in technology (Ghavifekr et al, 2014). There are many professional development approaches for teachers to integrate digital technology in education and the incorporation of digital technology into education is still an ongoing process (Kiran & Soumen, 2018). Teachers should update their knowledge and competences as the school program and technologies change because learning is no more teacher centric process but flexible process and learner centric (Kiran & Soumen, 2018). Teachers need different communication and technical skills such as word processing skills, chat rooms, web page authoring and various types of technology tools like compress and decompress of files File, Transfer Protocol (FTP), (Ghavifekr et al., 2014). To develop knowledge and skills in using digital technological tools, training institutions

for teachers should develop and design important professional development courses for school instructors (Oyeronke et al., 2015).

Professional training and development involves the types of educational learning experiences and the application of new knowledge and skills that will increase teacher performance on their job which is related to the individual's work (Mizell & Forward, 2010). Effective integration of digital technology needs a change in the practices that take place in the classroom than simple technical skills acquisition. Teachers need to be familiar with approaches, possibilities, and application of digital technology to effective teach and facilitate pupils' learning (Kiran & Soumen, 2018). The integration of digital technology in teaching and learning has changed the classroom into an active participant's setting where the knowledge evolves, and there is powerful professional teaching (Kiran & Soumen, 2018). teachers need to acquire knowledge and competences to be able to survive and impart best knowledge and practices to their learners (Kaur & Swarup, 2016).

Concerning the pedagogical functions of mobile devices in in the teaching and learning process, Sung, et al (2015), believe that mobile devices are used as a reinforcement tool and little projects have used mobile devices to help with reflection and constructive thinking. The main pedagogical functions that are attached to the Learning Management System as computer applications for teaching and learning concern providing exercises and a space of exploration, presenting information and providing a space of exchange between teachers and their learners (Ouadou et al, 2018). These pedagogical functions relate to one or many theories of learning, provide learners to acquire individual and collective knowledge based to the kind of interaction that takes place between her and the sources of information at her disposal (Ouadou et al, 2018). Everyone has the tasks to deal with such as consulting and reading the pedagogical materials, solving the problem situations, realizing the exercises for interaction, exploring the learning setting, discussing through synchronous and asynchronous communication tools (Ouadou et al, 2018).

B. ATTITUDE TOWARDS TECHNOLOGY INTEGRATION

The achievement of a meaningful computer technology in the teaching and learning process is influenced by many factors and one of these factors is the attitude of teachers toward the use of technology in education (Al-Zaidiyeen et al, 2010). The success of technology integration in the educational environment greatly depends on teachers' attitudes toward technology integration (Albirini, 2006, Baylor & Ritchie, 2002). Teachers' attitudes are considered as a key predictor of the technology usage in the educational environment (Albirini, 2006). Teachers' attitudes toward technology facilitate the acceptance and actual use of computers. Effective technology integration in the classroom depends on the teachers' attitudes toward technological tools (Kluever, Lam, Hoffman, Green & Swearinges, 1994).

According to Volk et al (2003), when attitude is developed and once established can encourage or stop further learning. Ozdemir (2012), believes it is not easy for teaching experience and preferred behavioral changes to be shaped in an environment where learners' attitudes are not considered. Even though the development of positive attitudes in learners is not an easy task (Boadu et al., 2014), technology-based teaching and learning activities create an environment where there is great dedication and engagement of learners, encouragement and motivation of slow learners to engage in classroom activities (Kassim et al., 2004). From the study carried out by Rampersad (2011), on how students' interest, motivation and engagement in modern studies were affected by technology integration, it reveals that the ICT integration helped to create more conducive environment for pupils learning. Technology help to capture learners' interest which can led to their greater involvement and engagement in classroom lessons.

Learners recall contents with the use of technology because it presents real examples on which students can identified and learned. To Lavin et al (2011), learners who are taught by their teachers using technology moderately or seriously increase their level of attentiveness and retention in class. They have a positive impact on the content learned and there is an increased in their desire to take more lessons in each subject area (Boadu et al., 2014). Learners need to be provided with didactic and technical strategies for them to become competent users of recent technologies and resources. They need to acquire skill and ability to cope with current technological demands and must acquire the capacity to use these technologies effectively at technical, rational and critical levels (Maria del, 2006). Loyd & Gressard (1986), cited by Rhonda (2002), point out that positive attitudes toward computers are correlated positively with teachers' level of experience with computer technology. The confidence a teacher has in the use of computer technology greatly affects his or her effective implementation of technological strategies and methods in the classroom environment (Rhonda, 2002). To Woodrow (1992), positive teacher attitudes toward computers technology are widely seen as an important condition for effective integration of technology in schools (Rhonda, 2002). Teachers who have both positive attitudes and adequate computer literacy skills integrate technology successfully into the classroom (Hignite & Echternacht, 1992, Rhonda, 2002).

Ghavifekr & Rosdy, (2015) believe that the major hindrance of integrating technology in education is the beliefs teachers have as they are the people who implement the changes that take place in the teaching and learning process. According to Cassim & Obono (2011), the relation between teachers' belief and technology integration are high, and teachers' role is very relevant especially in technology pedagogy which could increase students' achievement, creativity and critical thinking (Ghavifekr & Rosdy, 2015). The major hindrance of technology integration in schools are competence, confidence, and attitudes of teachers as they reduce the level of technology integration. Positive attitudes and perceptions toward ICT are very necessary because it causes an increased in computer competency and literacy skills (Wang, 2002; Carey, Chisholm & Irwin, 2002, Gülbahar, 2008). To Ertmer (2005), it is difficult to overestimate the effect of teachers' beliefs in technology integration in education. Even though many research studies

show that teachers have positive attitudes toward ICT and ready to use it, they are not given the chances and opportunities to practice and they do not have access to good teaching models (Breen, Lindsay, Jenkins & Smith, 2001; Iding, Crosby & Speitel, 2002, Gülbahar, 2008). This is caused by deficiency of technology possess by teachers since institutions and instructors play a major role in the orientation of students near new learning settings and environments (Odabasi, 2000). Research in the field of technology integration identify the integration of technology efficiency and in these research studies indicate that teachers have positive attitude toward ICT integration (Brush, Glazewski & Hew, 2008); and there is a relationship between pedagogical beliefs and the integration of technology in school environments (Chen, 2008; Ertmer et al., 2012; Hermans et al., 2008; Kim et al., 2013; Liu, 2011).

C. OBJECTIVES OF THE STUDY

The following research objectives are guiding the study:
- ✓ To investigate the teachers' attitude toward technology integration in in the teaching learning process during COVID - 19 in primary schools.
- ✓ To examine the level of effective technology usage in the teaching learning process during COVID - 19 in primary schools.
- ✓ To examine the effect of demographic variables on attitude toward technology integration and effective technology usage in the teaching learning process during COVID - 19 in primary schools.

II. METHODOLOGY

A. PARTICIPANTS

The respondents for this study were 398 primary school teachers selected from anglophone and francophone primary schools both private and public schools in Mfoundi Division, Centre region of Cameroon. The sample was selected using the simple random sampling procedure where the population members were assigned unique numbers, placed in a container, and well stirred. The numbers were then drawn from the container and the process were repeated until the required sample numbers were obtained.

Accordingly, both 146 males (36.7%) and 252 females (63.3%) participants were included in the research process and their ages ranges between 21 to 56 years old. There were 157 contract teachers (39.4%), 193 grade one teachers (48.5%), 9 senior grade one (2.3%) and 38 untrained teachers (9.5%). 109 participants were from public schools (27.4%) and 289 from private schools (72.6%). 78 participants from class one (19.6%), 58 from class two (14.6%), 66 from class three (16.6%), 65 from class four (16.3%), 64 from class five (16.1%) and 67 from class six (16.8). The number of pupils in this classes ranges from 03 to 150 and 216 teacher respondents were from the anglophone (54.3%) and 182 from francophone (45.7%) sub systems of education. 78 participants were holders of ordinary level certificate (19.6%), 236 holders of advanced level certificate (59.3%), 75 holders of bachelor of education (18.8%), 9 holders of master of education (2.3%) and their teaching experiences ranges from 1 to 30 years.

B. MATERIAL AND DESIGN

A questionnaire was used to collect data from the research respondents in a survey research design. Effective technology usage and attitude toward technology were evaluated using two sub scales research instruments from two researchers which are Albirini (2006), measuring the teacher's attitudes and Isleem (2003) measuring technology usage. Attitude toward technology was measured using teachers' attitudes toward ICTs sub scale (I like to acquire more about effective approaches to technology integration in the teaching and learning process, …). Effective technology usage was measured using the level of computer use for instructional teachers sub scale (I use a computer for demonstration working with presentations with learners e.g., PowerPoint, …). All the instruments were adapted and modified from Ghavifekr et al., (2014) and the two sub scales questionnaires adopted a four-point Likert scale format to assess teachers' responses for each related section (strongly disagree =1, disagree =2, agree =3, strongly agree =4).

The face and content validity of the questionnaire instrument were determined. Reliability of the instruments used in this research work was assessed using test-retest reliability. This was to estimate the components of measurement error by repeating the assessment procedure on the same subjects under the same conditions and comparing observations. The questionnaire was first tested to a group of 30 respondents and after two weeks, the same questionnaire was still conducted to the same group of respondents before administering them. Their responses were correlated, and the results analyzed indicating a high level of consistency. The Cronbach's reliability investigation was performed to test internal consistency of the study research variables. The reliability was evaluated by Cronbach's alpha coefficient which stood at 0.91 for effective technology usage and 0.88 for attitude toward technology integration.

As far as the ethical issues were concerned, all the required permissions were obtained from the primary school administrations and inspectors. The research respondents were informed prior to research and their anonymity was highly respected. The teachers' respondents responded to the questionnaires in the classroom environment. It took them 10 to15 minutes to complete a paper-pencil based questionnaire format. Their personal information and names were not requested, and they were kept secret to respect their anonymity.

C. DATA ANALYSIS

The research data was analysed using percentages, charts, tables, mean and standard deviations to be discussed. Version 25.0 Windows for Statistical Package for Social Sciences (SPSS) was used to analyse data. To give meaning to our study data, the various statistical tools: descriptive statistics, mean, standard deviation and independent t-test was use. This was to compare the mean values and test whether the sample from the study population have different mean values.

III. RESULTS

A. ATTITUDE TOWARD TECHNOLOGY INTEGRATION

Items	Mean	Std. Deviation
I like to acquire more about effective strategies for technology integration in the teaching and learning process.	3.45	.758
I would like to understand the available resources if schools choose to support the integration of technology in teaching and learning	3.43	.713
I like to know how the integration of technology provides better performance than traditional teaching and learning	3.39	.736
I intend to understand how the integration of technology in the school system increases awareness and competition	3.41	.718
I desire to know how the integration of technology increases the quality of interaction between teachers and learners	3.42	.726
I desire to know how to integrate technology and improve the way I arrange and present materials during instruction	3.41	.712
I desire to understand the qualifications that I must acquire to effective teach with technology.	3.37	.707
I will integrate technology in teaching and learning in future	3.46	.675
I plan to often integrate ICT in school as a part of teaching and learning	3.32	.746
I am not having interest about the integration of ICT in the teaching and learning process.	1.80	1.044

Table 1: Attitude toward technology integration

It can be observed from table 1 above that the highest score is where teachers will integrate technology in teaching and learning in future (M = 3.46; SD =0.676; t (397) =28.302; p < .001), like to acquire more about effective strategies to ICT integration in the teaching and learning process. (M = 3.45; SD =0.76; t (397) =24.915; p < .001), would like to understand the available resources if schools decide to support the integration of ICT in teaching and learning (M = 3.43; SD =0.71; t (396) =26.01; p < .001), desire to know how the integration of technology increases the quality of interaction between teachers and learners (M = 3.42; SD =0.73; t (395) =25.123; p < .001) and desire to know how to integrate technology and improve the way they arrange and deliver material during instruction (M = 3.41; SD =0.71; t (395) =25.560; p < .001). The lowest opinion is when teachers are not interested about ICT integration in the teaching and learning process. (M = 1.80; SD =1.044; t (397) = -13.447; p < .001).

From the mean attitude toward technology integration and Independent sample t- test, the results indicate that there is a positive and high (M =3.25; SD=0.518; *t (392) = 28.573, p= .000),* level of teachers' attitude toward technology integration in the teaching learning process among primary school teachers.

B. EFFECTIVE TECHNOLOGY USAGE

Items	Mean	Std. Deviation
I use a computer for demonstration and presentations with learners (e.g., PowerPoint)	2.29	1.030
I use a computer for demonstration working with available presentations with learners	2.24	.935
I use computer to teach new subject knowledge, i.e. the pupils obtain knowledge straight from the computer	2.22	.972
I use educational software applications with my learners to teach and learn subject knowledge through drill and Practice	2.29	.962
I encourage learners in the classroom to search for important information on the Internet	2.81	.961
I instruct learners to follow up class lesson and work at home on the computer	2.75	.925
I teach my learners to take into consideration the implications and advantages of integrating technology in teaching and learning.	2.95	.766
The school has articulated the mission and innovation of technology integration in teaching and learning.	2.90	.897
The school vision and mission of integrating technology motivates teachers to use technology effectively during instruction.	2.94	.839
The integration of technology has been conceived as an important element in maintaining competitive benefits of the school.	2.93	.853
Important agreements and decisions concerning the integration of ICT are available at all levels for teachers in the school	2.79	.899
The school encourages teachers to be autonomous and teamwork to enhance technology integration in teaching and learning.	2.86	.848
There is flexibility for teacher to adopt technology integration in the classroom environment.	2.78	.873
I have the sovereignty and responsibility on the integration of technology to make teaching and learning attractive and better.	3.04	.760
I receive support to attend pedagogic seminars, workshops and training programs to effectively integrate technology in teaching and learning.	2.56	.928
The school provide financial support for teachers to attend pedagogic seminars and conferences on the integration of technology in the teaching and learning process.	2.26	1.033
There are training programs provided for teachers in schools to update their knowledge on the importance of teaching and learning with technology.	2.51	.985
Technology coordinators are organized and appointed by the school to provide technical support for the entire teachers in the school	2.35	.987
The school constantly provide and update hardware and software applications for teaching and learning.	2.28	.988

Table 2: Effective technology usage in the teaching and learning process

It can be observed from table 2 above that the highest score is where teachers have the sovereignty and responsibility on the integration of technology to make teaching and learning attractive and better (M = 3.04; SD =0.76; t (397) =14.04; p < .001), teach their learners to take into consideration the implications and advantages of integrating technology in teaching and learning (M = 2.95; SD =0.77; t (397) =11.712; p < .001). The school vision and mission of integrating

technology motivates teachers to use technology effectively during instruction. (M = 2.94; SD =0.897; t (396) =10.442; p < .001), The integration of technology has been conceived as an important element in maintaining competitive benefits of the school (M = 2.93; SD =0.85; t (396) 10.034; p < .001) school has articulated the mission and innovation of technology integration in teaching and learning (M = 2.90; SD =0.897; t(397) =8.945; p < .001). The lowest opinions are when teachers use computer to teach new subject knowledge, i.e. the pupils obtain knowledge straight from the computer (M = 2.22; SD =0.972; t(397) = -5.672; p < .001), use a computer for demonstration working with available presentations with learners, (M = 2.24; SD =0.935; t(397) = -5.524; p < .001), school provide financial support for teachers to attend seminars and conferences on the integration of technology in the teaching and learning process (M = 2.26; SD =1.033; t(397) = -4.563; p < .001). school constantly provide and update hardware and software applications for teaching and learning (M = 2.28; SD =0.988; t (397) = -4.515; p < .001). use educational software applications with their learners to teach and learn subject knowledge through drill and Practice, use a computer for demonstration and presentations with learners (M = 2.29; SD =0.962; t (397) = -4.375; p < .001).

From mean effective technology usage and Independent sample t- test, the results indicate that there is an average significant effect t (M = 2.62; SD=0.52; *t (390) = 4.481, p= .000)* on effective technology usage in the teaching learning process among primary school teachers.

From the research findings, there is a weak correlation (r (391) = .126, p < .05) between attitude toward technology integration and effective technology usage in the teaching learning process. This indicate that other variables like technological knowledge and competences, professional development, self-efficacy can be explored to explain effective technology usage in the teaching and learning process.

C. DEMOGRAPHIC VARIABLES

Concerning the effect of demographic variables on attitude toward technology integration and effective technology usage, the results indicate the attitude toward technology integration for male (M = 3.206, SD = 0.579) and female (M = 3.271, SD = 0.471), t (391) = -1.208, p > 0.05) and effective technology usage for male (M = 2.704, SD = 0.4406) and female (M = 2.569, SD = 0.563), t (389) = 2.489, p < 0.05). This implies that there is no significant difference between sex on attitude toward technology integration and effective technology usage in the teaching learning process. The results also indicate a negative relationship on age (r (393) = -,155, p < .05) toward technology integration and effective technology usage.

With trained (contract, grade one and senior grade one) and untrained teachers, the findings indicate that trained teachers (M = 2.623, SD = 0.538) and untrained (M = 2.637, SD = 0.515), t (341) = -.247, p > 0.05) for effective technology usage and trained teachers (M = 3.273, SD = 0.502) and untrained (M = 3.249, SD = 0.510), t (344) = 0.445, p > 0.05) for attitude toward technology integration. This indicate that there is no significance difference between

trained and untrained teachers on attitude toward technology integration and effective usage in the teaching learning process. In private schools (M = 2.675, SD =0 .518) and public schools (M = 2.471, SD = 0.514), t (389) = 3.499, p < 0.05) for effective technology usage and private schools (M = 3.211, SD = 0.545) and public schools (M = 3.345, SD =0 .4265), t (391) = -2.300, p < 0.05) for attitude toward technology integration. There is high attitude toward technology integration in private school and significant effective technology usage. There is high attitude toward technology integration in public school and low effective technology usage among primary school teachers. Low relationship on number of pupils in class (r (396) = -.015, p < .05) toward technology integration and effective technology usage.

The findings further indicate no difference between anglophone subsystem (M = 2.633, SD =0.527) and francophone subsystem (M = 2.601, SD =0 522), t (389) = .596, p > 0.05) for effective technology usage. There is no difference between anglophone subsystem and (M = 3.234, SD =.5498) and francophone subsystem (M = 3.262, SD = .4799), t (391) = -.542, p > 0.05) on attitude toward technology integration. The highest academic diploma has no significant effect on effective technology usage (F (3,387) = 1.943, p >.005) and attitude toward technology integration (F (3,389) = .182, p >.005). Finally, there is a weak relationship between teaching experience (r (397) = -,151, p < .05) and attitude toward technology integration and effective technology usage.

IV. DISCUSSIONS

The findings reveal a high positive attitude toward technology integration and average level of effective technology usage. There is a weak correlation between attitude toward technology integration and effective technology usage in the teaching learning process. This implies that other variables such level of technology skills, knowledge and competences, types of technological tools and applications, professional development and teachers' self-efficacy beliefs can be explored to explain effective technology integration. During this period of COVID-19 where there is a necessity for distance learning and effective technology integration, primary school teachers have the sovereignty and responsibility on the integration of technology to make teaching and learning attractive and better. teach their learners to take into consideration the implications and advantages of integrating technology in teaching and learning and the school vision and mission of integrating technology motivates teachers to use technology effectively during instruction. The integration of technology has been conceived as an important element in maintaining competitive benefits of the school and primary schools in Cameroon school have articulated the mission and innovation of technology integration in teaching and learning. Besides, primary schools' teachers face difficulties in use computer to teach new subject knowledge where the pupils obtain knowledge straight from the computer, use a computer for demonstration working with available presentations with learners. They also lack the abilities to use educational

software applications with their learners to teach and learn subject knowledge and using computer for demonstration and presentations with learners during COVID- 19.

This validate pervious researchers as Ngajie & Ngo (2016), point out that very little training been given to in-service teachers in primary schools to initiate them in technology integration and Nkwenti (2015), who points out that ICT is conducted in schools through a pedagogy seminar (Inspectorate General of Pedagogy 2004; Nkwenti. 2010, Nkwenti, 2011). The seminars are one day, and they are given to teachers once a term with a total of 3 days per school year, 18 hours of effective teaching and learning. Insufficient financial support for teachers to attend seminars and conferences on the integration of technology in the teaching and learning process and lack of provision of consistent hardware and software application updates. The findings also revealed that there is high attitude toward technology integration in public and private schools. Effective technology integration is higher in private schools than in public schools. Teachers will integrate technology in teaching and learning in future, acquire more about effective approaches to ICT integration in the teaching and learning process., understand the available resources if schools decide to support the technology integration and know how the integration of technology increases the quality of interaction between teachers and learners in education.

The ministry of Basic education in Cameroon through inspectorate in charged of ICT should provide adequate professional in-service training to teachers to help them cope with current changes in educational technologies. They should also provide school with computer laboratories and multimedia centres and constantly update hardware and software applications. Schools should be providing with internet accessibility and connections, given financial and technical support for teachers to effectively acquire competences and effective technology integration in education during this period of COVID-19. Teachers should develop communication and technical skills on word processing, chartrooms and web page authoring to effectively integrate technology in the teaching learning process.

V. CONCLUSION

The use of educational technologies in teaching and learning environments needs a great deal of thinking and planning. Some good ideas of developmental testing and pedagogical perspectives or theories of learning are necessary in designing and interacting with technologies in educational settings. Teachers in primary schools must have a good knowledge of ICTs and their benefits, and how to integrate it in the teaching and learning process. Using ICT to improve teaching and learning is the key for pedagogy-technology integration in primary schools. Teachers' need continuous professional development programs in ICT which should be taken into consideration when developing ICT policy for schools. They need to be supplied with the fundamentals of technology tools and enough understanding on the integration of these tools in teaching and learning. Enough efforts should be oriented towards changing teachers mind set and

encouraging them to develop positive attitudes towards technology applications in teaching and learning.

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