Challenges of Blended-Learning Strategy in Government Teacher Training Colleges in the English Speaking Regions of Cameroon

Kibinkiri Eric Len
Department of Curriculum and Pedagogy, Faculty of Education, University of Bamenda &
Department of Science of Education, E.N.S Yaounde, University of Yaounde I

Isidor Fuh Suh
Department of Curriculum and Pedagogy, Faculty of Education, the University of Bamenda

Abstract: This study examined the challenges of blended-learning in Government teacher training colleges in the two English speaking Regions of Cameroon. The study aimed at answering the question: "What challenges do teacher trainers and student-teachers face in using the blended-learning model in Government teacher training colleges in the North West and South West Regions? The TPACK Model (Mishra et al., 2006) was selected to give more meaning to the problem. The population consisted of 735 teacher trainers of 15 Government Teacher Training colleges and 13 Regional Pedagogic Inspectors for teacher education in the North West and South West Regions of Cameroon where a sample of 2 teacher trainers and 2 regional pedagogic inspectors were conveniently selected. A qualitative approach was adopted for this study, with a self-designed, unstructured interview guide used to collect data. Data were analysed using thematic content analysis. Findings showed that insufficient knowledge in the use of computer-related gadgets; lack of computer-related infrastructure and learning materials like android phones, videos, audios adapted to the learning context; insufficient time to interact with content and peers; lack of administrative support; lack of concise policy on the use of blended-learning; unstable internet network and electricity supply hindered the effective use of the blended-learning strategy in Government teacher training colleges. The study recommended that a concise blended-learning policy be instituted, teacher trainers and student teachers be trained on the use of electronic gadgets, stable internet network and electricity be made available even in remote areas, while electronic gadgets and infrastructure required for blended lessons be provided in teacher training colleges.

Keywords: Blended-learning, Cameroon, challenges, teacher training college.

Introduction

In order to develop the educational system in line with the evolving trends of global education, especially in the context of Covid-19 pandemic and socio-political tensions, teaching strategies ought to ensure the quality of student's learning. To ensure this, a variety of teaching strategies and methods must go together with students' learning styles (Rahman, Aris, Mohamed & Zaid, 2014). This brings in the concept of blended-learning, also referred to as hybrid learning (Burns, 2011; Owston, Wideman & Murphy, 2008).

Also, the Cameroon Education Plan of 2013-2020 presented some salient challenges plaguing the teacher education sector in Cameroon. Among these were inadequate curricular and training programs as well as inadequate quality and availability of textbooks, teaching and learning resources (Republic of Cameroon, 2013). The document postulated that the teacher training college curricular of the 1990s remained theoretically focused and lacked experiential learning. The plan thereby proposed some salient solutions expected to enhance the professional

competence of student teachers upon graduation. Amongst these were the promotion of innovative teaching methods and strategies and the expansion of ICTs at all levels of education in Cameroon. The curricular needed to be reformed with emphasis on ICTs. This lead to a review of the curricular for teacher training colleges in 2013 and that of primary and nursery schools in 2018 (MINESEC, 2013; MINEDUB, 2018). As terminal end-of-course competence, the new curricular for teacher training colleges emphasized that the student teacher "must be a field practitioner who prepares, facilitates and evaluates learning activities in respect to students' differences, professional ethics and socio-cultural environment, by developing adapted communication strategies" (MINESEC, 2013, p.8). For training goals, the teacher will be a professional who performs the four priority functions of: Teaching, Communication, Education and Analysis and Regulation. He/she must be a reflective field practitioner: a teacher who analyses and regulates classroom practices. In other words, the teacher must possess pedagogical, content, technological knowledge and skills required for effective teaching and learning. An innovative teaching strategy like blended-learning was expected to bridge the gap during the crisis period.

Review of Related Literature

Conceptual Review

The concept of Blended-Learning (BL) is derived from two words, "blend" and "learning" (Tshabalala, Ndeya-Ndereya & Merwe, 2014, p.102). The word blend means combining things and learning denotes an assimilation of new knowledge (Olivier, 2011). According to Huang, Ma and Zhang (2008), blended-learning is not a new concept but originated from cooperate training and development in the United States of America and made its first appearance in the late 1990s. Ossiannilsson (2019) adds that blended-learning is part of the innovative transformation of education in the 21st century, which embraces personal quality learning. Many interpretations exist on the meaning of blended-learning largely because the usage of the term is still evolving (Graham, Allan, & Ure, 2005; Oliver & Trigwell, 2005; Whitelock & Jelfs, 2003). In a literature survey, Driscoll (2003) found four different uses of the concept that are prevalent: the mixing of traditional face-to-face instruction with instructional technology; the mixing of different forms of technology such as CD ROMs with web-based technology; the mixing of pedagogical approaches such as constructivism with behaviorism irrespective of whether learning technology is used; and the mixing of instructional technology with specific tasks to be accomplished. Oliver & Trigwell (2005) on their part found the term blended-learning problematic and called for a re-conceptualization of its meaning because 'blended' implies a differentiation between pedagogical approaches that may not exist, and because the term describes an instructional approach rather than learning. Notwithstanding, the term is increasingly being used to designate a combination of face-to-face experiences in which learners are co-located with online experiences where learners are not at the same location.

Similarly, Tshabalala et al. (2014), citing Heinze (2008) postulate that there is no single commonly accepted definition of blended-learning, but practitioners "negotiate their own meaning" according to the needs of their contexts of practice. The concept has therefore been defined differently since its inception with its meaning gradually changing with time and context. According to Shaboowala and Mishra (2021), blended-learning is a teaching-learning methodology introduced over a decade ago and used in the field of education, combining (or blending) online learning with traditional classroom methods (face-to-face learning). It requires the physical presence of both the teacher and student, with some elements of student control over time, place, path or pace and also educational materials and technology for online interaction (Friesen, 2012). Blended-learning is the use of a combination of online learning, face-to-face instruction, and other methods for distributing learning content and instruction (Burns, 2011; Noe, 2002; Ossiannilsson, 2019). It is the integration of instructional learning strategies such as teacher-

directed or face-to-face learning, distance learning, flipped learning and self-directed learning modes.

The effective use of blended-learning strategy in the training of student teachers can ensure greater efficiencies with group sizes; support professional/work-based skills development; flexible study, anytime or anywhere, to meet learners' needs wherever they want; provide wide access to digital resources, shared tools, and information systems; boosting up the effectiveness of education; increased access and convenience; greater cost-effectiveness; easy to access resources; enhance live feedback in the classroom; make lessons flexible, restrict the need for large buildings (Muxtorjonovna, 2020 citing Bahtia, 2007; Kaur, 2013) and enhance inclusive education.

Contextual Review

Quality education is a fundamental human right as well as an instrument for development. International and regional conventions like the Universal Declaration of Human Rights-UDHR (UNO, 1948), the United Nations Convention on the Rights of the Child, the African Charter on Human and People's Rights (OAU, 1981) and the African Charter on the Rights and Welfare of the Child (OAU, 1990) which Cameroon has duly ratified emphasize the state's responsibility towards providing education. This state responsibility was re-echoed on the preamble of the 2008 revised constitution of the Republic of Cameroon which state that "the state shall guarantee the child's right to education" (Republic of Cameroon, 2008). It also holds that primary education shall be compulsory while the organization and supervision of education at all levels shall be the bounden duty of the state. Similarly, the Universal Declaration of Human Rights from which the constitution draws inspiration affirms in article 26 (1) that:

> *Everyone has the right to education. Education shall be free at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and vocational education shall be made generally available and higher education shall be equally accessible to all on the basis of merit (UNO, 1948:8).*

The African Charter on Human and People's Rights in article 17(1) affirms that "every individual shall have the right to education" (OAU, 1981, p.6). On its part, the African Charter on the Rights and Welfare of the Child in its article 11(2) adds that the education provided should be for the "promotion and development of the child's personality, talents, mental and physical abilities to the best of their potential" (OAU, 1990, p.11). Based on the fact that primary school teachers lay the foundation for quality education, it is incumbent on the Government to ensure that these teachers are trained in quality and quantity to ensure the child's right to quality education even during crisis period.

Furthermore, Goal 4 of the Sustainable Development Goals (SDG) called for inclusive quality education and life-long learning for all (UNESCO, 2015). In the same direction, the Cameroon Growth and Employment Strategy Paper (Republic of Cameroon, 2009) and the Education and Training Sector Strategy Paper-ETSSP (Republic of Cameroon, 2013) emphasized access, equity and quality education and training of teachers as essential elements for the emergence of Cameroon by 2035. The disruption of regular classes by the socio-political turmoil that erupted in 2016 and the Covid-19 pandemic called for intensification of innovative teaching-learning strategies to ensure the attainment of these objectives. With the gradual resumption of classes, a joint order by Ministries of Basic (MINEDUB) and Secondary Education (MINESEC) requested an intensification of the use of the blended-learning strategy in enhancing teaching and learning (Akumbu, Teneng & Ngu, 2020; Béché, 2020). The different ministries of education made several efforts aimed at encouraging teachers to embrace digitalization of education. The Ministry of Secondary Education in Partnership with UNICEF and the CRTV created a website for distance

learning lessons as well as television and radio lessons to reinforce the irregular classroom encounter (Béché 2020; MINESEC, 2020). It became germane to examine the challenges teacher trainers and student teachers faced in the use of the blended-learning strategy during the crisis period in the North West and South West Regions of Cameroon.

Theoretical Review

The TPACK Model (Mishra et al., 2006)

Increase in the availability of digital and networked tools has the potential to fundamentally transform the teaching and learning process. Research on the instructional uses of technology, however, has revealed that teachers often lack the knowledge to successfully integrate technology in their teaching and their attempts tend to be limited in scope, variety, and depth (Koehler, Mishra, Kereluik & Graham, 2006). For this reason, McCormick & Scrimshaw (2001) hold that, technology is used more as efficiency aids and extension devices rather than as tools that can transform the nature of a subject at the most fundamental level. The Ministry of Secondary Education in Cameroon realized this gap and emphasized the encouragement of its teachers to embrace digitalization in education (Divisional Delegation of Secondary Education for Boyo, 2020). According to Shulman (1986) effective teaching requires a special type of knowledge-pedagogical content knowledge (PCK), that represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction. Mishra and Koehler's (2006) formulation of the technological, pedagogical, and content knowledge (TPACK) framework extended Shulman's (1986) characterization of teacher knowledge to explicitly consider the role that knowledge about technology can play in effective teaching. A blend therefore of technological, pedagogical and content knowledge basis is necessary for effective integration of ICTs in teaching, a requirement for 21st Century pedagogy.
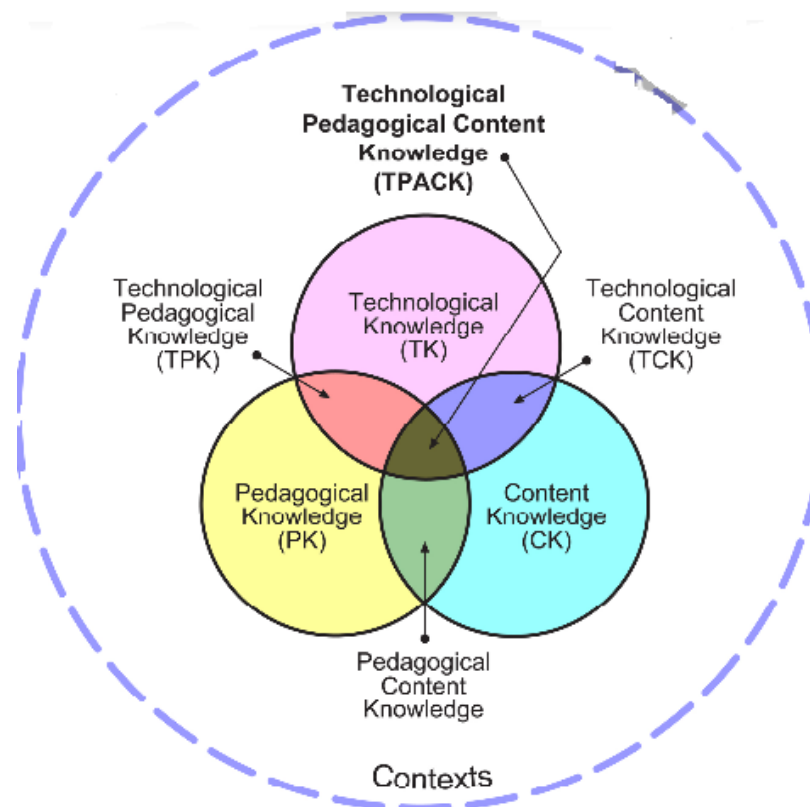
Figure 1: TPACK Model for Integration of ICTs in Pedagogy

Source: Koehler et al. (2006)

Technological Pedagogical Content Knowledge (TPACK) refers to knowledge about the complex relations among technology, pedagogy, and content that enable teachers to develop appropriate and context-specific teaching strategies (Koehler et al., 2006) as seen on figure 1. According to Moreno et al. (2019), Technological Pedagogical and Content Knowledge (TPACK) refers to a teacher's knowledge on how to develop specific didactic strategies on different matters using ICT in order to facilitate learning. It is a form of knowledge that goes beyond these three components (content, pedagogy, and technology). TPACK includes, for example, the knowledge of pedagogical strategies that allow the effective use of technologies to teach the content of the discipline, and the knowledge of the aspects that make the content easy or difficult to learn, and how technology can help with some of the problems that students face (Moreno et al., 2019). In a blended-learning strategy to teaching, teacher trainers must be imbued with technological, pedagogical and content knowledge. They must also ensure their student teachers develop these skills required to be able to blend these different knowledge bases that will make their own teaching effective.

Statement of the Problem

The use of innovative teaching strategies had been previewed in articles 23(2) and 25 of the 1998 Orientation Law on Education in Cameroon (Republic of Cameroon, 1998). However, little had been done to ensure its effectiveness. The call by the Ministries of Basic and Secondary Education for the adoption of such innovative digitalized teaching strategies to avert the devastating effects of the socio-political unrest in the two English-speaking regions of Cameroon and the Covid-19 pandemic (Akumbu, Teneng & Ngu, 2020; Béché, 2020), seemed to have taken the Government teacher training colleges by surprise. With interruptions in the regular on-site learning, the low level of appropriation of digitalization by Cameroon teachers (Béché, 2013, 2017; Josue, 2007; Mbangwana, 2008; Ndongfack, 2015; Njebakal & Teneng, 2017) it became necessary to examine some of the challenges hindering the effective implementation of the blended-learning strategy in elementary teacher training colleges in the North West and South West regions of Cameroon and make some salient recommendations to fill the gap.

Research Methodology

This study was conducted in Government Teacher Training Colleges in the two English speaking regions (North West and South West regions) of the Republic of Cameroon, affected by the violent Socio-political crisis that erupted in 2016 and the Covid-19 pandemic. Cameroon covers a surface area of 475,000 square kilometres (Dizian, 1978; UNESCO, 1995) and has an ethnically and linguistically diverse population of about 23.4 million with about 200 linguistic and ethnic groups (World Bank Report, 2018). Cameroon is bordered to the south by Equatorial Guinea, Gabon and Congo; on its south-west, it overlooks the vast Atlantic Ocean; to the west by Nigeria; on its eastern side by the Central African Republic and Chad; and to the north by Lake Chad. Based on its colonial heritage, Cameroon at independence adopted two official languages, English and French (Ngoh, 1987). The country is sub divided into ten regions (North West, South West, West, Littoral, Centre, South, East, Adamawa, North and Far North Regions). The North West and South West Regions are predominantly English speaking given the fact that they were administered by the British from 1920 to 1961 (Ngoh, 1987). The other eight were administered by the French before independence and consequently are predominantly French-speaking. The North West Region of Cameroon has a population of 1,804, 695 inhabitants (BUCREP, 2010) and covers a surface area of $17,910km^2$, bounded to the North and West by the Federal Republic of Nigeria and to the South by the South West Region. The South West Region covers a surface area of 25,410km2, with a population size of 1, 384, 286 inhabitants (BUCREP, 2010). These two

regions constitute about 20% of the population and approximately accounts for 16,364 km2 of the 475,442 km2 surface area of Cameroon (World Bank Report, 2018).

The qualitative approach was adopted for this study with a target population of 735 Government teacher trainers and 13 Regional Pedagogic Inspectors for Teacher Education in the North West and South West Regions of Cameroon. The convenience and simple random samplibng technique using the ballot method was adopted to select a sample of 2 teacher trainers and 2 regional pedagogic inspectors. An unstructured interview guide was designed to collect required data. Face and content validity were adequately ensured. Each interview on these items took a maximum of 30 minutes at the staffroom of the teacher training colleges and the office of the regional pedagogic inspectors. The transcribed interviews were typed and crosschecked repeatedly to ensure all relevant information was captured. The interview data was collected with the help of a tape recorder and an interview check-list designed for the purpose. The confidentiality and anonymity of respondents was ensured by the researcher. Interviews were conducted between 29th of November and 14th December 2022. Questions and answers resulting from informal discussion with participants were also carefully reviewed. Interview data were analyzed using thematic content analysis.

Table 1: Socio-demographic Data of Interview Respondents

Cases	Function	Institution	Region	Gender	Age	Experience	Qualification
Case A	Teacher Trainer	GTTC Buea	South West Region	Female	47 years	13 years	DIPEN II/M.Ed. in Educational Psychology
Case B	Teacher Trainer	GBTTC Bamenda	North West Region	Male	42 years	11 years	DIPEN II
Case C	RPI for teacher Education	Regional Delegation for Secondary Education	North West Region	Female	50 years	5 years	DIPEN II/M.Ed. in Educational Psychology
Case D	RPI for teacher Education	Regional Delegation for Secondary Education	South West Region	Male	49 years	5 years	DIPEN II/*Maitrise* in Law

As seen on table 1, the respondents were identified as Case A, B, C and D. two teacher trainers and two regional pedagogic inspectors were interviewed. Case A was a female teacher trainer of GTTC Buea, South West Region. She was aged 47 with 13 years teaching experience and holder of DIPEN II Diploma (*Diplome de Professeur d'Ensignement Normale, Deuxieme Categorie*) and a Master Degree in Educational Psychology. Case B was a male, teacher trainer of GBTTC Bamenda in the North West Region. He was aged 42 years, with 11 years teaching experience and holder of the DIPEN II Diploma. Case C was a Regional Pedagogic Inspector for Teacher Education at the Regional Delegation of Secondary Education for the North West Region. She was aged 50 years with 5 years working experience and regional pedagogic inspector and holder of DIPEN II Diploma and master Degree in Educational Psychology. Case D was a male, aged 49, Regional Pedagogic Inspector for Teacher Education for the South West Region. He was holder o DIPEN II Diploma and *Maitrise* (Master I) in Law. The years of service and qualification of the respondents shows that they had rich experiences in the domain of teacher education.

Findings

Challenges in the use of Blended-Learning strategy in teaching and learning

Table 2: Teacher trainer and pedagogic inspector's interview response

Question	Case	Response
Do you regularly use the blended-learning strategy in teaching student teachers?	Case A	Yes.
	Case B	Yes.
Do your teacher trainers regularly use the blended-learning strategy in teaching student teachers?	Case C	No.
	Case D	No.
I will like you to state some of the challenges that often hinder your use of the blended-learning strategy as a teacher trainer?	Case A	-Some student teachers have difficulties using online digital platforms. -Some lack android phones while others have challenges loading data regularly. -I also lack ready-made audios and videos that reflect the lessons to be taught. -There is insufficient time for students to interact with content, resources and peers.
	Case B	-Insufficient knowledge on the part of students in accessing online content. -Lack of required learning materials like android phones, videos, audios adapted to our learning context. -Insufficient time. -Irregular power supply and internet connection.
I will like you to state some of the challenges that often hinder your teacher trainer's use of the blended-learning strategy?	Case C	-Lack of required knowledge and skills in blending learning. -Lack of required teaching- learning materials like cell phones, computers. -Unstable internet network, irregular electricity supply. -Lack of precise policy on blending learning. -Lack of administrative support. -Insufficient time.
	Case D	-Lack of required knowledge and skills in blending lessons. -Lack of adequate knowledge in using ICTs in pedagogy. -Lack of well-defined policy on blended-learning. -Lack of adequate time to cover content. -Irregular internet and electricity supply. -Lack of audio and video recordings adapted to our school content and learning outcomes.

Table 1 shows teacher trainers' and pedagogic inspectors' opinions on the challenges faced in the use of the blended-learning strategy in teaching and learning. Case A and B, who were teacher trainers agreed that they regularly used the blended-learning strategy in the training of student

teachers. Furthermore, Cases C and D who were regional pedagogic inspectors opined that their teacher trainers did not regularly use the blended-learning strategy in teaching as would have been expected.

On the challenges faced in the use of this approach in facilitating teaching and learning, Case A opined that some of her students had difficulties using online digital platforms, while others lacked android phones. Also, some of her students had challenges in loading data regularly. The teacher trainer on her part lacked ready-made audios and videos that reflect the lessons to be taught, while there was insufficient time for students to interact with content, resources and peers. Case B on his part stated that insufficient knowledge on the part his students in accessing online content, lack of required learning materials like android phones, videos, audios adapted to the learning context, insufficient time and irregular power supply and internet connection were challenges he faced in the use of blended-learning strategy in teaching.

Also, Case C opined that lack of required knowledge and skills in blending learning, lack of required teaching- learning materials like cell phones, computers, unstable internet network, irregular electricity supply, lack of precise policy on blending learning, lack of administrative support and insufficient time were challenges that hindered her teacher trainers from using the blended-learning strategy. Case D on his part said lack of required knowledge and skills in blending lessons, lack of adequate knowledge in using ICTs in pedagogy, lack of well-defined policy on blended-learning, lack of adequate time to cover content, irregular internet and electricity supply and lack of audio and video recordings adapted to our school content and learning outcomes were challenges hindering his teacher trainers from using the blended-learning challenge in teaching.

Discussions

Unavailability of Computer-related Equipment and Infrastructure

One of the challenges highlighted by interviewees was unavailability of computer related equipment for interaction. In order to effectively implement the blended-learning strategy in teaching, suitable infrastructure as well as technological tools are required (Tambo, 2012). Zama and Endeley (2023) regret that unavailability due to financial costs hinder the use of the blended-learning strategy in teaching. This is supported by Namyssova et al. (2019) that the lack of suitable infrastructure and access to technology can cause some constraints for the successful integration of blended-learning in schools. Government teacher training colleges in the North-West and South West regions lack essential computer-related equipment for smooth implementation of blended-learning strategy. Sayed and Baker (2014) hold that learning through technology demands reliable hardware, easy to use software, high bandwidth network connection, high performance databases and large backup storage. Schools that had few computers saw their equipment looted or set ablaze during the socio-political unrest. Most of the schools currently operate in temporal sites in seemingly more secured areas of town. Where these facilities are available, they are insufficient or inadequate. Tshabalala, Ndeya-Ndereya, and Merwe (2014) opine that such inadequacy in technological resources hinders the use of blended-learning in schools. Where few computers exist, they are too slow and unable to function with recent educational software.

Also, many students and even some teacher trainers lack functional personal laptops or up-to-date android phones that can be used to transmit lesson content from home to enhance flipped and distance learning (Neilsen, 2012). In addition, cell phones, laptops or desktops still seem expensive for most student teachers and teacher trainers to acquire. To make a bad situation worse, Toure et al. (2008) posit with regret that lesson plans and content available on the internet

are not adapted to our context, nor relevant to our development needs. Much of this content was developed following western curriculum that needs to be adapted to local realities.

Insufficient Time to Interact with Content, Learning Materials and peers

Another challenge hindering the use of the blended-learning strategy to teaching by teacher trainers and student teachers according to the findings was insufficient time to interact with learning materials. Since some students may have little experience in blended-learning, adequate time needs to be allocated for them to adapt to blended-learning (Saber et al., 2022). However, with the tight schedule on the timetables and teacher trainer's desire to cover content in record time, student teachers end up having very limited time to interact with learning materials in a blended-learning strategy. Jayanthi (2019) adds that it is time consuming to prepare and present lessons in blended mode. Educators think blended-learning increases their workload as they need more time to design the course platform, upload instructional materials, answer queries and evaluate students' online outputs (Alebaikan & Troudi, 2010). This makes most teachers to shy away or use the strategy ineffectively.

Insufficient Knowledge in the use of Electronic Gadgets and Platforms

Also, insufficient knowledge in the use of electronic gadgets and platforms in facilitating learning was another challenge affecting the use of the blended-learning strategy to teaching in Government teacher training colleges. Knowledge of technology is an essential element in blended-learning (Abubakar & Adetimirin 2015). Both teachers and students must be computer literate to use blended-learning effectively (Zama & Endeley, 2013). Blended-learning therefore cannot be effective when student teachers and teacher trainers lack basic knowledge and skills in operating electronic gadgets and navigating the internet. These gadgets include cell phones, computers, video and audio recording devices used to facilitate teaching in a blended-learning context. Besides, learners and teachers are expected to be conversant with digital technologies such as chatting through the internet, using Zoom, and mastering the learning management systems (Ahmad and Al-Khanjari, 2011). Unfortunately, the unexpected impact of the socio-political crisis and Covid-19 pandemic saw the educational sector embracing blended approaches without sufficient preparation. In order to be more effective in becoming one of the best solutions to problematic teaching and learning styles in education, blended-learning concepts need to be thoroughly understood by both teachers and students (Kaur, 2013) and this needs time. The International Telecommunication Union (ITU 2019) asserts that less than 15% of Cameroonians command basic digital skills. Béché (2020) support that although teachers used WhatsApp group discussions, Google accounts and online tutoring applications to teach at the inception of the Covid-19 pandemic within the framework of an institution, in 95% of cases these tools were implemented on the individual initiative of teachers familiar with these new technologies, particularly computer science teachers. This means that teachers handling other subjects who were not verse with the use of these devices in teaching avoided them.

In addition, Alebaikan and Troudi (2010) opine that one reason for insufficient staff knowledge in using blended-learning strategy is that the institutions do not provide enough training workshops for online learning (blended-learning) systems. Teachers motivated and trained to use ICTs can use them to help learners engage with texts at multiple levels, develop and question discourse about the ways of the world (Toure et al., 2008). Also, worthy of note is the fact that it is not just acquiring the knowledge of ICT that is of importance to the teacher (Tchombe et al., 2008). Teachers need to understand how to use ICT pedagogically as Mishra et al. (2006) suggest. Lack of technological skills may lead to fear of technology and lack of engagement on the part of the teachers (Sayed & Baker, 2014). They however contend that once the individual becomes familiar with the technology and recognizes the enormous benefits, the fear of technology and lack of engagement becomes immaterial.

Also, Kaur (2013) writing on the instructional challenges of implementing blended-learning in schools supports that when learning technologies are introduced, attention is often paid to the technology implementation, while the design of the actual appropriate content is left with too little time and budget to create a successful program. He affirms that instructional design challenges include: looking at how to teach, not just what to teach; matching the best delivery medium to the performance objectives; keeping online offerings interactive rather than just "talking at" participants; ensuring participant commitment and follow-through with "non-live" elements and ensuring all the elements of the blend are coordinated. Teacher trainers therefore need sufficient knowledge in blended-learning for effective implementation. It is for this reason that AL-Muqaiseeb (2022) recommends that before integrating blended-learning technologies, the teachers and students would have to be trained and educated first.

Lack of Concise Policy on Blended-Learning

In addition, the Lack of concise policy on blended-learning was another challenge hindering the use of blended-learning in teaching and learning. The existence of a concise policy would serve as a guide to teachers, learners and administrators to follow. Policy gives guidelines or directives on how something should be done. Namyssova et al. (2019) and Akumbu et al. (2020) support that the absence of a concise policy on blended-learning serve as a constraint in the use of this strategy. The fact that most teachers use their personal initiative to select which aspects of blended-learning to implement, there are bound to be challenges. The effective implementation of blended-learning, even in individual institutions, requires a flexibility or significant fundamental change across the education system and its support mechanisms in the form of legislation and frameworks, resources, professional development and quality assurance (European Commission, 2020).

Unavailability of Adapted Distance Learning Software

Also, the unavailability of adapted distance learning software was another challenge for the use of blended-learning in facilitating teaching and learning. Zama and Endeley (2023) affirm that for effective use of the blended-learning strategy, teachers could use pre-recorded instructional videos or ready-made ones. To them, popular ready-made learning management systems teachers could use are *Google Classroom, Schoology, Blackboard* and *Canvas*. Also, they add commonly used webinar tools like *Zoom, Adobe Connect, Any Meeting* and *Google Hangout*. Unfortunately, most of these are not very feasible within the context of our teacher training colleges especially in remote areas. In addition, most distance learning software available do not suit our local realities as content is mostly based on curriculum expectations of the context in which the software was designed. Lack of adequate software creates digital divide and interfere with student's ability to access online course work and submit assignments (Asgari et al., 2021; Lake & Makori, 2020). The lack of appropriate and adapted software also impedes assessment and evaluation of students using distance modes. It is for this reason that Singh, Steele and Singh (2021) recommend that the use of online proctoring methods that use cameras and other technology enabled features can help prevent cheating in hybrid and blended-learning. Conscious of this lack of software adapted to our context, Tambo (2000) recommend that schools should encourage local talents to develop hardware and software appropriate for the nation's curriculum.

Lack of Administrative Support

Also, inadequate administrative support was another challenge hindering the use of blended-learning strategy in teaching. Once the immediate administrative authorities expected to supervise the implementation of blended-learning fail to provide the required support, implementation is bound to be ineffective. Namyssova et al. (2019) sees this lack of administrative support as a fundamental challenge in the implementation of the blended-learning strategy. Despite the fact that the Ministries of education emphasize the blend of teaching approaches to cover content and

ensure success, much needs to be done by the school and public administration to ensure the required infrastructure and other basic requirements are provided to students and teachers. The different stake-holders from the central to the decentralized services of the Ministries of Basic and Secondary Education need to be actively engaged in providing an enabling environment and resources for blended-learning to be feasible. Sayed and Baker (2014) relates this challenge to e-learning apathy where they elaborate that if upper management is unaware of the benefits of e-learning, they will be reluctant to invest in the blended-learning project. Lim and Wang (2016) hold that when facing a new instructional model like blended-learning model, teaching staff require support from administration to learn how to better control the quality of on-line learning. They add that other administrative support is also needed to help teaching staff use their teaching hours more effectively, including their on-line and face-to-face hours.

Unavailable/ Irregular Internet Network and Electricity Supply

Furthermore, poor and irregular internet network was identified as another challenge affecting the use of blended-learning strategy in the teaching-learning process in Government teacher training colleges in the English speaking regions of Cameroon. Saber et al (2022) in their research on blended-learning challenges contend that internet challenges delayed the submission of students' assignments and their participation in online activities. They add that some assignments needed to be submitted through the portal yet due to Internet limitation, students needed some time to find spots with good Internet coverage in order to submit their work online. This is a similar case student teachers and teacher trainers face in remote divisions like Ndian, Kupemaninguba and Manyu in the South West and Manchum, Boyo, Ndonga-Mantung and Bui in the North West region. Jayanthi (2019) is in line with this finding on poor or irregular Internet connection as he affirms that poor Internet connectivity has been reported to inhibit students' ability to engage in online discussions, which could lead to considerable frustration and have a negative impact on learning. Also, blended-learning needs strong Internet connection to allow students watch, or download the uploaded videos (Saber et al., 2022). To Saber et al. (2022), strong Internet connection is also needed to access the student portal, else the portal will become slow and only continue to buffer (load) with no end in sight. Zama and Endeley (2023) in similar perspective regret that internet penetration rate in Cameroon stands at only 36.5%. The challenging nature of electricity supply further aggravates the already discouraging internet problem. Béché (2020), citing Mbodiam (2019) support that more than 45% of Cameroonians do not have access to electricity. Rural areas, which include more than 60% of the country, are only 21% covered by the electricity network. These areas definitely have problems connecting to the Internet. The unreliable and unequally distributed electricity supply exacerbates the issue of exclusion and inequality.

Conclusion and Recommendations

The findings of the interview showed that some teacher trainers regularly used the blended-learning strategy to teach while others did not. It also showed that insufficient knowledge in the use of computer-related gadgets, lack of computer-related infrastructure, insufficient time to interact with content and peers, lack of administrative support, lack of concise policy on the use of blended-learning, unstable internet network and electricity supply hindered the use of the blended-learning strategy in Government teacher training colleges. Based on these findings and given that blended-learning is an innovative strategy especially in times of crisis, the following recommendations were made:

1) Teacher trainers and students should be encouraged to acquire basic skills in computing that they need to engage in distance teaching and learning.

2) Authorities of teacher training colleges should ensure that there are up-to-date computers and internet facility within the school.

3) Teacher trainers and student teachers should acquire suitable android phones or MODEMs and laptops.

4) The Ministry of Post and Telecommunication with its accredited service providers (CAMTEL, MTN, Orange) should ensure that stable internet network with high band width is available even in remote areas where teacher training colleges are located.

5) These service providers should offer special affordable internet bundles to students and teachers.

6) The Ministry of Mines, Energy and Water Resources should ensure that electrical energy is available and constant. Teacher training colleges should also make provision for solar or other environmentally friendly energy sources to power computers, cell phones and servers used for distance learning.

7) Cameroon Radio and Television Corporation (CRTV) should ensure television and radio signals are available even in remote areas to ensure student teachers follow lessons and acquire other information necessary for their professional development in the teaching field.

8) School Administration should ensure teacher trainers are trained on the use of blended-learning strategies especially on the integration of technologies in pedagogy so that they can use them effectively to teach. This can be through in-service training programs (seminars/workshops) for those already in service and pre-service courses for those still in teacher training colleges.

9) The Ministries of Education should ensure a concise policy on blended-learning should be instituted that is binding to teacher training colleges. This will serve as concrete backing for the implementation of blended-learning strategies in teacher training colleges.

10) Distance learning platforms and content adapted to the requirements of teacher training colleges be designed. Audio and video clips based on content of the curriculum for teacher training colleges should also be developed and made available.

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