STRATEGIC PLANNING IN DISTANCE EDUCATION AND ITS INFLUENCE ON LEARNING OUTCOMES OF STUDENTS OF SOME SECONDARY SCHOOLS IN MFOUNDI DIVISION YAOUNDE

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DECLARATION

I, **MIJANG ERNESTINE EMMA NDIMAH,** do hereby declare that this dissertation is my original work and that it has not been submitted and will not be submitted for an academic award in any other University for a similar or any other degree award.

Signature

Date

DEDICATION

To

My parents (of late memory) NDIMAH BARNABAS BITOMBUH & SHURE ELIZABETH.

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LIST OF ABBREVIATION

CIAC:	Computer and Internet Access Centres
CIDA:	Canadian International Development Agency
COVID 19:	Corona Virus Disease of 2019
CSC:	Computer Science
DOI:	Diffusion of Innovation Theory
ERNWACA:	Educational Research Network for West and Central Africa
G.B.H.S:	Government Bilingual High School
GCE:	General Certificate of Examination
Ha:	Alternative Hypothesis
Ho:	Null Hypothesis
ICT:	Information and Communication Technology
IJCDSE:	International Journal for Cross-Disciplinary Subjects in Education
MINEDUB:	Ministry of Basic Education
MINESEC:	Ministry of Secondary Education
NDS:	National Development Strategy
SDG30:	Sustainable Development Goals by 2030
TAM:	Technology Acceptance Theory/Model
UNO:	United Nation Organisation

ABSTRACT

The present study seeks to examine the impact of strategic planning in Distance Education on the Learning outcomes of students in some secondary schools in the Mfoundi division. In order to achieve this objective, a quantitative research approach was adopted based on deductive research design. The population of study comprises teachers and students in secondary schools of Mfoundi division. Through the use of simple random and stratified sampling, a sample size of 247 participants were selected for the study. To collect data, a close ended questionnaire was administered to the participants selected in the study. The data obtained was analysed using the statistical data analysis technique, precisely the Pearson correlation. Three major theories were convoked to facilitate the discussion of the findings. The data collected and analysed resulted to the following results: Hypothesis one was to measure the relationship between needs assessment and learning outcomes of students in some secondary schools in Mfoudi division, it proved that need assessment significantly influences learning outcomes of students. The second hypothesis aims to examine the impact of provision of digital resources on learning outcome of students, this was positive, this implies that there is a strong and positive relationship between the provision of digital resources and learning outcomes of secondary school students. The third hypothesis was to measure the relationship between technology integration and learning outcomes of students of secondary school, the results proved that technology integration strongly influences the learning outcomes of secondary school students of the Mfoundi division. Finally, the forth hypothesis aim to measure the relationship between monitoring and evaluation and the learning outcomes of the secondary school students, it proved that monitoring and evaluation significantly influences learning outcomes of secondary school students. Basing on this results a number of suggestions were proposed amongst which we have: Educational planners should develop a detail plan, which includes needs assessment, provision of digital resources, technology integration and monitoring and evaluation in their vision for distance education at the strategic level of planning. Identify current gaps and challenges in the government's digital infrastructure and understand requirements of different structures, while planning for flexible solutions.

Key Words: Strategic Planning, Distance Education, Learning Outcomes, Secondary School and Student.

RÉSUMÉ

La présente étude vise à examiner l'impact de la planification stratégique dans l'enseignement à distance sur les résultats d'apprentissage des élèves dans certaines écoles secondaires du département de Mfoundi. Afin d'atteindre cet objectif, une approche de recherche quantitative a été adoptée basée sur un modèle de recherche déductif. La population d'étude comprend les enseignants et les élèves des écoles secondaires du département de Mfoundi. Grâce à l'utilisation d'un échantillonnage aléatoire simple et stratifié, un échantillon de 247 participants a été sélectionné pour l'étude. Pour collecter les données, un questionnaire fermé a été administré aux participants sélectionnés dans l'étude. Les données obtenues ont été analysées en utilisant la technique d'analyse des données statistiques, précisément la corrélation de Pearson. Quatre théories principales ont été évoquées pour faciliter la discussion des résultats. Les données collectées et analysées ont abouti aux résultats suivants : L'hypothèse 1 était de mesurer la relation entre l'évaluation des besoins et les résultats d'apprentissage des élèves dans certaines écoles secondaires du département de Mfoudi, il a été prouvé que l'évaluation des besoins influence considérablement les résultats d'apprentissage des élèves. L'hypothèse deux vise à mesurer l'impact de la fourniture de ressources numériques sur les résultats d'apprentissage des élèves, ce qui est positif, ce qui implique qu'il existe une relation forte et positive entre la fourniture de ressources numériques et les résultats d'apprentissage des élèves du secondaire. La troisième hypothèse était de mesurer la relation entre l'intégration de la technologie et les résultats d'apprentissage des élèves du secondaire, les résultats ont prouvé que l'intégration de la technologie influence fortement les résultats d'apprentissage des élèves du secondaire du département de Mfoundi. Enfin, la quatrième hypothèse vise à mesurer la relation entre le suivi et l'évaluation et les résultats d'apprentissage des élèves du secondaire, il a été prouvé que le suivi et l'évaluation influencent de manière significative les résultats d'apprentissage des élèves du secondaire. Sur la base de ces résultats, un certain nombre de suggestions ont été proposées parmi lesquelles nous avons : Les planificateurs de l'éducation devraient élaborer un plan détaillé, qui comprend l'évaluation des besoins, la fourniture de ressources numériques, l'intégration de la technologie et le suivi et l'évaluation dans leur vision de l'enseignement à distance au niveau stratégique de la planification. Identifier les lacunes et les défis actuels de l'infrastructure numérique du gouvernement et comprendre les exigences des différentes structures, tout en planifiant des solutions flexibles.

Mots clés : Planification stratégique, enseignement à distance, résultats d'apprentissage, école secondaire et étudiant.

CHAPTER ONE

INTRODUCTION

Distance education as a form of learning is growing in popularity due to its availability, practicality, and feasibility, for which every country's state policy strives. The government of Cameroon has the vision of seeing Cameroon become an emerging nation by 2035. The status of emerging nation is defined as one having achieved industrial capacity and path of becoming fully industrialized. It is the intellectual capacity of the citizens of a nation that determines its level of economic development. This view is shared by Kumo (2019), who notes that education makes provision for innovators and ensures that changes occur smoothly.

Secondary school occupies a strategic place in the educational system of most countries in the world. This is because secondary school is the link between the elementary and the tertiary level of education. This level is supposed to be the bed rock and the foundation towards higher education. It is an instrument that can be used to achieve a more rapid economic social, political, scientific and cultural development in the country.

The minister of secondary education in her speech at the distance learning center on the 29th of August 2022, instructed teachers to embrace distance education and articulate it with the present teaching mode to help learners bridge the technology gap towards advanced countries and achieve relevant learner outcome for the 21st century.

Distance learning, distributed education, online program, computer – aided learning, computer – assisted courses, tele-courses, and videoconferencing generally can be referred to as distance education. Ndongfack (2016) distance education is broadly defined as a flexible and dynamic form of knowledge transmission which is characterised by the separation of the teacher from the learner in time and setting, use of a variety of media to bridge the separation between the teacher and the learner through the use of computer-based learning, telecommunications, video and audiocassettes, radio and television broadcasts, provision of two way communication, possibility of face-to-face meetings through tutorials, and the use of industrialised processes. A definition of distance education is provided in the Ukraine law 'on education', in paragraph 4 Article 9 'forms of obtaining Education'. This definition describes distance education as an individualized process of gaining knowledge, which usually involves meditated interactions between participants who are spatially distant but who operate within a particular environment according to modern psycho-pedagogical and information and communication technologies. (LE, n.d).

Distance education is a rising star in the future of education. It offers study programs that are not available to local students, and it's a wise investment when it comes to saving valuable time and at the same time gaining the skills and knowledge you need in relation to your workforce. It ensures continuity of education, even in cases of crisis such as COVID 19 pandemic. The biggest advantages of distance learning include flexibility, convenience, and affordability. Distance education comes in as a support to the face to face education system, hereby helping the government acquire access and equity, quality and employability and strengthening of the education system, as defined in the NDS30 in the section Education, Training and Employability.

This chapter focuses on background of the study where the contextual, conceptual, historical and theoretical background will be included. This chapter also include the statement of problem, as well as the justification of the research. Other articulation of the study also includes; research objective of the study, research questions and research hypothesis.

Backgrounds of The Study

This section focuses on contextual and the conceptual background of study. It also includes the historical and theoretical background of study.

Contextual Background

The population of Cameroon was estimated to be 26, 491, 087 in 2020, and the current population of Cameroon is 29,394,433 as of 2024, based on worldometer elaboration of the latest United Nations data (worldometer, 2024). Also, based on Bureau of Censuses and Population Studies (BUCREP) analyses and projection, the population of Cameroon is expected to be 27,538,142 in 2025 (MINEDUB, 2021). According to the results of the Third-Generation population and Housing Census (GPHC), the population of Cameroon is projected to be 30,000,000 by 2025 (NIS, 2022). The report presented by the analysis of school census data in the basic education sub-sector carried out in the ten regions across the nation from July to September 2020 by the central and decentralized services of the Ministry of Basic Education (Ministry of Basic Education), projects school - age population as follows; 12,875,930, in 2019, 13,182,702 in 2020 and 14,381,251 in 2025 (MINEDUB, 2021). With such a statistic from MINEDUB, it is clear that the schooling population is constantly increasing. It is noticed that this constant increase in school – age population has rendered access to education very difficult especially for people living in rural area, this as a result of lack of quality and modern infrastructure. In order to solve this problem, the government of

Cameroon through the president of the republic has initiated distance education as a supplement to conventional method of teaching. Open distance education hereby is seen as a way in which barriers to education can be overcome. Effort to introduce Distance Learning (DL) in Cameroon began over four decades ago (Ndongfack, 2016). In 1998, the Commonwealth of Learning (COL) reported attempt made to use distance education in Cameroon's educational system since 1967 to address the problem of falling standards of education which largely blamed by the lack of qualified teachers and access to education at all levels (COL, 2008). The Cameroon government promulgate a law in 2001, instituting ICTs in government secondary schools, probably as prerequisite for the eventual take up of the e-learning strategy in the education system. The law organizing Cameroon's educational system, referred to Decree Nº 2006/306 of 22 September 2006, recognized the potential demand for education due largely to the youthful population of the country.

The Ministry of Higher Education in Cameroon has contributed to the development of distance learning in Cameroon through several initiatives which included:

- The initiation of the "one teacher, one computer" policy (aimed at developing the computing skills of teachers and enabling each student to own a computer)
- The beginning of the pioneer DE programme in the Dschang University Centre.
- Training of teachers of higher education in china on distance learning;

According to Nsolly and Ngo Mback (2016) the integration of ICTs in Cameroonian primary and secondary schools can be traced as far back as between 1998 and 1999 when some private efforts were made in some private and mission schools such as the College Francois Xavier Vogt to use ICTs in the teaching and learning process. (Karsenti et al., 2012) found out that several primary, general secondary and technical secondary schools in some cities in Cameroon were already using computers and providing courses in ICTs before the government could develop the ICT curricula.

The integration of ICT became a reality in February 2001 when the president of the Republic called for the orientation of education and training toward the knowledge economy in his address to the Cameroon youths (Mbangwana, 2008). The reality of ICT integration saw the light in secondary schools and colleges in Cameroon from this day (Mbangwana, 2008). The Government began with development of policy document and general strategy for the integration of ICTs in all sectors was by the National Agency of ICTs (ANTIC) and setting of a Multimedia Resource Centres in some primary and secondary schools; Government Bilingual High School Yaounde, Lycee General Leclers Yaounde, and Government Bilingual

High School Joss Douala, and some primary schools like Champions of the Chantale Biya Foundation. By 2003, official ICT programmes for secondary schools were conceived (ERNWACA-Cameroon, 200) and ICT syllabuses and National Sequential schemes of work published in 2008 were made available to Nursery, Primary and Teacher Training Education. Computer science and ICT was established at the Higher Teacher Training College (HTTC) Yaounde to train general secondary school CSC and ICT teachers in 2007. ICT was introduced as compulsory subject in all MINESEC official examinations.

The Ministry of Secondary Education under the leadership of the Minister of Secondary Education, Professor Nalova Lyonga, created the Distance Education Centre after the outburst of the COVID – 19 pandemics to ensure that Cameroon's educational system does not suffer from pandemic and to preserve the right of each Cameroonian child to quality education everywhere. The Centre in addition to broadcasting lessons and activities on radio and television, uploaded over 300 lessons on the website of MINESEC for students in examination classes during the lockdown on Tuesday June 2, 2020 and since then the website has been uploading lessons for all classes and all subjects (minesec.gov.cm). The Minister of Secondary Education in her speech at the Distance Education Centre on the 29th of August 2022, instructed teachers to embrace distance education and articulate it with the present teaching mode so as to help learners bridge the technology gap towards advanced countries and achieve relevant learner outcome for the 21st century.

Conceptual Background

Strategic planning looks after the definition of the strategies and the visions of an organization. Strategic planning is the highest level in planning. In education, strategic planning involves the definition of the educational strategies and mobilization of means and resources to achieve the strategies. Strategic planning is a disciplined, fact –based decision-making process, based on analysis of internal and external contexts and data, related to choices on how you are going to commit your resources, in ways compatible with your vision and mission, and to optimize strengths and opportunities and minimize weaknesses and threats. (Bryson, 1995) defines strategic planning more technically as "a set of concepts, procedures, and tools designed to help leaders, managers, and others think and act strategically on behalf of their institutions and their institution' stakeholders." The purpose of strategic planning is to align the institution with the external environment. Strategic planning with it long-range perspective, enables the institution (state) to identify where it is going and focuses on broad policy issues (Moscow, 1981). An institution plans strategically to identify

how it will commit resources over the long term in order to accomplish its mission (hunt, et al., 1997). According to Mintzberg, Strategic planning is about analysis (i.e. breaking down a goal into steps, designing how the steps may be implemented, and estimating the anticipated consequences of each step (Mintzberg, 1994).

The term distance education covers various forms of study at all levels which are not under continuous, immediate supervision of tutors present with their students in lecture rooms or on premises, but which nevertheless, benefit from the planning guidance and tuition of tutorial organization (Holmberg, 1989). Distance education defined the distance learner as one who is physically separated from the teacher (Rumble, 1986) has a planned and guided learning experience (Holmberg, 1986), and participates in a two-way structured form of distance education which is distinct from the traditional form of classroom instruction (Keegan, 1988) (Gunaward & Mclsaac, 2004)

Distance education is a form of education which bring together the physically-distant learner(s) and the facilitator (s) of the learning activity around planned and structured learning experiences via various two or multi-way mediated media channels that allow interactions between/among learners, facilitators as well as between learners and educational resources (Saykili, 2018).

(Gunta, 2013). Learning outcome is defined as statements of what a learner knows, understands and is able to do when completing a certain period of learning. Thus, learning outcome describes the non-material benefits students acquire during their learning. Learning outcome describe: knowledge, skills, attitudes, competences, values etc. acquired during their learning process. Learning outcomes are defined as 'statements of what a learner knows, understands and is able to do after completion of learning. (Adam, 2004). a learning outcome is a written statement of what the successful student or learner is expected to be able to do at the end of the modules/course unit, or qualification.

Historical background

The history of distance education can be traced as far back as the 1700s and 1800s with the egalitarian approach to education. The evolution of distance education also considers the evolution in the field of technology which is characterized by ages and generations. Each ages and generations gave rise to new discoveries in the field of technology. The evolution in the field of distance education is classified under correspondence teaching, which is the first

generation, the electronic communications, which is the second generation and the distance teaching universities which correspond to the third generation of distance education.

According to Bozhurt (2019) the first age of distance education known as correspondence teaching mostly delivered its content through mails. It is believed that correspondence teaching was first reported in a Swedish newspaper in 1833 which offered opportunity to study "composition through the medium of the post". According to Anderson and Simpson (2012) the first generation of distance education though not quite what we have today was intended to extend education to individuals living in remote areas. The first persons to use correspondence study was Charles Toussaint and Gustav Langenscheidt, who taught language in Berlin. This was followed by the initiative of Anna Eliot Ticknor who founded a Boston-based society to encourage people to learn from their homes.

The second generation in the evolution of distance education was known as the electronic communications. During this period, radio and television was used in the teaching and learning process. Distance education was gradually gaining ground in Europe, though without a considerable radical changes in structure but with more sophisticated methods and media were deployed. It is argued that by 1930s, experimental television teaching programs were produced at the university of Iowa, Purdue University and Kansas State college. By 1960s, satellite technology which went operational in the 1980s enabled the rapid spread of instructional television. In the late 1980s and early 1990s, the fibber-optic communication systems were developed.

The third generation of the evolution of distance education also known as distance teaching universities marked the intensification of digital knowledge and network in the society. The decision in 1962 to make the University of South Africa a distance teaching university modified the world`s perception of distance education. Similarly, the founding of the Open University of the United Kingdom in 1971 serves as another landmark in distance education as it offers full degree programs, sophisticated courses, and the innovative of the use of media (Holmberg, 1986). The Open university intensified the importance of distance education as it led to the creation of other distance learning universities in countries such as West Germany, Japan, Canada, Sri Lanka and Pakistan.

In Africa, young people aged between 20 years or even younger, 30% are qualified for tertiary studies. This population is believed to be very large, for the present state of African universities cannot contain all of them. According to Allen (2010), the number of African youths willing to integrate the tertiary sector was projected to increase by 100 million come

2020 (Allen, 2010). (Atkins et al., 2007) were of the view that for African countries to sustain this rapid increase in number of children under the schooling age, a major university need to be opened every week. (Ndongfack, 2016) argued that the existing and planned academic institutions cannot sustain the demand force. It is observed that the provision of education over the past decades has gradually increases (Ndongfack, 2016). It is in this regard that (Going Global, 2012) reported that in 2007 there were 150 million tertiary students globally, which represents an increase of 53% over the previous decade. It is observed that enrolment into tertiary education doubled between 2003 and 2011. Daniel (2010) commenting on the situation argued that though universities are not monumental, it is left on policy makers to derive alternative measures through which education can be provided to all the social classes in the society at an affordable cost (Daniel, 2010).

The development of distance education in former East Cameroon was formalized by Decree No. 67/187 of 03 August 1967 which brought into being "L'Enseignment a Distance" (EAD), through the creation of the Centre Pedagogique (Centre for Correspondence Learning), Alemnge (2018). The ministry of secondary education began in 2003 to pursue a project to integrate the use of new Information and Communication Technologies (ICTs) in teaching in general and in distance education in particular. The Ministry of Higher Education has contributed to the development of distance education in Cameroon through several initiatives. In the University of Dschang for example, the distance education program started in 1991. The university of Dschang is the only institution of higher learning offering tertiary agricultural education at or above the Bachelor's level. Admission was and is still by entrance examination. This situation limits access to agricultural education and creates a scarcity of trained human resources in the agricultural sector (Nji, 2008). In 1988, some staff of the National Advanced School of Agriculture (NASA) of the University Centre of Dschang for fear of the unknown outcome of the limited, design what was to become the pioneer distance education program in agriculture in Cameroon's higher education system. The proposal developed by the visionary thinkers in Dschang was evaluated and approved by CIDA in 1991. "establish a sustainable distance education project in agriculture in Cameroon which would serve the English and French speaking rural population in the country" (Djoukam,1988). In the University of Buea, the Distance Education program started in 2008. The purpose was to upgrade knowledge and skills of teachers of Nursery and Primary. The minister of secondary education in her speech at the distance learning center on the 29th of August 2022, instructed teachers to embrace distance education and articulate it with the

present teaching mode so as to help learners bridge the technology gap towards advanced countries and achieve relevant learner outcome for the 21st century. Distance education took another dimension in 2020 as it was used as a strategy to deal with the impact of COVID – 19 on education. This could be verified in the text that include special declarations made by the prime minister on the 17 March, 1 April and 15 May 2020 respectively, as well as the decrees, memoranda and communiques of the Ministries of Basic Education, Secondary Education and Higher Education and communiques from eight state universities.

It was not until 2001 when the use of ICTs was introduced in public schools in Cameroon, (Nsolly & Ngo, M. 2016). Though ICTs was introduced in secondary schools four years, the initiative went operational four years later prior to the creation of general inspectorate in charge of Computer Science (Fouda et al., 2013). Eventually, several primary, general secondary and technical secondary schools in some cities in Cameroon were already using computers and providing courses in ICTs before the government could develop the ICT curricula (Karsenti et al., 2012).

The initiative became real in February 2001 when the president of the Republic called for the orientation of education and training toward the knowledge economy in his address to the Cameroon youths (Mbangwana, 2008). From this day, ICT integration became a reality in secondary schools and colleges in Cameroon with most of them benefiting from government`s grants in the form of multimedia resource centres with internet connection (Mbangwana, 2008).

ERNWACA-Cameroon, (2005) argues that by 2003, official ICT programs for secondary schools were designed and ICT syllabuses and National Sequential Schemes of work published in 2008 were made available to Nursery, Primary and Teacher Training Education. In 2007, the field of computer science and educational technologies was established at the Higher Teacher Training College (HTTC) Yaounde to train ICT teachers (Nsolly & Ngo, 2016). By 2009, an information management system was set up at the Higher Teacher Training College, Bamenda to train technical secondary school teachers in computer science. This initiative led to the adoption of Information Technology as a school subject in January 2011.

Theoretical Background

Technology Acceptance Theory (TAM)

The Technology Acceptance Theory/Model (TAM) was developed by Fred Davis in 1989. This theory explains the acceptance of information systems by individuals. According to Fred Davis**,** the theory can be analysed in the following three principles or ideas.

 Perceived Usefulness: Users' perception of how a technology enhances their task performance. If users believe a technology is useful, they are more likely to accept and use it.

Perceived Ease of Use: Users' perception of how easy it is to use the technology. Simplicity and user-friendliness influence acceptance.

 Behavioural Intention: The intention to use a technology, which directly affects actual usage. It's influenced by perceived usefulness and ease of use.

In the case of Cameroon secondary education, one of the main challenge they may face with the implementation of distance education, is that of acceptance. Be it at level of student or teacher, or even the institutions themselves, change is always a complicated issue since individuals are called to either abandon some thing or add new things to already complicated ones. Technology Acceptance Theory comes in to bridge this challenge as it plays a significant role in shaping strategic planning for **distance education**. It focuses on how users perceive and accept technology. The Cameroonian system of education for many centuries and till present date, practices the traditional face to face method of teaching and learning. Distance education comes in like a new tradition that will take them away from the old method of doing thing or request them to add to what already seem complex to some individuals. In this context, understanding students' and teachers' acceptance of educational technology and the ease of use is crucial. With Technology Acceptance Theory, planners can easily identify factors that influence their willingness to use technology and this can be used to tailor their strategies effectively. Once a planning strategy can handle Perceived Usefulness**,** Perceived Ease of Use and Behavioral Intention as explained above, implementation becomes effective and efficient, since planners master the degree of acceptance and ease of use. These are factors that if poorly managed may lead to complete rejection. TAM has been widely studied and validated. It serves as a predictive model for adoption behavior. When planning distance education initiatives, institutions can leverage TAM to anticipate how users will respond to new technologies. Technological Acceptance Theory is one of the most suitable theory for strategic planning in distance education because

it guides strategic planners to focus on technologies that align with educational goals and provide tangible benefits. It also guides them to prioritize user-friendly tools to encourage adoption and to include training and support to boost self-efficacy.

Diffusion of Innovation Theory (DOI)

Another theory that could be very useful to strategic planning in distance education and its influence on learning outcomes is Diffusion of Innovation Theory. DOI is one of the oldest social science theories developed by an American communication theorist and sociologist Everett Rogers in 1962. DOI explains the pattern and speed at which innovations are adopted by different segments of the population. The diffusion of innovation theory explains the rate at which consumers will adopt a new product or services. The minister of secondary education in her speech at the distance learning center on the 29th of August 2022, instructed teachers to embrace distance education and articulate it with the present teaching mode so as to help learners bridge the technology gap towards advanced countries and achieve relevant learner outcome for the 21st century. This new way of doing things comes with challenges such as lack of knowledge and skills as well as attitudes and beliefs on the part of both the teachers and learners and even the planners themselves. The diffusion of innovation theory will help strategic planners evaluate the rate and pattern at which innovations will be adopted by both teachers, learners and even parents, hence guiding them to plan better. DOI will be useful in strategic planning in distance education because it will help planners understand how new educational technologies spread among students and educators. It will also help them tailor strategies based on adopter categories. It also promotes the adoption of distance education tools.

Personal innovativeness in information technology or individual natural aptitude to accept and use new information technology can stimulate the use of those tools. While for some, innovation is an incremental process of "making today's products and services a little bit better" (Morris, 2013). (Rogers, 2003). innovation is seen as "an idea, practice, or project that is perceived as new by an individual or other unit of adoption". In the context of Cameroon secondary educational system, it is perceived as new. Diffusion is defined as the "spreading of social or cultural properties from one society or environment to another" (Kinnunen, 1996). For Rogers, diffusion is "the process in which an innovation is communicated thorough certain channels over time among the members of a social system" (Rogers, 2003). This process of dissemination is influenced by four elements, including the innovation in question,

communication channels, the temporal aspect and the social context (Sahin, 2006). Therefore, as Agarwal notes, "potential users make decisions to adopt or reject an innovation based on beliefs that they form about the innovation" (Agarwal, 2000). Diffusion models have been successfully applied to diverse domains across different geographies, and have dealt with myriad issues like the adoption of Automated Teller Machines (ATM) in Nigeria (Olatokun & Igbinedion, 2009).

The Statement of the Problem

The government of Cameroon since the year 1998 initiated distance education in Law No 98/004 of 14th April 1998 to lay down guideline for education in Cameroon which stated that distance education will be used to facilitate teaching and learning as need arises. ICTs were officially introduced into the Cameroon secondary education system in February 2001by the president in his message to the youth, in which he called on them to embrace the knowledge economy (Mbangwana, 2008). ICT integration in Cameroonian primary and secondary schools effectively started as far back as 1998 and 1999 when some private efforts were made in some private and mission schools such as College Francois Xavier Vogt to use ICTs in the teaching learning process. The Cameroon government promulgated a law in 2001 instituting ICTs in government secondary schools, probably as prerequisite for the eventual take up of e-learning strategy in the education system. The Minister of secondary education in her speech at the distance learning center on the 29th of August 2022, instructed teachers to embrace distance education and articulate it with the present teaching mode so as to help learners bridge the technology gap towards advanced countries and achieve relevant learner outcomes for the 21st century. This initiative is in line with the UN policy to support lifelong learning opportunities for all irrespective of geographical location, status, gender and the age. To lay more emphasis on this in 2020, the government of Cameroon initiated the National Development Strategy in the section education, training and employability the government emphasize on the adoption of distance education and this was materialized with the creation of the distance learning centre. This centre produced and uploaded digital lessons and activities are on the MINESEC website and broadcast on radio and television. Many schools have been receiving presidential grant in the form of Multimedia Resource Centres with internet connection (Mbangwana, 2008). MINESEC, partnering with MTN foundation based on the 2013 partnership agreement (Camerpost, 2013), launched the first competition in 2014 to award teachers who integrate ICTs in teaching techniques and methods to improve learning. The objective being to motivate teachers in the use of technology without

discrimination, to stimulate the quest for research in innovative teaching methods and contribute toward achieving quality education. GRID (2014) says MINESEC can now boast that 80 per cent of secondary schools have computer rooms and 60 per cent have computers (Nsolly & Ngo, 2016).

Despite all the above initiatives it is observed that students learning outcomes in secondary schools is on a constant decrease which can be justified by repetition, dropout, violent, indiscipline, poor GCE results and inability to apply skills and knowledge obtained in real world of work. For instance, according to the General Certificate of Education Board, the GCE results witness a global drop of 3.36%; that is 66.88% in 2023 as against 70.25% in 2022 (GCE Board website, 2023). This can be caused by a number of empirical observation made during the field work. Lack of electricity, lack of digital learning materials and infrastructures, lack of multimedia hall or center in schools, poor financial status of most families, making it impossible to provide smart phones or laptops. Cameroonian teachers have differing experiences with modern technology due to recent presence of modern technology in their schools and their distinct cultural background (Shaibou, 2015). In addition to this, there is no clear recognizable national strategy plan for the integration of modern technology within the school curricula and pedagogic activities (Shaibou, 2017). Hence, it is important to examine the impact of strategic planning in Distance Education on learning outcomes of students in some secondary schools.

Research Objective of the Study

General research objective:

To examine the influence of strategic planning in distance education on learning outcomes of students in some secondary schools in Mfoundi Division.

Specific research objective

- To examine the impact of need assessment on learning outcomes of students in some secondary schools in the Mfoundi division.
- To investigate the influence of the provision of digital resources on learning outcomes of students in some secondary schools in the Mfoundi division.
- To examine the influence of technology integration on learning outcomes of students in some secondary schools in the Mfoundi division
- To analyse the influence monitoring and evaluation in strategic planning in Distance Education on learning outcomes of students in some secondary schools in the Mfoundi division.

Research Questions

The research questions are provided in two folds; General and specific research questions.

General research question

- To what extend does strategic planning in distance education influence learning outcomes of students in some secondary schools in the Mfoundi division?

Specific research questions

- To what extend does needs assessment influence learning outcomes of students in some secondary schools in the Mfoundi division?
- To what extend does provision of digital resources influence learning outcomes of students in some secondary schools in the Mfoundi division?
- To what extend does technology integration influence learning outcomes of students in some secondary schools in the Mfoundi division?
- To what extend does monitoring and evaluation influence learning outcomes of students in some secondary schools in the Mfoundi division?

Research Hypothesis

The hypothesis of this research is provided in two-fold; general and specific research hypothesis. All specific hypothesis is stated in alternative forms, while the general hypothesis is stated in the alternative and null forms.

General Research Hypothesis

Ha- Strategic planning in distance education has a statistically significant influence on learning outcomes of students in some secondary schools in the Mfoundi division.

Ho- Strategic planning in distance education has no statistical significant influence on learning outcomes of students in some secondary schools in the Mfoundi division.

Specific Research Hypothesis

Ha1 - Need assessment has a statistically significant influence on learning outcomes of students in some secondary schools in the Mfoundi division.

Ha2 – Provision of digital resources has a statistically significant influence on learning outcomes of students in some secondary schools in the Mfoundi division.

Ha3 - Technology integration has a statistically significant influence on learning outcomes of students in some secondary schools in the Mfoundi division.

Ha4 - Monitoring and evaluation has a statistically significant influence on learning outcomes of students in some secondary schools in the Mfoundi division.

Significance of the Study

This study will be significant to different educational stake holders including the government, inspectors, trainers and teachers at the distance learning center in Yaounde.

To the Government: The government of Cameroon is the main body in charge of planning education in relation to the visions of the state. Most precisely the ministry of secondary education enacts laws reforms and carry's out activities to ensure the digitalization of secondary education in order to influence learning outcomes. The main reason for this study is for the government to effectively plan distance education in Cameroon and ensure that she accompany the distance learning center to be effective and efficient.

To Educational Planners: The role of an educational planner is to ensure that educational activities go on smoothly as envisioned by the ministerial department. Planning is an ongoing process in any institution to ensure that things get done on time and as efficiently as possible. At the level of the ministry to the distance learning center activities have to follow a particular sequence in order to fulfill the mission of the institution.

To teachers: The teachers who carry out lessons in the distance learning centers do so to be able to transmit knowledge more easily and therefore their activities have to be well planned to make sure that the lessons delivered are well prepared to meet the needs of the learners and hence increase the performance of their learning activities.

To learners: It will help the learners to be more aware of the distance education and its related activities, and how it can help them to develop better skills and methods.

To the Educational Community: Strategic planning in education and in distance education in particular has revealed itself to be very important part of recovering. Strategic plan articulates a share vision, mission and values, this will be very beneficial to the educational community if implemented in distance education since it is yet to gain it ground in Cameroon. Since distance education faces some challenges related to time, a strategic plan will effectively organize schools, staff, and time. The main aim of educational community to adopt distance learning education is to improve and assure efficient and effective learning outcomes, strategic plan defines how success is measured. Strategic planning in distance education helps educational community with decision making, responsiveness, and innovation. Strategic

planning in distance education will increase communication and engagement, hence an influence in learning outcomes.

Scientific significance

This work is not the first of its kind in the field of study, many people have carried out similar studies on this topic, the present study only comes in to enrich already existing literature on the topic.

Scope of the Study

Geographical scope of the study

This study is carried out in Mfoundi division of the centre region of Cameroon. The Mfoundi division covers an area of 297 km2 and as of 2005 had a total population of 1,881,876. It forms the capital and greater area. (Institute national de la statistique, 2012). The division of Mfoundi was created by Decree No. 74/193 of 11 March 1974 seperating it from the division of Mefou (today itself divided into Mefou –et- Afamba and Mefou – et – Akono), (Copyright Visit –cameroun, 2020). Mfoundi division is made up of 7 sub-divisions among which is Yaounde IV where the study actually took place. The division is dominated by the presence of state-own public institutions and private institutions. The division is known as the administrative head quarter for the simple reason that most if not all the public institutions are concentrated in the area. The study is conducted precisely in Government Bilingual High School Ekounou. The main issue under investigation was to examine the influence of strategic planning in distance education on learning outcomes of secondary school students. It will focus on four components of independent variables; need assessment, provision of digital resources, technology integration and monitoring and evaluation.

Thematic (Scientific) scope

This study falls in the field of science of education specifically management of education and more precisely educational planning and management of information system. This study examines how strategic planning in distance education influences learning outcomes of secondary school students in Cameroon in general and particularly, those of the Mfoundi division.

Time scope or temporal scope

This work will be conducted for a period of one year six months, that is, it runs from October 2022 to June 2024.

Definition of Terms

Distance Education

Generally, distance education is an educational system where learners are separated from teachers physically, but are connected to each other through the use of technological tools and media such as radio, television, social media platforms, google classroom, zoom. It could also be by the projection of digitalized lessons with guided instructions, in class room, computer laboratory or multimedia centers; prepared and selected by educational expert in the field of study. This education technique may be included in the traditional face- to - face form of education in an institution, or it may be offered separately from the traditional system of education (face – to- face) where the learner is free to enroll or not. Whatever form an institution or state decide to adopt, it need to be accompanied by skills, resources and guidance. According to Ndongfack, distance education is broadly defined as a flexible and dynamic form of knowledge transmission which is characterised by the separation of the teacher from the learner in time and setting, use of a variety of media to bridge the separation between the teacher and the learner through the use of computer-based learning, telecommunications, video and audiocassettes, radio and television broadcasts, provision of two way communication, possibility of face-to-face meetings through tutorials, and the use of industrialised processes (Ndongfack, 2016). For Keegan, the main elements of a definition of distance education are:

the separation of teacher and learner which distinguishes it from face-to-face (F2F) lecturing

the influence of an educational organization which distinguishes it from private study

the use of technical media, usually print, to unite teacher and learner and carry the educational content of the course

the provision of two-way communication so that the student may benefit from or even initiate dialogue

the possibility of occasional meetings for both didactic and socialization purposes

the participation in an industrialized form of education (Keegan, 1980).

A definition of distance education is provided in the Ukraine law 'on education', in paragraph 4 Article 9 'forms of obtaining Education'. This definition describes distance education as an individualized process of gaining education, which usually involves meditated interactions between participants who are spatially distant but who operate within a particular

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environment according to modern psycho-pedagogical and information and communication technologies. (LE, n.d). furthermore, Gunawardena and McIsaac (2004) provide a broader definition which combine key concepts in three definitions by Rumble (1986), Holmberg (1986) and Keegan (1988). Distance education defined the distance learner as one who is physically separated from the teacher (Rumble, 1986) has a planned and guided learning experience (Holmberg, 1986), and participates in a two-way structured form of distance education which is distinct from the traditional form of classroom instruction (Keegan, 1988). Saykili summarises the above definitions as, Distance education is a form of education which bring together the physically-distant learner(s) and the facilitator (s) of the learning activity around planned and structured learning experiences via various two or multi-way mediated media channels that allow interactions between/among learners, facilitators as well as between learners and educational resources (Saykili, 2018).

In the context of Cameroon secondary education, Distance Education is a form of transmission of knowledge and skills by the use of technology, where well-prepared selected lessons of all subjects and all classes of the secondary, are downloaded from the website of MINESEC by learners or institutions and are studied or projecting on white board either in classrooms, computer laboratories or in multimedia halls, or teachers themselves prepare digitalized lessons, digitalized questions, provide a courseware to students with prepared questions and guided answers or ask students to make research through guided website and exchange with them through social media platforms (mostly WhatsApp), zoom, Google classroom; or it could be diffused in radio or over the television under the special planning and supervision of MINESEC. In this our study we are going to adopt the definition of Ndongfack which defines distance education as a flexible and dynamic form of knowledge transmission where the teacher and learner are separated in space but present in time through the use of variety of media, computer-based learning, telecommunications, video and audiocassettes, radio and television broadcasts, provision of two way communication, possibility of face-to-face meetings through tutorials, and the use of industrialized processes (Ndongfack, 2016).

Strategic Planning

Strategic planning is the highest level of planning after operational and tactical planning. It is necessary in educational institution because if well planned and applied, it lead to increase in the performance of educational institution. In strategic planning objectives and goals are identified, and this helps to ensure that distance education is not only successful but meets the

needs of its users. strategic planning in distance education guides educational development by giving a common vision and shared priorities. Strategic planning is a process in which an organization define its vision, set it goals and objectives and the strategies used in achieving them.

Bryson (1995) defines strategic planning more technically as "a set of concepts, procedures, and tools designed to help leaders, managers, and others think and act strategically on behalf of their institutions and their institution' stakeholders." The purpose of strategic planning is to align the institution with the external environment. Strategic planning with it long-range perspective, enables the institution (state) to identify where it is going and focuses on broad policy issues (Moscow, 1981). An institution plans strategically to identify how it will commit resources over the long term in order to accomplish its mission (hunt, et al., 1997). According to Mintzberg, Strategic planning is about analysis (i.e. breaking down a goal into steps, designing how the steps may be implemented, and estimating the anticipated consequences of each step) (Mintzberg, 1994). In this our study we are going to adopt Mintzberg approach. Thus, strategic planning in distance education is therefore a process which consists defining the strategies, the mission, the vision and setting goals and objectives as well as mobilizing means so as to ensure the effectiveness and efficiency of distance education.

Learning Outcome

Learning outcome is all about goals. What is the purpose of learning? What is the objective of the teacher, the institution, or the state with regard to learning? What is the final product of learning? (Gunta, 2013) Learning outcome is a statements of what a learner knows, understands and is able to do when completing a certain period of learning. Thus, learning outcome describes the non-material benefits students acquire during their learning. Learning outcome describe: knowledge, skills, attitudes, competences, values etc. acquired during their learning process. Learning outcomes are defined as 'statements of what a learner knows, understands and is able to do after completion of learning.

According to Adam (2004), a learning outcome is a written statement of what the successful student or learner is expected to be able to do at the end of the modules/course unit, or qualification. According to Lin and Miller learning outcomes are both the physical and intellectual results visible in an individual upon completion of a session of learning experiences. They are simply what an individual achieve in the form of skills, knowledge, competence, aptitudes, attributes etc. upon completion of a training program. In this study we

are going to adopt learning outcome according Gunta, which describe: knowledge, skills, attitudes, competences, values etc. acquired during their learning process.

Secondary School

Adamu defines secondary education as a form of education that students receive after their primary education and or before their tertiary education. It is the midway between primary and tertiary schools. It is intended for pupils between the ages of 11-17. For him, secondary education is the budding ground for future professionals as well as the foundation for the discovering and classification of specific fields of professions (Adamu, 2020). Secondary education is regarded as the education and training that children receive during the teenage years. During this age, the children are different from each other in terms of number of aspects. These include, personality traits, learning abilities, natures, attitudes, caste, creed, race, religion, ethnicity, gender, age and socio-economic background (Radhika, 2019). Secondary school education equips individuals with skills and knowledge, students in secondary schools become independent set and achieve goals and participate in larger community. When secondary education is well planned, and effectively carried out, it contributes to economic growth and stability. Secondary school serve children aged 12 to 18, this the stage when an individual strives for independent. secondary school education comes in to play a vital role in the life of an individual, offering them a platform to explore their interest, develop their talent and discover their passions. Here in Cameroon, a secondary school is the level between primary school and university and the ages is 12 – 18.

Student

A secondary school student is any individual between the age of 10 and 21 formally enrolled in a private or public secondary school and who acquires knowledge and skills under the guidance and supervision of a teacher or instructor who performs evaluations at regular and well defined intervals to measure the learning outcomes of the said individual. Being a student helps an individual to build personal skills and improve confidence. The students of today are the citizens of tomorrow.

Oxford Learner's Dictionary defines a student as a person who is studying at a school, especially a secondary school.

The Oxford English Dictionary (OED) defines a student as a person engaged in or dedicated to the pursuit of knowledge, especially in a particular subject area.

In this our study, we are going to adopt the definition of Oxford Learner's Dictionary, where a student is defined as a person acquire knowledge in a secondary school.

CHAPTER TWO

LITERATURE REVIEW OF THE STUDY

Strategic planning in distance education is a concept which has considerably gain ground over the past years. While distance education has become a supplement of the traditional or the conventional method of teaching and learning, the desire to ensure its effectiveness has been subjected to debates. This appears as a results of a good number of factors which mitigates against its effective implementation especially in sub-Saharan countries. As such, strategic planning has been seen by many as the "panacea" to the problems faced by distance education in both the developed and under developed countries. The present chapter focuses on the review of related literature to the study. It is divided into three major parts. This consists of the conceptual review of literature, the empirical review and the theoretical review of literature. Conceptual review is a general review of key concepts, the empirical also known as review by objective, is a sort of specific review while the theoretical review look after the major theories convoked in this study.

Conceptual review of literature

The conceptual review of literature provides a sort of general overview of the key concepts of the study. It tries to review related works to the study in a general manner. Here, concepts such as strategic planning, distance education, and learning outcomes are critically reviewed to better the understand of the studied phenomenon.

A general overview of strategic planning

A plan is a well conceive model which helps an individual, group of individuals or organisations to achieve the predefined objectives within a specific framework. It is a guideline which guides the activities of individuals in an organisation. planning is a process which involves the prevision of the use of the available human, material and financial resources. Planning entails forecasting for the future requirements of an organisation. It is argued that the success or failure of an organisation largely depends on the ability of its leaders to plan or not ahead of time. Planning ensures the effective and efficient utilisation of the available resources in view of achieving the stated goals and objectives of the organisation. While planning is seen as the act of forecasting for the future requirements of the organisation, strategic planning on the other hand looks after the definition of the strategies and the visions of an organisation. Strategic planning is the highest level in planning. In education, strategic planning involves the definition of the educational strategies

and mobilisation of means and resources to achieve the strategies. Strategic planning provides the foundation for any action to take place in the educational system.

According to Cope (1981) strategic planning originated from the military plans devised for war which can be dated as far back as 2000 years ago. He argues that the ability to assess the threats of the enemy, devise a suitable response plan which explores the weaknesses of the enemy and the strength of the forces while coordinating combat support and logistics in support of the response is known as strategic planning. The word strategy is from a Greek word "stratos" which means the army and "ago" which means to lead.

Over the past years, recent literature has attempted a definition of strategic planning. Mintzberg (1994) one of the proponents of strategic planning for several years argued that strategic planning in education is an approach which is closely link to the definition of the strategy, the vision, the mission and the goals and objectives of an organisation. He argues that strategic planning takes place at the macro level of the organisation. The actors or individuals who initiate strategic planning in an organisation are the top management. They provide the principles and guidelines necessary for the attainment of predefined goals and objectives. Though Mintzberg is seen as one of the proponents of strategic planning, he later argues that strategic planning is not the miracle solution for the simple reason that the failures in the past decades have highlighted the difficulties and weaknesses of strategic planning (Mintzberg, 1994). In his argument, Mintzberg advocated for the reconceptualization of the strategic planning to a practice that he later on calls "strategic programming". Mintzberg emphasises that the organisation in reality is made up of a large number of people who contribute in one way or the other to the realisation of the stated goals and objectives rather than a group of strategic planning specialists. This is why he further argues that it is necessary in the application of strategic planning "to try to make the process of developing the strategy more flexible rather than trying to make the process stricter by an arbitrary formalisation" (Mintzberg, 1994).

According to McCune (1986) strategic planning is an approach which is based on a theory and preparation for the future different from the long term planning. It is based on the belief that the future can be influenced and developed by the present actions of an organisation instead of believing that the current trends in an organisation will continue in a linear manner (Kaufman & Herman, 1991). While strategic planning is seen as an initiative which helps to redesign the future of an organisation, it success or failure depends on the present situation of the organisation. this means that the success of an organisation or an individual is in larger

part influence and design by the current state of the individual or the organisation. This explains why Hache (n.d) argues that an organisation that carry out strategic planning is not in reality preparing for the future but instead preparing the future itself. He further argues that the future is never a fait accompli that cannot only be anticipated but can equally be redesigned according to the desires and expectations of individuals as well as organisations. Hache further argues that strategic planning is therefore all the means and resources an organisation uses to constantly redefine itself so as to realise the predefined goals and objectives. In this perspective, Cook (1990) made it clear that strategic planning is not influenced by the methodology, process or system, but instead by the context from which the action plans are drawn. Bean (1993) on his part conceived strategic planning as a concerted effort intended to achieve a group of decisions and actions which form and guide an organisation or individual to be what it is, to do what it does, and to know why it does it.

Planning in distance education is a process which consist of redesigning the future requirements of an educational institution. Distance education has been used as a supplement to the classical or traditional method of knowledge transmission. This in larger part has been caused by numerous crisis affecting the society which at times make physical presence in school campuses practically very impossible. This is why Garrett and Weiner (1999) in a study found out that regardless of the details, effective distance pedagogy is more the result of the preparation or planning than innovation. This entails that distance education requires innovation for it to be effective but its effectiveness much more depends on the ability of governments, individuals, stakeholders to effectively plan ahead of time. Strategic planning in distance education is therefore a process which consists of defining the strategies, the mission, the vision and setting goals and objectives as well as mobilising means so as to ensure the effectiveness and efficiency of distance education.

Over the years, a number of strategic planning models for distance education have been developed (Barone & Hagner, 2001; Hanley, 2001; Offir, 2000, University of Maryland, 2001). In a study by Kaufman et al. (2001), they give a set of dimensions of distance education as well as the current and future trends regarding strategic planning in distance education. They argue that strategic planning in distance education focuses on distinguishing mega level planning which focuses on outcomes, macro level planning which focuses on addressing the outputs and the micro level planning in distance education. Here, institutions are therefore required to adopt a valid performance model, ensuring rigour in the application by linking the three levels of planning. This requires educational planners to avoid confusing

the means of delivery to the mastering requirements, conducting need assessments, use a learner focused, performance centred approach and create distance learning which systematically adds value (Madden, n.d.).

Strategic planning in distance education is seen as a logical path through which long term vision of an educational institution can be achieved. It entails a medium of interaction between the learner and the instructor each time they are separated in time and setting. It is an initiative which identifies a faraway goal and mobilises the means to achieve it. While strategic planning in distance education appears to be very easy in theory, the process of execution is said to be far more complicated. Strategic planning in distance education ask questions such as what must be done, by whom, when, with what resources and how? Providing answers to this questions required planners to developed a detail plan. The absence of a plan will make the work of a planner more daunting and complicating. This is why Kaufman (1995) argues "if we are not masters of change, we will be victims of it".

Figure 1: Mintzberg`s forms of strategy
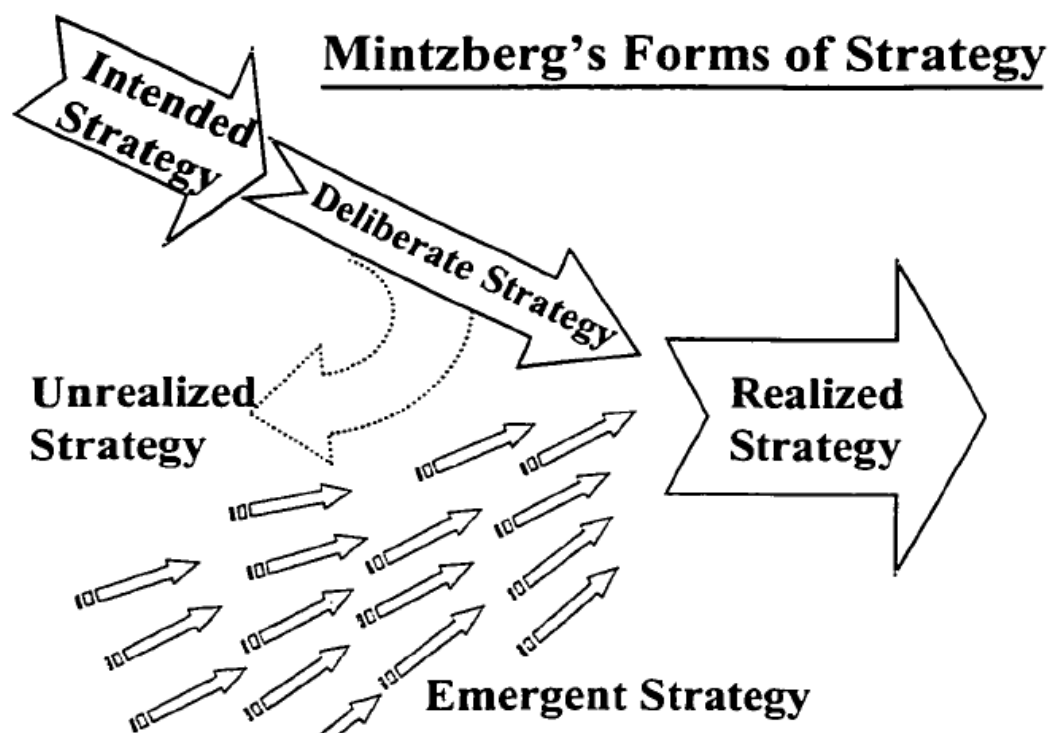
Source: Mintzberg, 1994)

Levels of strategic planning in distance education

Strategic planning in distance education as earlier defined above is a process which consists of developing proactive measures to overcome daily challenges in an organisation. it is a

process which entails planning ahead of time so as to avoid any undesirable events in an organisation. Kaufman (1992) developed an appropriate model for planning in education. He identifies a unique view of strategic planning in education. The model of Kaufman in education applies to distance education. He argues that the key element of planning continuum is arguably the strategy and thus asserts that strategic planning should be conducted in three different levels. He talked of:

- Micro planning: which focuses of individual or small groups performance,
- Macro planning: which focuses on the organisation itself, and
- Mega planning: which focuses on the external, outside the organisation, clients and society.

For Kaufman, strategic planning for education must begin with the mega level planning which make the society the primary customer and beneficiary of the strategic planning process. This means that every strategic planning must start with needs assessments as it helps to determine the desires and expectations of the customers and the beneficiaries.

In the view of Barry (1998) and Herman (1990) strategic planning entails forecasting the future requirements of the organisation which can be done at three different levels. To them, these levels involves;

- The strategic level,
- The operational level, and
- The tactical level.

They argued that strategic planning is projected forward as little as 3 to 5 or as much as 10 to 20 years. Strategic level of planning according to Moscow (1981) identifies where the organisation is going to and focuses on broad issues. Strategic planning level ask questions such as what could be? What should be? Herman (1990) emphasized that the vision outlines the current state of the organisation as well as identify the gap the strategy is supposed to fill. This help the planners to know what to do, how to do it, when to do it, with whom to do it and how long it will take for it to be done. Strategic planning level help an organisation to develop a framework for the utilization of the resources in the best and possible manner so as to accomplish its mission.

The operational plan ranges from 1 to 5 years. This level of planning is also known as the implementation or program planning (McCune, 1986). Barry (1998) argues that the operational plan facilitates the implementation of the broad goals, objectives, vision and

strategy defined at the strategic level of planning. McCune (1998) argues that in an educational setting, the operational plan addresses issues such curriculum development, staff acquisition and development, teaching methods, plan facilities, infrastructures etc.

The tactical plan has the shortest length of time which is usually less than 1 year. Tactical planning according to Boar (1993) is referred to as the "malleable part" of the strategic planning which enables an organisation to adapt to a constantly changing and dynamic environment. They are known as action plans since it permits planners to solve problems which arises in the process of the execution of the strategic plan or the operational planning.

Long range planning versus strategic planning: what difference?

The existing literature reveals that before the 1960s, long range plan and strategic planning were used by planners interchangeably. Long range planning is generally known as form of planning which focuses on logical incrementalism or extrapolative forecasting as the baseline of planning. According to Ansoff (1988) logical incrementalism is based on the belief that the environment is stable and the future can simply be forecast by analyzing the past. Long range planning does not give room for change.

For the proponents of the long range planning, the environment is and shall remain stable and thus the future can simply be planned by considering the past events. This form of planning is understood to be insufficient as it does as sufficiently respond to the needs of the future. Long range planning is thus considered to be ineffective since the environment today is said to be dynamic as well as changing. Covey (1992) compares this type of planning to a road map as this type of planning is only reliable when the environment remains unchanged. This explains why Morrison and Renfro (1984) identifies the difference between long range planning and strategic planning as "one where the future happens to the institution and the other where the future happens for the institution".

Models of strategic planning in education

As earlier defined above, strategic planning in distance education is a process which involves developing proactive measures intended to facilitate the achievement of the predefined goals and objectives in distance learning. While distance education for the past years has become the favoured medium of exchange between learners and facilitators, its effectiveness largely depends on the ability of policy makers and educationists to strategically plan ahead of time. This requires planners to adopt the right and appropriate model for strategic planning. In strategic planning, several models have been developed depending on the domain. While

strategic planning is seen as the pathway used by organisations and individuals to cope with constant changes, uncertainties, and ambiguity (Sparks, 1993), they exist a number of models that can be used such as the business models, the economic models and the educational models. The focus of the present study is on the strategic planning model used in education.

According to D`Amico (1989) they are three major differences between strategic planning in the educational settings and strategic planning in the corporate organisations. He argues that strategic planning in education differs from that in business organisations in that: (i) structural factors, (ii) corporate planning is product driven, and (iii) political aspects are more influential in educational planning. Several scholars have developed strategic planning in education such as the Hunt et al. (1997) strategic planning model, Kaufman and Herman (1991a) strategic planning model, Anthony (1985) strategic planning model, just to name a few.

In the present study, the researcher opted for the model developed by Hunt et al. (1997) for three main reasons. The first reason why Hunt el al. strategic planning was adopted in the case of this study is for the fact that the model focus on strategy development, inclusion of assumptions, and its operationalisation of the plan. The Hunt et al. model for strategic planning in education was equally retained for this study because of its focus on SWOTs analysis. The SWOT analysis permits educational planners to scan the environment so as to identify the strengths, weaknesses, opportunities and threats which might affects the smooth realisation of the plan.

Figure 2: Hunt et al (1997) strategic planning model in education
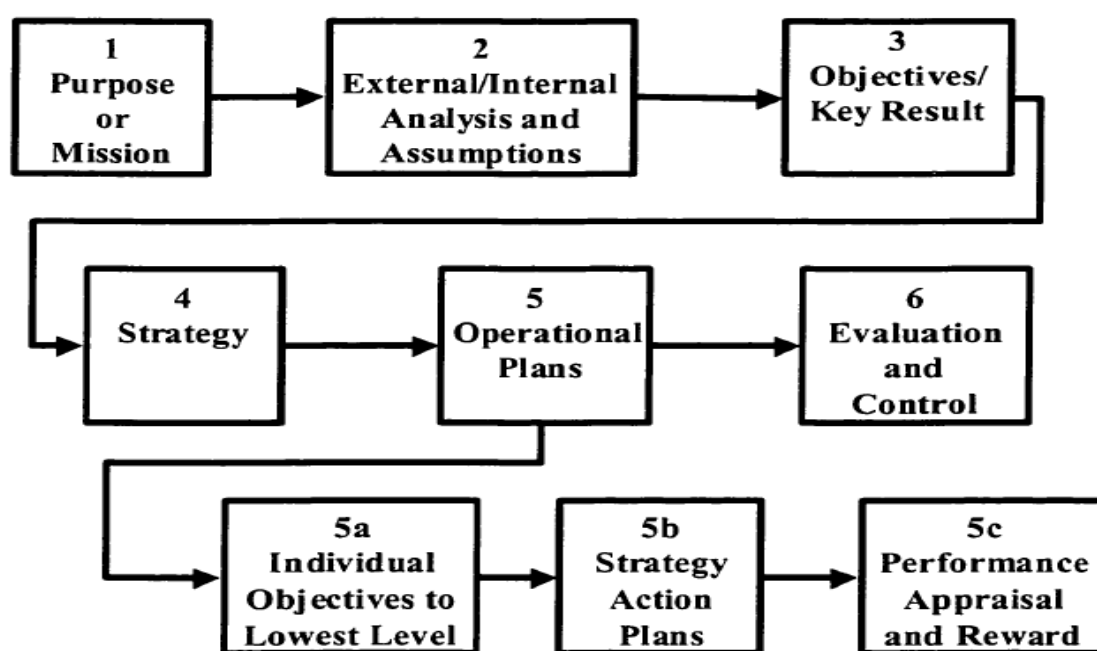
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The above strategic planning model developed by Hunt et al. provides a framework for understanding how strategic planning in distance education can be conceived. This is developed in six steps. The step one focuses on the purpose or mission of strategic planning. This is to say that what the planner want to become in the near future. Step two focuses on the internal and external diagnosis of the environment to identify possible assumptions which might affects the planning. Step three focuses on the definition of clear aims and objectives as well as the expected results of the strategic plan. Step four focuses on the development of the strategy itself, step five focuses on operational plan which takes into consideration the individual objectives, the strategy action plan or pathway and performance appraisal and reward while step six focuses on control and evaluation of the strategic plan to make sure that the outcomes and results reflects the stated aims and objectives of the process.

Process of strategic planning in distance education

Strategic planning commonly seen as the development of strategies, methods, and means by an individual or an organisation to cope with changes, uncertainties and ambiguity from the environment. Distance education, a relatively new approach to teaching and learning requires a lot of attention from planners. As such, educational planners are required to undertake strategic planning as a means to overcome some of the challenges faced by this relatively new approach to teaching and learning process. Strategic planning in distance education according to AFSC (1997) comprises of five phases. These phases consist of the initiation phase, the concept development phase, plan development phase, plan review phase and supporting plans phase.

Figure 3: Process of strategic planning in education
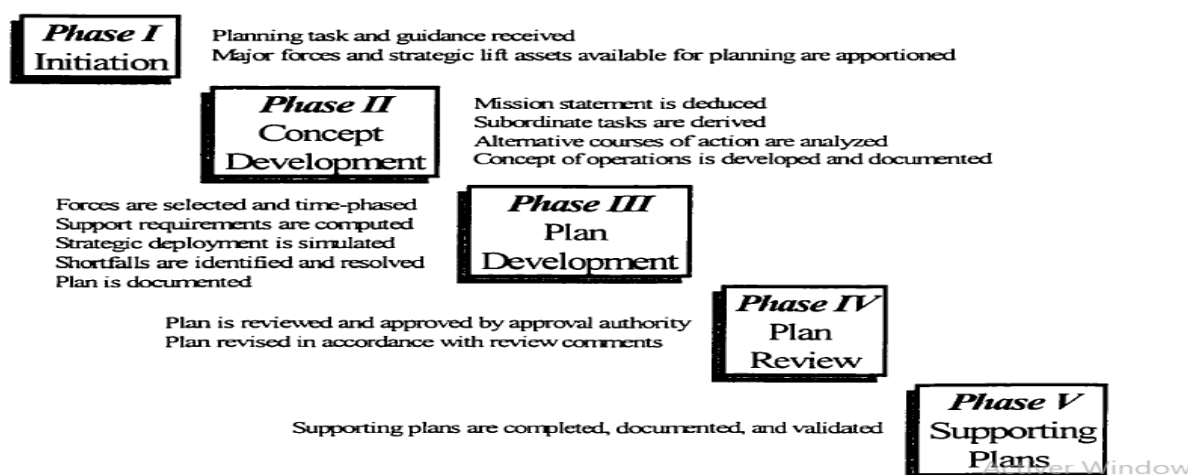
The above figure presents the planning process in education according to AFSC (1997). The strategic planning in education is conceived in five phases, starting with the initiation phase and ending with the supporting plans phase. The initiation phase involves the planning of the task and looking as the possibility of the plan being successful. The concept development phase involves the definition of the missions of the plan, analysis of the alternative courses of actions and tasks subordination. The plan development phase of the strategic planning in education involves the development of the support mechanisms, the timing of the activities and tasks, strategic deployment, identification of possible obstacles and documentation of the plan. Plan review which is the next phase involves the revision and validation of the plan by the planner and the correction of the plans according to the expectations. The final phase in strategic planning in education is supporting the plans which involves completing, documenting and validating the plan. All these phases must be respected in strategic planning in education so as to ensure the effectiveness of distance education which will in return positively affects the learning outcomes of students in secondary schools.

Understanding distance education

Distance education or e-learning is a method of knowledge transmission whereby the teacher and the students are separated in settings and time. This has become a new paradigm in teaching and learning process as it is flexible and dynamic. Distance education is developed as a supplement to the traditional or conventional method of knowledge transmission which always requires the physical presence of teachers and students in a traditional classroom. According to Ndongfack (2016) distance education is broadly defined as a flexible and dynamic form of knowledge transmission which is characterised by the separation of the teacher from the learner in time and setting, use of a variety of media to bridge the separation between the teacher and the learner through the use of computer-based learning, telecommunications, video and audiocassettes, radio and television broadcasts, provision of two way communication, possibility of face-to-face meetings through tutorials, and the use of industrialised processes. Distance education is thus a method of transmitting knowledge, skills, competences and aptitudes through the use of variety of digital devices such as smart phones, computers, audio and videocassettes, as well as computer assisted devices such as projectors.

Distance education, also known as correspondence education, home study, independent study, external studies, continuing education, distance teaching, technology-based-mediated education, learner-centred education, open learning, flexible learning, distributed learning

(Ndongfack, 2016) is a method of knowledge transmission whereby the teacher and the learner are physically separated both in time and space. It is believed that distance education is developed as a means to facilitate access to education at any time and in any place. This initiative is in line with the UN policy on ensuring lifelong learning opportunities for all irrespective of the geographical location, the status, the gender and the age. Institutions may operate as entirely a distance learning institution (single mode) or as part of an existing traditional university (dual mode). The purpose of distance education in both the developed and less developed countries is to facilitate access to quality education to individuals in both the urban and rural or remote areas. This initiative is in order to eradicate discrepancies or disparities of access to quality education for both the urban and the rural populations.

Ndongfack (2016) argues that because of numerous socio-economic and even political crisis, most people find it difficult to attend on-campus regular courses and so they are deprived from their right to education. The fourth objective for Sustainable Development Goals (SDG4) advocates for an inclusive and equitable quality education as well as the promotion of lifelong learning opportunities for all. The realisation of this goal number 4 requires policy makers and educationists to develop mechanisms and adequate measures through access to education can be improved. This is why Ndongfack (2016) further explains that distance education is fast becoming an indispensable part of the mainstream education. This is so because of the need to make the teaching and learning process more accessible to a wider population irrespective of their location, the growing need for continual skills, upgrading and reskilling, as well as advancement in the field of technology which have make teaching to be possible from a distance.

The development in the field of technology has led to the emergence of distance education as a means through which skills, knowledge, aptitudes and competences could be transmitted. The end of the 20th century marked the turning point in the use of ICT in education. This is because a good number of people over the years have expressed their willingness to continue upgrading and reskilling themselves as a means to adapt to the changing and dynamic environment. The declaration of the UNO in relation to SDG4 is a proof that education is a continuous process. This means that there is no age limit in education. As such, policy makers and educationists in order to widen access to equitable quality education for all, has embarked on developing adequate measures through which all disparities regarding access to quality education can be eradicated. This is why Buselic (2012) in his study argued that new methods of teaching and learning were developed as a result of rapid development and evolution in

field of information and communication technology. This new method of education commonly known as distance education or open distance learning have given the opportunity for highly occupied population to continue upgrading and reskilling themselves despite the stuck schedules. This is as a result of the flexibility and dynamism of distance education which provides frameworks for individuals to learn at their own space.

A brief history of distance education

The history of distance education can be traced as far back as the 1700s and 1800s with the egalitarian approach to education. The evolution of distance education takes into consideration the evolution in the field of technology which is characterised by ages and generations. Each ages and generations were characterised by new discoveries in the field of technology. The evolution in the field of distance education is classified under correspondence teaching, which is the first generation, the electronic communications, which is the second generation and the distance teaching universities which correspond to the third generation of distance education.

Correspondence teaching

According to Bozhurt (2019) the first age of distance education is known as correspondence teaching whose content was mostly delivered through mails. It is believed that correspondence teaching was first reported in a Swedish newspaper in 1833 which touted the opportunity to study "composition through the medium of the post". According to Anderson and Simpson (2012) the first generation of distance education though not quite what we have today was intended to widen access to education for individuals living in remote areas. The first persons to use correspondence study was Charles Toussaint and Gustav Langenscheidt, who taught language in Berlin. This was followed by the initiative of Anna Eliot Ticknor who founded a Boston-based society to encourage people to learn from their homes. From 1883-1891, the state of New York authorised the granting of academic degrees through the Chautauqua College of Liberal Arts to all the students who completed the required summer institutes and correspondence courses (Bozhurt, 2019).

Similarly, in 1891, Thomas Foster, editor of the Mining Herald newspaper in Eastern Pennsylvania, started offering a correspondence course in mining and the prevention of mining accidents. In Britain, correspondence study greatly gain ground with the creation of a number of correspondence institutions such as Skerry`s College in 1878, and the University correspondence college in 1887. During this time, correspondence teaching constituted an integral part of the University of Chicago through the university extension as one of its five

divisions. In 1886, the moody Bible institute was created and by 1901, it founded the correspondence department. By 1920s, correspondence teaching started to enrich the secondary school curriculum as students in Benton Harbor, Michigan were offered vocational courses in 1923 (Anderson & Simpson, 2012). All these institutions vulgarised correspondence study in the early 1900s.

Electronic communications

The second generation in the evolution of distance education was known as the electronic communications. This period marked the introduction and use of radio and television in the teaching and learning process. The use of these technological tools facilitated interactions between the teacher and the learners. Before then, teaching was mostly done through the radio but thanks to the advancement in technology, visual auditory was introduced through the use of the television (Bozhurt, 2019). Distance education was gradually gaining ground in Europe, though without a considerable radical changes in structure but with more sophisticated methods and media were deployed. It is argued that by 1930s, experimental television teaching programs were produced at the university of Iowa, Purdue University and Kansas State college.

By 1960s, satellite technology which went operational in the 1980s enabled the rapid spread of instructional television. In the late 1980s and early 1990s, the fibber-optic communication systems were developed. These fiber-optic communication systems allowed for the expansion of live, two-way, high quality audio and video systems in education. As such, the Iowa Communications Network (ICN) provides full-motion, two-way interactive video, data, and voice services to over 800 Iowa classrooms (Anderson & Simpson, 2012). Through the use of these technological devices, it became easy for a large number of people to receive education regardless of their position.

Distance teaching universities

The third generation of the evolution of distance education also known as distance teaching universities marked the intensification of digital knowledge and network in the society. Bozhurt (2019) argued that the third generation of distance education was characterised by two-way communication such as synchronous and asynchronous computer mediated communication or audio and video conferencing. The decision in 1962 to make the University of South Africa a distance teaching university modified the world`s perception of distance education. Similarly, the founding of the Open University of the United Kingdom in 1971 serves as another landmark in distance education as it offers full degree programs,

sophisticated courses, and the innovative of the use of media (Holmberg, 1986). The Open university intensified the importance of distance education as it led to the creation of other distance learning universities in countries such as West Germany, Japan, Canada, Sri Lanka and Pakistan.

It is believed the different distance learning universities differs in many ways though with numerous similarities. An example is the Open University in the United Kingdom and the German Fern Universitat. While the British Open university favours employed, part-time students above the normal schooling age, allows them to enroll without formal qualifications, the German Fern Universitat founded in 1975 offers a more rigorous program (Holmberg, 1986).

Holmberg (1986) in a study found out a number of political, economic, and educational reasons account for the founding of distance teaching universities, which include;

- The need felt in many countries to increase the offerings of tertiary education ;
- The fact that adults with jobs, family responsibilities, and social commitments form a large group of prospective part-time university students ;
- Desire to serve individuals and the society by offering study opportunities to adults ;
- Desire to upgrade as well as reskilling;
- Desire to support innovations in education ;
- Belief in the feasibility of an economical use of educational resources by mediated teaching.

In fact, the adoption of distance education in most countries accounts for the fact that policy makers, and educationists wanted to eradicate all barriers to access to inclusive, equitable quality education and lifelong learning opportunities for individuals of all ages.

Trends in distance education in sub-Saharan Africa

In Africa, it is argued that young people aged between 20 years or even younger, 30 are qualified for tertiary studies but it is believed that the present state of African universities cannot contain all of them. according to Allen (2010), the number of African youths willing to integrate the tertiary sector was projected to increase by 100 million come 2020. This is why Atkins et al. (2007) were of the view that for African countries to sustain this rapid increase in number of children under the schooling age, a major university need to be opened every week. This is Ndongfack (2016) argued that the existing and planned academic institutions cannot sustain the demand force.

According to Ndongfack (2016) it is observed that the provision of education over the past decades has gradually increases. It is in this regard that Going Global (2012) reported that in 2007 there were 150 million tertiary students globally, which represents an increase of 53% over the previous decade. It is observed that enrolment into tertiary education doubled between 2003 and 2011. This is why Daniel (2010) commenting on the situation argued that though universities are not monumental, it is left on policy makers to derive alternative measures through which education can be provided to all the social classes in the society at an affordable cost. His remarks thus require policy makers to look for a complementary means through which education can be delivered. This will help to grant an open access to all and also accommodate all the children under the schooling age and willing to go to schools.

Atkins et al. (2007) argued that the development in the field of ICTs and technological advancement as well as open educational resources (OERs) offers new opportunities for distance learning institutions to ameliorate the rate at which education is provided to the youths. This is because ICT offers a new dimension through which education can be provided without necessarily needing the presence of a teacher or learner. This come in a time where African countries in general and Cameroon are suffering from lack or insufficient infrastructures which can accommodate all the students. While a good number of youths in Africa are becoming accustomed to digital devices like laptops, smart phones, social media, internet, tablets, etc. the government is required to enhance the integration of these tools in schools and colleges so as to facilitate effective integration of distance education which will go a long to affect student`s outcomes positively. This initiative becomes primordial as ineffective integration of distance education will have a negative impact on the performance of students in secondary schools and colleges.

The government of Cameroon in its initiative to foster distance education argues that "to lighten training based on physical presence, innovative approaches such as distance education or hybrid education (virtual university in Yaounde) will be encouraged (Cameroon`s Education and Training Sector Strategy Paper, 2013). This endeavour is required to enhance access to secondary education to all the social classes in the society. Distance education is thus viewed as the mechanism through which open access and lifelong for all learning opportunities can be achieved.

Integration of distance education in secondary schools in Cameroon

In a world characterised by crisis of all types, the desire to ensure the continuity of education in both the primary, secondary and tertiary education has become a major concern to policy

makers, educationists and the educational community. Distance education over the past years have been seen by both countries in the developed and less developed world as a mechanism through which inclusive and equitable quality education as well as lifelong learning opportunities can be assured. Countries in sub-Saharan Africa including Cameroon sees distance education as the appropriate tool through which open access can be ensured to all the social classes of the population. According to Nsolly and Ngo Mback (2016) the integration of ICTs in Cameroonian primary and secondary schools can be traced as far back as between 1998 and 1999 when some private efforts were made in some private and mission schools such as the College Francois Xavier Vogt to use ICTs in the teaching and learning process. This endeavour faced a number of challenges along the way as the unpreparedness of the current state of Cameroon to integrate ICTs in secondary schools probably due to unstable energy production, poor quality of internet connectivity, absence of modern digital learning infrastructures etc.

Nsolly and Ngo Mback (2016) further argues that though the initiative to introduce distance education in secondary schools started in 1998, it was not until 2001 when the use of ICTs was introduced in public schools in Cameroon. For Fouda et al. (2013) though ICTs was introduced in secondary schools four years, the intuitive went operational four years later prior to the creation of general inspectorate in charge of Computer Science. Karsenti et al. (2012) found out that several primary, general secondary and technical secondary schools in some cities in Cameroon were already using computers and providing courses in ICTs before the government could develop the ICT curricula.

The initiative became real in February 2001 when the president of the Republic called for the orientation of education and training toward the knowledge economy in his address to the Cameroon youths (Mbangwana, 2008). From this day, ICT integration became a reality in secondary schools and colleges in Cameroon with most of them benefiting from government`s grants in the form of multimedia resource centres with internet connection (Mbangwana, 2008).

ERNWACA-Cameroon (2005) argues that by 2003, official ICT programmes for secondary schools were designed and ICT syllabuses and National Sequential Schemes of work published in 2008 were made available to Nursery, Primary and Teacher Training Education. In 2007, the field of computer science and educational technologies was established at the Higher Teacher Training College (HTTC) Yaounde to train ICT teachers (Nsolly & Ngo Mback, 2016). By 2009, an information management system was set up at the Higher Teacher

Training College, Bamenda to train technical secondary school teachers in computer science. This initiative led to the adoption of Information Technology as a school subject in January 2011.

Away from government initiatives to make ICTs a reality in secondary schools and colleges in Cameroon, non-governmental organisations like the ADCOME also contributed at the regional levels to bridge the gap in distance learning in schools especially in the South West region of the country prior to the CIAC project (Computer and Internet Access Centres). Nganji et al. (2010) argues that the initial aim of the ADCOME was to bring internet closer to the people at low cost in 2000. But prior to the achievement of this aim, ADCOME decided to initiate the CIAC project to install computers and internet as well as providing secondary school teachers with training in ICTs with the first pilot school being the Baptist High School Buea.

Barriers to distance education in Cameroon

Distance education is a relatively new approach for teaching and learning. The revolution began in European countries before extending to the rest of the world. Prior to the growing number of students coupled with the inability of the present institutions to accommodate all the learners, there is the need to turn to other means through which this can be made possible. In order to widen access to inclusive and equitable quality education, distance education has been seen as the cornerstone through which this can be achieved. But despite of the great desires of policy makers, educationists, stakeholders, and the educational community to integrate distance education in secondary schools and colleges in Cameroon, the initiative have faced a number of challenges.

In a study conducted by Ndongfack (2010) found out that even though around 96.23% of public primary school's pupils and secondary school's students are taught ICT lessons and 100% of Teacher Training Colleges provides training to teachers in ICTs, a greater portion of the training is said to be theoretical due to the chronic lack of sufficient resources and modern infrastructures. A similar study conducted by ERNWACA (Educational Research Network for West and Central Africa) and PAQUEB in 2009 and in 2010 found out that 87% of all the teaching in secondary schools and colleges in ICTs in more of theory than practice since only meagre 3% of all the public primary schools possess computers.

Correspondingly, Ndongfack (2016) argues that the Association for the Development of Education in Africa (ADEA) identifies a number of barriers to the development and

integration of distance education in Africa. We have the low level of support from the political class regarding distance education, failure of public services to recognise distance learning in its assessment of employee qualifications, lack of trained human resource, absence of follow-up and support programmes, limited budgets allocated to distance education and poor state of infrastructures. Shaibou (2017) argues that there is no clear, recognizable national strategy plan for the integration of modern technology within the school curricula and pedagogical activities.

For Kinyanjui (1998) the effective integration of distance education has been far below expectations in sub-Saharan African countries probably because of lack of policy coordination with other efforts, such as the provision of adequate resources, development of supporting infrastructures, and the training and education of distance learning users. This is so because the integration of distance education in secondary schools and colleges in Africa in particular and Cameroon has not taken in account the level of preparedness of the country. This means that the integration of distance education in larger part does not take into consideration the political, environmental, social, cultural, technological, economic and physical realities of the country.

Learning outcomes: An overview

Learning outcomes are known to be the character traits an individual or group of individuals are required to portray upon completion of a training program. They are changes both physically and mentally which occurs in an individual after the completion of a training program. In other words, learning outcomes are knowledge, attributes, abilities, skills, and competencies a student is required to possess and demonstrate after completing a learning experience or session of learning experiences. According to Lin and Miller learning outcomes are both the physical and intellectual results visible in an individual upon completion of a session of learning experiences. They are simply what an individual achieve in the form of skills, knowledge, competence, aptitudes, attributes etc. upon completion of a training program. Diagrammatically, Lin and Miller (2005) presents the relationship between student, learning experience and outcome. This is seen in figure 4 below.

Figure 4: Relationship between student and learning outcome
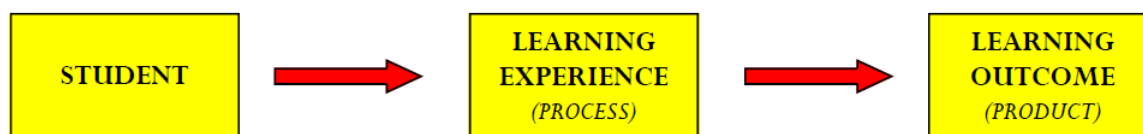
Source: Adapted from Lin and Miller (2005)

The above diagram established the link between the student, learning experience and learning outcome. The student is seen as the main actor in this process. Learning experience, also known as the process focus on the acquisition of skills, knowledge and aptitudes. Learning outcome is the product of the learning process which is visible in a student. That is; learning outcome is the final changes which occurs in an individual as a results of knowledge and skills acquisition.

Constructing learning outcomes required educationists to fix simple, measurable, attainable, realisable and in due time the objectives of learning. This requires them to be SMART in the statement of learning objectives. In order to achieve this, it advisable to use taxonomies. Taxonomies are comprehensive means through which student`s learning outcomes can be clearly defined. This is so because taxonomies attempt to identify as well as clarify all the different types of learning. That is; cognitive, affective and behavioural learning types. Bloom`s Taxonomy of educational objectives (1956) appears to be one of the oldest framework which structures learning outcomes of students. He categorises his taxonomy of learning objectives into six levels. This include; knowledge, comprehension, application, analysis, synthesis, and evaluation. Knowledge according to Bloom involves knowing and remembering specific facts, events, terms, concepts, principles or theories useful in the learning process. Comprehension involves understanding, interpreting, comparing, explaining, and contrasting the facts, events, theories, principles or concepts. With application, it entails applying the knowledge acquire to new situations so as to solve problems. Analysis on the other hand entails the identification of the structure, the parts, relationships, and even organising principles of an event, or a fact. For synthesis, it involves creating something, integrating ideas into a solution, proposing an action plan and even proposing a new pathway to solve the problem. And finally evaluation which entails judging the quality of a product based on its adequacy, value, logic or even use.

Bloom (1956) argues that they are generally 5 types of learning outcomes. This involves psychomotor, affective, social, ethical, and cognitive. Lin and Miller (2005) emphasising on this argues that learning outcome can modify the behaviour of an individual either ethically, socially, affective, psychomotor or even cognitive. This entails that knowledge acquisition, learning experiences, learning process can have a bigger impact on the behaviour of a student. This impact is what is known in the context of this study as the learning outcome. That is; what happen after learning has taken place.

Empirical review of related literature

The empirical review of the related literature also known as review by objectives focuses on reviewing the works which are directly related to the present study. It is a sort of specific review of related literature. Here, four variables re considered. We have need assessments, provision of digital resources, integration of technology and monitoring and evaluation. The various modalities are reviewed in relation to the learning outcomes of students.

Need assessment in distance education and learning outcomes of students

In educational planning, need assessment is an important step toward the success of a plan. Be it strategic planning, operational planning or even tactical planning, it is essential for planners to analyse the internal and external environment. This analysis is a sort of diagnostic evaluation or better a feasibility test which permits planners to be able to control and manage those variables which can influence the success of a plan. Existing reviews has demonstrated the effect of need assessment on learning outcomes of students in secondary schools and colleges.

In a study conducted by Kilfoil (2003) on "*Strategic Planning in Distance Education, published by Distance Education and Training Council, Washington DC,* found out that need assessment is an important step in strategic planning in education. To him, need assessment is directly link to student`s outcomes as it provides the ground for planners to conduct the planning taking in to consideration the learning requirements of the learners as well as the audiences. He further argued that need assessment is the preparatory phase of strategic planning in distance education. This consists of collecting baseline information, discussion the mission and function, collecting data, conducting SWOT analysis and discussing the difference between mission, vision and strategy. The effective need assessment in strategic planning in education will help to boast the outcomes of learners since their needs and expectations will be taken into consideration during the planning phase. This simply means that need assessment permits planners to tailor the plan to the needs of the students.

In a similar study by Hauer and Quill (2011) on *"Educational Needs Assessment, Development of Learning Objectives and Choosing a Teaching Approach", published by Journal of Palliative Medicine, Vol.14, No.14,* found out that needs assessment is an important step in educational planning. The authors found out that needs assessment is an important step in planning and is used to determine revisions in curriculum, identify needs in clinical staff development and to self-identify individual learner status. this means that needs assessment is directly link to the achievement of learning objectives as it helps in revising the curriculum in line with the needs and expectations of learners. The results further revealed that once needs assessment is conducted, the identified curriculum needs are linked to the definition of learning objectives and outcome statements which identify the knowledge, skills, and attitudes which students are required to portray. This endeavour helps planners to be able to develop a roadmap which will ensure the achievement of the stated aims and objectives.

Also, Hershkowitz (1976) conducted a study on *"Critical issues in educational needs assessment, Educational Planning Vol.3, No.2* found out that needs assessment can be grouped into two broad group, that is; learner needs and administrator needs. He found out that the former are related to the educational deficiency while the latter look after educational accountability. Learner needs assessment indicates the discrepancy between what is and what should be. It outlines the gap between an educational objective and outcome in terms of performance within the system. This means that needs assessment is very useful in educational planning as it helps to identify the actual standard of the learners so as to define the expected or the desired standard of the learners.

Provision of digital resources and learning outcomes of students

Distance education is a modernised method of knowledge transmission from generations to generations. The advancement in the field of technology have made it practically very impossible to think of an educational system which does not integrate technology. Technology has reshaped the way of life of individuals including educationists. The effectiveness of distance education in enhancing the learning outcomes of students depends on the ability of planners to provide digital resources on time and in due cost. This required the policy makers to make sure that digital learning resources such as latest generation computers, digital infrastructures, smartphones, tablets, projectors, interactive boards, etc. are made available to teachers and even students. This also requires them to possess well trained and qualified personnel to handle distance education.

In a study by the University of Waterloo (2020) on "*Synchronous and Asynchronous Online Learning: Keep Learning,* found out that digital learning resources has a significant impact on the learning outcomes of students in secondary schools and colleges and even universities. It argues that distance learning resources are powerful tools which can be used to improve the outcomes of students in ways a textbook may not be able to. This means that the provision of digital learning materials greatly influences the performance of students. It further argues that both the synchronous and asynchronous learning use online tools and assign readings, upload media, assign online quizzes, suggest supplementary subject-related videos for clarification, utilise Google documents and much more to improve the learning quality and outcome of students.

In a similar study by Staff Writers (2021) on "*Synchronous learning vs Asynchronous learning: What`s the difference? Published by Best Colleges,* found out that both the synchronous and asynchronous learning requires the use of digital resources to improve the performance of students. Synchronous learning is seen as online learning courses whereby the instructor and the students engage with each other and the course content remotely in different settings but at same schedule meeting time. For the asynchronous learning, students are required to complete assignments and reading materials send to them via online platforms in preparation for virtual class discussion. These courses in most cases involves interactive lectures, discussions, student-led conversations, and also presentation during structured class meetings.

Another study by Ali et l. (2021) on "*Research Investigating Individual Device Preference and E-learning Quality Perception: Can a one-solution-fits-all e-learning solution work?" Heliyon, Vol. 7, No.6,* found out that digital resources have a positive impact on the performance of students. They believed that the way in which digital resources are presented to students can greatly influence the outcome of students in schools. They further argued that students' retention is a direct correlates of student perception of quality. This means that teachers can only attracts and retains students with digital learning resources if they provide educational services which are known to meet the expectations of students and also add value to students learning.

Another study conducted by Marna et al. (2019) *on "The effect of social media, digital learning resources and learning motivation on digital native learning outcomes in SMAN 2 Painan*, *published by Advances in economics, business and management research, vol. 124,* using a total sample of 97 participants found out that digital learning resources have a

significant influence on native digital student learning outcomes. The findings also revealed that digital learning resources have a significant positive influence on learning motivation of students. These results highlight the needs for the provision of digital learning devices in schools such as computers, smartphones, projectors, interactive boards, multimedia halls, qualified human resources, constant electricity production, better internet connectivity and modern digital learning infrastructures.

Also, in a study conducted by Lin, Chen, and Liu (2016) on "A study on the effects of digital learning on learning motivation and learning outcome, published by EURASIA journal of Mathematics Science and Technology education, using a total of 116 students selected from 4 classes found out that digital learning presents a better positive effects on learning motivation than traditional teaching does. It also revealed that digital learning presents a better positive effects on learning outcome than traditional teaching does. These results indicate that the provision of digital learning resources go a long way to enhance the performance of students in secondary schools and colleges.

Technology integration and learning outcome of students

The rapid growth and development in the field of technology have make distance education the means through which inclusive and equitable quality education and lifelong learning opportunities can be ensured for all. This is because the integration of ICT in secondary school's curriculum widen the access to quality education. In sub-Saharan countries, though the integration of ICT in education has met a number of challenges, its influence on student`s performance has been monumental. The integration of technology in secondary schools allows the use of digital resources as a means to boast the outcome of learners. A number of studies have discussed the influence of technology integration on the performance of students in secondary schools.

In a study conducted by Fouda et al (2013) on "*Un profil de competences pour les professeurs d`informatique de l`enseignement secondaire Camerounais",* published by International Review of Education, found out that the integration of technology into the secondary school's curriculum has a significant influence on student performance. They argued though the integration of technology in secondary schools in pledged by a number of shortcomings such as poor internet connectivity, unstable production of electricity or even lack of electricity in some interior villages, absence of latest generation computers and modern digital infrastructure, technology integration produces a positive result in areas where these digital

resources are made available. Technology integration according to these authors is a correlates of the learning outcome of students in secondary schools in Cameroon.

For Karsenti et al. (2012) in a study on "*Pedagogical integration of ICT: Successes and challenges from 100+ African schools*" published by Ottawa, ON: IDRC, found out that the integration of ICTs in secondary schools and colleges has become a major concern for policy makers and educationists. They argued that ICT integration helps to boaster the performance of students as it is seen as a positive predictor of student outcome. This is because the outcome or performance of students largely depends on the ability of the teachers to effectively integrate ICT in their teaching and learning. The results of the study show that the use of blended teaching methods in class by teachers helps to improve students' performance as it provides variety of means through which students can assimilate lessons.

Another study by Mbangwana (2008) on "*Introduction of ICT in schools and classrooms in Cameroon. In K. Toure, T.M. Tchombe, & T. Karsenti (Eds.). "ICT and changing mind-sets in education*", published by ERNWCA/ROCARE, found out that the integration of ICTs in Cameroonian secondary schools and colleges has significantly influence the performance of students. The findings reveal that the integration of technology enables student`s centred discussion which helps to upgrade the performance of students. This involves the use of digital tools such as computers, smartphones, interactive boards, projectors, video and audiocassettes. The use of these resources greatly influence the performance and outcome of secondary school students.

Also, in a study by Ndongfack (2010) on "*ICT integration in Cameroon primary schools: A case study of Government primary practicing school Angele, South Region*" published by Kuala Lumpur: Open University of Malaysia, found out that the integration of ICT though an indispensable tool for improving students' performance, faces a number of challenges which at times goes a long to negatively affects student's outcome in schools. This implies that the integration of ICT in Cameroonians public primary schools and secondary schools helps to improve the outcome of learners. This is because this form of teaching and learning provides additional means through which students can easily assimilate lessons.

Another study by Ndongfack (2015) on "*Mastery of active and shared learning processes for techno-pedagogy (MASLEPT): A model for teacher professional development on technology integration*", published by Creative educative, found that the integration of ICT in education accounts in larger in improving the performance of students. The government of cameroon in a bit to ensure inclusive and equitable quality education as well as lifelong learning

opportunities for all initiates the strategy of integrating ICT in secondary schools. This is intended to widen access to quality education for all.

In another conducted by Ndongfack (2016) on "*Baseline study on the current state of open and distance learning in Cameroon", published by Commonwealth of learning,* found out that integrating ICT in primary, secondary and tertiary schools in Cameroon has become a top priority of the State. In a digital age, the integration of technology is seen by a number of State and private institutions an indispensable initiative to assure access to quality education. The findings reveal that despite the promising image, the open and distance education is facing a number of challenges regarding its integration. In another study by Ross (2020) on "*Technology infusion in K-12 classrooms: A retrospective look at three decades of challenges and advancements in research and practice",* published by educational research technology & development, found out that the infusion of technology would increase student centred learning activities, student`s increased confidence in technology usage, and student`s overall accessibility to technology. His findings display an increase in accessibility to technology and a positive impact on the learning outcome of students.

In another research work, Mollov (2019) in "*Google classroom – an innovative approach to a more efficient organisation of learning"* published by Mathematics and Informatics, found out that education has a big impact in shaping the personality of a student and the teachers has an important role to play in this process. In his attempt to understand how Google classroom can influence the learning environment of students, and within a 2-year span, and observing 117 students and 29 teachers found out that students appeared to be highly motivated at the idea of integrating Google classroom. All the above results help to demonstrate the need and importance of integrating technology into secondary schools.

Monitoring and evaluation and learning outcome of students

Monitoring is a process which consist of tracking daily progress in a program. Monitoring provides the framework for educational planners to assess the progress of a plan on daily basis so as to adjust the plan depending on the challenges faced. Evaluation on the other hand entails assessing the success or failure of a plan. It is the final assessment which helps to determine whether the predefined objectives are achieved. Strategic planning in distance education requires planners to carefully monitor and evaluate the plan to make sure that it produces a positive impact on student`s outcome. Recent studies have established the link between monitoring and evaluation and learning outcome of learners.

In a study by Durak and Saritepeci (2017) on "*Investigating the effect of technology in education on classroom management within the scope of the FATIH project*", published by Cukurova university faculty of educational journal, found out that monitoring and evaluation plays a vital role in shaping the performance of students in schools. They explain that the effectiveness of distance education depends in larger part on the constant monitoring and evaluation of ICT policies and its implementation. Monitoring and evaluation provides the framework for planners to evaluate the attainment of the stated objectives as well as the measures which can be adopted to adapt the plan to the needs of learners.

In another study by Jabali and Walker (2021) on "*An exploratory cross-sectional duty: FlipQuiz as a digital tool for learning English vocabulary in language classroom*" published by International journal of technology in education, found out that monitoring a plan requires educational planners to carefully handle the plan so as to ensure the effective of distance education. Learner outcome is seen as a top priority in schools. The integration of technology in education is believed to have an impact on the performance of students. As such, it becomes very necessary for planners to make sure that distance education is carefully monitored and evaluated to make sure it has a positive effect on student's outcome.

Another study conducted by Ukah (2020) on "*Towards the acquisition of digital instructional resources for effective teaching in the 21st century classroom in public secondary schools in Cross River State",* published by international journal of curriculum and instruction, found out the evaluation of distance learning education helps to determine its impact on student's outcome. This implies that evaluating distance education permits educationists to assess the achievement of the learning objectives as well as to adjust the plan to the needs of learners.

Furthermore, in a study conducted by Martin (2022) on "*The impact of technology integration on secondary student learning",* published by Spark repository found out that monitoring and evaluation of distance education has a significant impact on learner's outcome in secondary schools. The results of this study proves that monitoring and evaluation provides a framework for the evaluation of distance learning in relation to student's outcome.

Theoretical review of literature

The present section of the study focuses on the theoretical framework of the study. The theoretical framework of the study discusses the major theories which will be used to understand the studied phenomenon. Here, three major theories are convoked. This involves

the theory of strategic management by Henry Mintzberg (1994), the structural contingency theory by Kannan (2008) and the theory of Diffusion of innovation by Rogers (1983).

Theory of strategic management by Mintzberg, 1994

Though there is no generally agreed definition of strategic management or better still strategic planning, Drucker (1993) viewed it as a process of entrepreneurial and methodical decision making with the maximum knowledge possible of the future and the assessment of results. Strategic planning in distance education is simply a process of developing proactive measures aim to tackle issues and problems faced in and organisation. although the concept of strategic management existed before the work of Henry Mintzberg, he popularised strategic management as the principal tool through which organisational success can be achieved. Henry Mintzberg, a Canadian academic and author on business and management providided a framework for understanding planning processes in organisations. Mintzberg theory of strategic planning offers valuable insights into various dimensions of strategy.

Over the past years, recent literature has attempted a definition of strategic planning. Mintzberg (1994) one of the proponents of strategic planning for several years argued that strategic planning in education is an approach which is closely link to the definition of the strategy, the vision, the mission and the goals and objectives of an organisation. He argues that strategic planning takes place at the macro level of the organisation. The actors or individuals who initiate strategic planning in an organisation are the top management. They provide the principles and guidelines necessary for the attainment of predefined goals and objectives. Though Mintzberg is seen as one of the proponents of strategic planning, he later argues that strategic planning is not the miracle solution for the simple reason that the failures in the past decades have highlighted the difficulties and weaknesses of strategic planning (Mintzberg, 1994). In his argument, Mintzberg advocated for the reconceptualization of the strategic planning to a practice that he later on calls "strategic programming". Mintzberg emphasises that the organisation in reality is made up of a large number of people who contribute in one way or the other to the realisation of the stated goals and objectives rather than a group of strategic planning specialists. This is why he further argues that it is necessary in the application of strategic planning "to try to make the process of developing the strategy more flexible rather than trying to make the process stricter by an arbitrary formalisation" (Mintzberg, 1994).

Mintzberg theory of strategic planning is based on the assumption that strategic planning is not the miracle solution for the simple reason that the failures in the past decades have

highlighted the difficulties and weaknesses of strategic planning. He further argues that strategic management should be reconceptualised and in doing so he developed the concept of strategic programming. Here, the planning process is handle by a minority group in the organisation which constitute the top management but also by all those who are involved in the running of the organisation. To better make his view understood, Mintzberg developed the 5 Ps considered to be indispensable in strategic. This involves plan, ploy, pattern, position, and perspective. These 5 Ps are diagrammatically presented in figure 5 below.

Figure 5: Five Ps of strategy

Source: Mintzberg, 1994

The first "P", plan known to be the tradition approach to planning which involves goals definition. This focuses on defining the strategy, the action plan and milestones which will guide the activities of the organisation as it moves toward the achievement of the goals and objectives. The second "P" Ploy, focuses on developing the tactical moves and the manoeuvres employ to overcome competitors, exploit existing opportunities and reshape the industry. The third "P" pattern, discusses the need for recognising and mastering past actions and outcomes which can affect the program. The fourth "P" position, emphasises on importance of the position of the organisation vis-a-vis the competitor. It has to do with understanding market dynamics, customer preferences, and organisation positive to create and sustain competitive advantage. The final "P" perspective, looks after the role of the organisation culture, values, and leadership in shaping the decision making process in the organisation. according to Mintzberg (1994) perspective enables the organisation to adopt a holistic view, considering their purpose, values and long-term sustainability while making strategic choices.

Implication of the theory to the present study

Mintzberg theory of strategic planning focuses on the development of strategies to enhance the achievement of the predefined goals and objectives of a program. Strategic planning in distance education holds significant implications for shaping the direction, effectiveness and sustainability of educational institutions and programs. This theory is useful in the present study as it will help us to understand how distance education is vital for the growth of educational institutions, how distance education can foster student success, promoting innovation in schools, and enhancing the overall quality education. The pertinence of the strategic planning theory in the present study lies in the fact that it sets a roadmap for the realisation of educational aspirations, satisfaction of stakeholder`s expectations, and creation of a save and conducive environment for learning and development.

Theory of structural contingency by Kannan, 2008

Contingency theory is a management theory which advocates that there is no one best way or method or universal approach to managing programs, projects and even organisations. The theory states that the optimal management approach is contingent upon the unique circumstance present in a given situation. The contingency theory argues that organisations operate in diverse environment with specific characteristics and face different challenges. Thus, organisations require flexible and adaptation management practices to suit specific contexts. Kannan (2008) argues that the theory of structural contingency theory is the continuation of the contingency theory which is based on the situational dependence, environment fit, flexibility and adaptability, leadership style matching, complexity and uncertainty, integration of variables, adaptive decision-making, and contingency factors.

The contingency theory addresses the internal and external factors which are susceptible of affecting the growth and effectiveness of a program. In terms of external contingency factors, Armstrong (1982) pointed out at the characteristics of organisational contexts including environmental uncertainty, and turbulence. Odom and Boxx (1984) pointed out that contingency factors may also include complexity and stability of the environment. Stone and Brush (1996) and Bracker et al. (1988) pointed out at environmental ambiguity and industry maturity and growth respectively.

Kannan (2008) portrays three important variables which are the size of the organisation, the technology in use and the environment. Soylu (2008) argues that these contingency factors dictate the performance of an organisation. He further argues that any misfit between the

variables and the structure will lead to under performance. Contingency theory states that the social and business environment is always subjected to change. This is because the environment is too unpredictable. As such, there is no standard rule or law to handle management problems as every situation require its own approach. Kannan (2008) listed the following features of contingency theory as follows:

- Management is essentially situational : this means that the management approach is contingent of the situation. If the management approach corresponds to the demand and the requirement of the environment, the approach will be effective and fruitful. This means that the diversity and the complexity of the external environment with which the organisation interacts should determine the approach to be used.

- He also argues that managers must adapt their strategies and approaches to the requirements of the situation at hand. This requires the organisation to design its structure, leadership style, and control system should be oriented towards the situation at hand.

- He equally argues that since management is effective and successful only when it directly relates to the ability to cope with the environment and changes happening therein, it should sharpen its diagnostic skills to be proactive and anticipate and comprehend the environmental changes.

- Finally, he argues that a quality manager must be aware that there is no one best way to run an organisation. This means that they should not consider a particular approach or technique of management as being universally applicable to all managerial situations in organisations.

This is Soylu (2008) argues that the contingency approach has a wide range of applicability and practical utility in the management of complex and large size organisations. it encourages a comparative analysis of organisations to bring about matching between the organisation structure and situational variables.

Implication of the structural contingency theory to the present study

The contingency theory provides a framework for the management of modern days' organisations. This theory is useful in strategic planning in distance education as it helps to ensure the effectiveness of open distance learning. The theory advocates that there is no one best way to manage organisations as each organisation operates in a particular and specific context. Even organisations in the same context have diverse internal reality. This theory is useful in the present study as it will help us to understand how the control of the external and

internal in strategic planning in distance education can help boast the learning outcome of students in secondary schools and colleges in Cameroon.

Theory of Diffusion of innovation by Rogers 1983

The theory of diffusion of innovations (DOI), developed by Rogers in 1983 is one of the most cited theories in the field of technology and innovations. His book "Diffusion of Innovations" is the single most cited individual work, receiving around 286 citations. The diffusion of innovations is a general theory of how new ideas are spread and also adopted in the society. The theory once again explain how communication channels and opinion leaders shape the adoption of new ideas or innovations in a community. The theory of diffusion of innovation by Rogers is based on the assumptions that communication is the principal element which determines how an idea diffuses through a specific population over time. The theory advocates that individuals should be ready to adopt new ideas or develop new patterns of behavior which will help to adapt to the current circumstances in the society. In developing this theory, Rogers wanted to understand how fast people can adapt to changes which might occur in the society.

Rogers (1983) first proposed the first process model, that is; a five stage model of the implementation and adoption of innovations in an organization. This implies that for innovation to take place in an organization, the leaders or managers need to develop implementation strategies that will facilitate the adoption and subsequent use of new ideas or innovations. A school being an educational organization is not forgotten in this process. This means that the theory of diffusion of innovation seeks to provide a framework where individuals can learn new things as well as developed new behavior patterns. This theory proves that the adoption of new ideas which might require the integration of technology in classrooms required teachers and learners to be ready and prepared to go in for new ideas.

The work of Rogers inspired Moore and Benbasat (1991), who used the DOI theory to develop "an instrument designed to measure the various perceptions that an individual may have of adopting an information technology (IT) innovation". The objective of this instrument developed by Moore and Benbasat (1991) was intended to be a tool for the study of the initial adoption and subsequent diffusion of IT innovations within organizations. The theory of diffusion of innovation is based on four fundamental principles which are: innovation, communication, time and social system.

- Rogers (2003) defines innovation as "an idea, practice, or project that is perceived as new by an individual or other unit of adoption". This means that something might not

necessarily be in its beginning and it is innovation. Innovation implies giving a newlook to something which existed before.

- Rogers insists that communication channel is "a process in which participants create and share information with others so as to reach mutual understanding". Communication channel provides a framework for individuals to adopt new ideas. Individuals can only adopt new ideas when the purpose has been communicated to them.

- For Rogers, time here represents the period an idea or a technology takes to diffuse among the population. Since it is something relatively new, the acceptance and adoption of technology requires time from the individuals.

- Finally, Rogers argue that social system constitutes one of the fundamental principles of diffusion of innovation theory. He argue that social system can be seen as a set of interrelated and interdependent units engaged in joint problem with the aim of achieving a common goal.

The diffusion of innovation theory by Rogers is one of the prominent theories in distance education. Since distance education is a relatively new approach to teaching and learning, the theory addresses how its acceptance by users can influence the effectiveness of distance education. Rogers (2003) developed five categories of adopters of innovation which includes; innovators, early adopters, early majority, late majority and the laggards. In fact, diffusion of innovation theory focuses on how new ideas and methods or approaches diffuses among a population or social system over time through effective communication.

Contribution of the theory of diffusion of innovation to the present study

The theory of diffusion of innovation focuses on how new ideas, new methods or new approaches are adopted in the society by individuals. It is very essential for modern day`s organisation for the simple reason that both the business organisations and social organisations cannot survive in the 21st century if they fail to integrate technology in their day-to- day practices. The theory is essential in the present study as it provides a framework to understand how the integration of technology in public and private secondary schools and colleges in Cameroon can help ameliorate the learning outcome of learners. Since distance education is a relatively new approach of teaching and learning, this theory seeks to understand how the diffusion or integration of technology in modern day`s classrooms can help foster the learning outcomes of students in both secondary schools and colleges in Cameroon in general and in the Centre region in particular.

CHAPTER THREE

METHODOLOGY OF RESEARCH

The present chapter explores the methodological framework of the study. In this chapter, elements such as the research design, research type, research area, population of study, sampling procedures, as well as instruments and tools of data collection are discussed. The chapter also discusses the validity and reliability of the data collection instruments, the techniques of data analysis, as well as ethical consideration in the study. The chapter ends with the identification of the main variables of the study as well as a synoptic or recapitulative table which summarises all the necessary elements of the research. The elements of the research methodology stated above are well elaborated on in the following paragraphs.

Research type

According to Creswell and Clark (2007) there exists several types of research such as descriptive, exploratory, experimental, correlational, longitudinal, explanatory, action, historical, comparative, surveys, etc. The choice of a research type depends on the knowledge that a researcher has about the research type and the nature of the research. Depending on the research approach, a researcher can select a research type which is said to be appropriate. In the present study, the researcher opted for a survey research. This research type was deemed appropriate for the present study since the researcher wishes to examine the impact of strategic planning in distance education in enhancing the learning outcomes of students in secondary schools in Mfoundi division.

Research design

Research design is the plan and structure of investigation which is well developed so as to obtain valid answers to the research questions, the strategy as well as the plan through which the strategy is to be carried out (Kerlinger, 1986). The research design explores the processes and procedures adopted by a researcher to carry out a research. It is a pathway used by the research to arrive at the desired outcomes or results. There are several research design from which a researcher can choose the appropriate design depending on the nature and objective of the research. A research design can be inductive, deductive or mixed. Basing on the objective of this study which is to examine the impact of strategic planning in distance education on the learning outcomes of students in secondary schools, a deductive research design was adopted in this study. The purpose of adopting the deductive research design for

the present study was because the researcher intended to move from hypotheses to draw conclusions.

Area of the study

Area of the study refers to the geographical location where a study is carried out or is intended to be conducted. The present study is conducted in Centre region and the Political capital of Cameroon, Yaounde. Yaounde is a cosmopolitan city which is inhabited by both English speaking and French speaking Cameroonians. Administratively, the region is headed by a governor and have 10 divisions under its jurisdiction. This include; Haute-Sanaga, Lekie, Mbam and Inoubu, Mbam and Kim, Mfoundi, Nyong and Kelle, Nyong and Mfoumou, Nyong and So`o, Mefou and Afamba, and Mefou and Akono. The present study is conducted in the Mfoundi division. The division is made up of 7 sub-divisions among which we have Yaounde IV where the study actually took place. The division is dominated by the presence of state-own public institutions and private institutions. The division is known as the administrative head quarter for the simple reason that most if not all the public institutions are concentrated in the area. The study is conducted precisely in Government Bilingual High School Ekounou.

Population of study

A population of study refers to the total number of items, elements, objects and people that a researcher intends to observe in research setting so as to make inferences at the end of the study. Nachmias and Nachmias (1996) defines population of study as the total collection of elements about which a researcher wishes to make some inferences at the end of the study. A population of study is the total objects in the real world in which the researcher is interested (2008), meanwhile Zibran (2007) argues that a population of study is simply a representative of the whole population which does not needs to be large before it is known as population.

The population of study comprises of all the lower sixth arts students in selected secondary schools in Mfoundi Division. The population of study is divided into the targeted population, the accessible and the sample population.

Targeted population

Target population refers to all the elements, objects, items and people targeted by the researcher in a research work. The targeted population generally have the same characteristics as the total population. The present study targeted all the lower sixth arts students of the seven schools which constituted our case study.

Table 1: Distribution of target population

No	Name of School	Sub-division	Target teachers
1.	Government bilingual high school Emana	Yaounde 1	175
2.	Government bilingual high school Nyom	Yaounde 1	83
3.	Government bilingual high school Nkol-Eton	Yaounde 2	182
4.	Government bilingual practising high school Yaounde	Yaounde 3	244
5.	Government bilingual high school Ekounou	Yaounde 4	194
6.	Government bilingual high school Mimboman	Yaounde 4	169
7.	Government bilingual high school Yaounde	Yaounde 5	198
8.	Government bilingual high school Etoug-Egbe	Yaounde 6	284
9.	Government bilingual high school Mendong	Yaounde 6	276
10.	Government bilingual high school Ekorezock	Yaounde 7	163
	Total		**1968**

Source: Fieldwork, 2024.

Accessible population

Onen (2020) argues that the accessible population can be defined as the portion of the targeted population to which the researcher has reasonable access and from which the sample can be drawn. The accessible population is a small portion of the targeted population from which the sample size is drawn. For the present study, the accessible population were all the participants who were met in the field at the time of data collection. All those who were willing to participate in the study were simply retained as the accessible population. The teachers and the students who were thus met at the time of the fieldwork and were ready to participate on the study were retained as the accessible population. In this regards, a total of 1968 lower sixth arts students, both male and female were retained as the accessible population. This accessible population was distributed as follows.

Table 2: Distribution of the accessible population

No	Name of school	Sub-division	Accessible Teachers
1	Government bilingual high school Emana	Yaounde 1	175
2	Government bilingual high school Nkol-Eton	Yaounde 2	182
3	Government bilingual practising high school Yaounde	Yaounde 3	244
4	Government bilingual high school Ekounou	Yaounde 4	194
5	Government bilingual high school Yaounde	Yaounde 5	198
6	Government bilingual high school Mendong	Yaounde 6	276
7	Government bilingual high school Ekorezock	Yaounde 7	163
	Total		**1432**

Source: fieldwork, 2024.

Sample size

A sample is a smaller group or subset of the total population carefully selected by a researcher in a study (Cohen et al. 2010). A sample is a smaller portion of the accessible population having the same characteristics as the total population and which is representative of the total population. Gilbert (2008) argues that a sample should be drawn from the accessible population and have the same characteristics as the broader population from which it is selected. For Merriam (2009) "within every study, there exist numerous sites that could be visited, events or activities that could be observed, people who could be interviewed, documents that could be read. A researcher thus, need to choose what, where, when, and whom to observe, of interview". Sample size is thus the total number of individuals who took part in a research project.

In the case of the present study, a total of 278 participants were sampled for the study. These 278 participants comprise of the lower sixth arts students selected from the school which constituted the case study in this study.

Table 3: Sample size of the study

No	Name of school	Sub-division	Accessible population	Sample
1	Government bilingual high school Nkol-Eton	Yaounde 2	182	35
2	Government bilingual high school Emana	Yaounde 1	175	42
3	Government bilingual practising high school Yaounde	Yaounde 3	244	42
4	Government bilingual high school Ekounou	Yaounde 4	194	42
5	Government bilingual high school Yaounde	Yaounde 5	198	40
6	Government bilingual high school Mendong	Yaounde 6	276	42
7	Government bilingual high school Ekorezock	Yaounde 7	163	35
	Total		**1432**	**278**

Source: Field work, 2024.

Sampling techniques

Sampling technique refers to the method used by the researcher in a research work to select participants for the study. This explains why Ross (2005) argues that the selection of a sample from a defined population necessitates a careful construction of the sample frame. He further explains that this process helps the researcher to take hold of the targeted population without any need to worry about the contamination with incorrect entries or elements associated with

the excluded population (Ross, 2005). For the present study, the researcher opted for the random sampling techniques as the technique for the selection of the participants, more precisely the simple random technique. This method of selection of participants was deemed appropriate as it provided equal chances to all the participants who were met in the field at the time of data collection to be selected for the study. This was for the simple reason that the researcher did not have a defined population and thus it was essential to provide equal chances to all the participants to be retained for the study.

Sources of data

Data is raw information which has not yet been processed. It is first-hand information collected from the field which must be analysed so as to bring out meaningful information from it. In the present study, we made used of two sources of data which include; the primary source and the secondary source.

Primary source of data

The primary source of data refers to data collected by the researcher from the field. It constitutes first-hand information collected from the field which necessitates analysis. They constitute the original data collected from the field and analysed by the researcher so as to draw conclusions on the studied phenomenon. Primary source of data helps in decision making in a research work. In the present study, primary data was obtained from the participant`s responses to a self-completed questionnaire which was administered to them throw the direct delivery mood.

Secondary source of data

Secondary data refers to other sources of data apart from the primary source of which helps in the realisation of this research work. Secondary data is data collected by another person which provides either specific or general knowledge on the studied phenomenon. According to Lindstrom et al. (2010) this kind of previously collected information is not always specific but appears to be very relevant for the understanding of the research problem. Merriam (2009) argues this type of data are artefacts which are "symbolic materials such as writings, signs, and non-symbolic materials such as tools and furnishings". This is why Glaser and Strauss (1967) argues that "when someone stands in the library stacks, he is, metaphorically surrounded by voices begging to be heard. Every book, every magazine article represents at least one person who is equivalent to the anthropologist`s informant or sociologist`s interviewee".

In the present study, secondary data was used to provide either general knowledge or specific knowledge on the research problem. It helps us to identify what has been done so far on the research problem as well as the gap. Secondary data was obtained from books, articles, journals, magazines, thesis, master`s dissertations, newspapers, laws, degrees, web sites etc. the secondary data was useful in this study as it helps in the elaboration of the literature review.

Data collection instruments

According to Merriam (2009) "data are nothing more than ordinary bits and pieces of information found in the environment. They can be concrete and measurable as in an attendance, or invisible and difficult to measure as in feelings. They exist so many methods of data collection for a quantitative and qualitative research. the researcher therefore has the choice to go for a combination of two or more methods or simply go in for a unique method". With the objective of the present study being to examine the impact of the strategic planning in distance education on the learning outcomes of learners, and considering the fact that the research design is basically the deductive research design, the researcher opted for a questionnaire as instruments of data collection. The decision to use a questionnaire as instrument of data collection in this study was to facilitate the attainment of the required number of the participants so as to ensure generalisation.

Description of the instruments of data collection

In the present study, two instruments were used to collect data from the participants in the field. In the first place, a close ended questionnaire was administered to the participants of the study to collect quantitative data. Secondly, a structured interview guide was administered to some of the participants of the study to collect the qualitative data. Below is the descriptions of the instrument of data collection.

Description of the questionnaire

A questionnaire is an instrument of data collection generally used to collect numerical data from the participants in a research work. According to Enshassi et al. (2010) a questionnaire is a widely used instrument for descriptive and analytical surveys used to collect the facts, opinions and views of the respondents on a research problem. The questionnaire administered to the participants of the study comprises of four sections. The construction of the questionnaire was made in a way that each statement was clearly phrased to avoid ambiguity

and checked for expression, objectivity, and relevance to the problem investigated (Idrus, 2001).

The first part of the questionnaire general known as the introductory part provided the participants with necessary information regarding the research process. It starts with the introduction of the researcher, the institution of the researcher, the research topic, the research objective as well as the confidentiality and anonymity principles. This part also guarantees the free will to the participants to quit the research process any time they feel uncomfortable. The section ends with the instructions to the participants on how to proceed in answering the questionnaire. The second part of the questionnaire focuses on the independent variable of the study. This part is sub-divided into four. The first section focuses on needs assessment in strategic planning which ranges from item 1 to item 5. The second section focuses integration of technology in strategic planning which ranges from item 6 to item 10. The third section focuses on the provision of digital resources in strategic planning which ranges from item 11 to item 15, and the fourth section focuses on the monitoring and evaluation of strategic planning which ranges from item 16 to item 20.

The third part of the questionnaire focuses on the dependent variable of the study which is learning outcomes of students in secondary schools. A total of five items are formulated to measure the learning outcomes of students. This ranges from item 21 to item 25. The fourth part of the questionnaire focuses on the socio-demographic variables of the study. Personal information such as sex, age, status, level of education is collected here. This ranges from item 26 to item 30. The questionnaire is constructed in regards to the Likert scale which ranges from strongly agree to strongly disagree. The researcher used a direct delivery mode for the administration of the questionnaire since majority of the participants could read and understand the contents of the questionnaire. The weighting of the questionnaire ranges from 4 to 1. That is; strongly agree = 4, agree = 3, disagree = 2, and strongly disagree = 1. The questionnaire was equally used as the tool of data collection as the participants had to provide their responses directly on the questionnaire by choosing the box which corresponded to their level of agreement or disagreement with the item addressed.

Validity of the data collection instruments

Validity of the data collection instruments refers to the ability of the instruments to externally and internally measure the research problem of the study. Validity portrays the objectivity of the data collection instruments. In the present study, the researcher opted for the internal and external validity to test the validity of the instruments.

The internal validity of the instruments of data collection comprises of the face validity, the content and construct validity. To test the face validity of the instruments of data collection, the researcher after constructing the instruments, met with the supervisor who after examination carried on some modifications on the basis of which the final version of the instruments was adopted. For the content and construct validity, the researcher made sure that the variable explores in the questionnaire were actually the variables of the study. The researcher made sure that all the elements of the strategic planning in distance education and learning outcomes were included in the instrument of data collection.

The validity of the instruments of data collection was equally ensured through the external validity. Here, the researcher made sure that the instrument of data collection was effectively administered to the rightful population for which the instruments were designed. This was in bit to ensure the generalisation of the results at the end of the study.

Reliability of the data collection instrument

To test the reliability of the data collection instrument, a pilot study was conducted on a smaller portion of the population having the same characteristics as the sample population of the study. Ries (2012) argues that a pilot study helps a researcher to determine whether the research is possible to be realised. Pilot study is important to a researcher as it serves as an advance warning about where the research could fail, where research protocols might not be followed, or where proposed methods or instruments might be inappropriate. The pilot study was influential in the present study as it helped the researcher to carry out adjustments on the research instruments. The table below presents the distribution of the pilot study population.

Table 4: Distribution of the pilot study population

Name of the school	Category of population		Total
	Teacher	**Student**	
Government bilingual high school Nyom	11	19	30
Government bilingual high school Etoug-Egbe	8	12	20
Total	**19**	**31**	**50**

Source: Field work, 2024

The data collected from the above participants was analysed to test the reliability of the data collection instrument. The result of the pilot study is seen in the following tables.

Table 5: All variables

Case Processing Summary

		N	%
Cases	Valid	50	100.0
	Excluded[a]	0	0.0
	Total	50	100.0

Source: field work, 2024.

Table 6: Reliability statistics

Reliability Statistics

Cronbach's Alpha	N of Items
0.841	**50**

Source: Fieldwork, 2024

To conduct the pilot study, a total of 50 questionnaires were administered to the participants. The data obtained was analysed and used to test the reliability of the data collection instrument. The analysis reveals a Cronbach`s alpha of 0.841, which is good and strong. This gave the go ahead to the researcher to proceed with the main study.

Data analysis techniques

Data analysis refers to the methods used by the researcher to analyse the data gotten from the field. Generally, they exist variety of methods through which data can be analysed. The methods used depends on the research approach adopted in the study. A researcher can decide to go in for a unique technique or combine two or more methods depending on the objective of the study. Considering the objective of the present study, the researcher opted for the quantitative data analysis techniques to analyse the data.

To analyse the quantitative data, a statistical data analysis test was used by the researcher in the study. Here, the researcher used the correlation analysis, more specifically the Spearman rank correlation coefficient analysis. The Spearman rank correlation coefficient was considered to be the appropriate statistical test for the quantitative data for the simple reason that the researcher wanted to determine the effect of the independent variable (strategic planning in distance education) on the dependent variable (learning outcomes of students). The study made use of the descriptive and inferential statistics. The descriptive statistics

serves to bring out the frequency distribution and percentage of the participant's responses while the inferential statistics helps for the testing of hypotheses. Thus, the quantitative data was analysed using this test with the help of the computer assisted software more precisely the SPSS (Statistical Package for Service Solution) version 22.0.

Ethical considerations

Fouka and Mantzorou (2011) argues that ethical considerations refer to all actions taken by a researcher in a research project to protect the right and dignity of the participants as well as the publication of the research results. Research ethics requires the researcher to ensure the respect of the participants and to avoid any situation whereby the participants might feel oblige to participate in the study. Gullemin and Gillam (2008) argues that there exist two types of research ethics. This involves procedural and practical research ethics. In the present study, both the procedural and the practical research ethics were put into practice.

The procedural dimension of the research ethic used in this study consisted of getting a research authorization from the faculty of education which was in return presented to the participants of the study before any contact. The organisation which constituted our case study also delivered an authorisation which authorised us to work all the person`s resource in this study.

The practical dimension of the research ethics entails everyday ethical matters when conducting the research and interacting with the participants. Since the researcher had to collect data from individuals with feelings and emotions, the principles of privacy, confidentiality, anonymity, protection from harm, voluntary participation, free consent, and research skills were ensured to all the participants. All the participants were protected from harm, as their rights were clearly respected. The identity of the participants was not disclosed and it remains anonymous. The information was kept confidential and stored in a place only known by the researcher. The participants were not forced to participate in the study and could leave the research process whenever they feel uncomfortable.

Identification of the variables

A variable is an element which does not have a fixed value but instead changes depending on the situations. In the present study, we have the independent and the dependent variables.
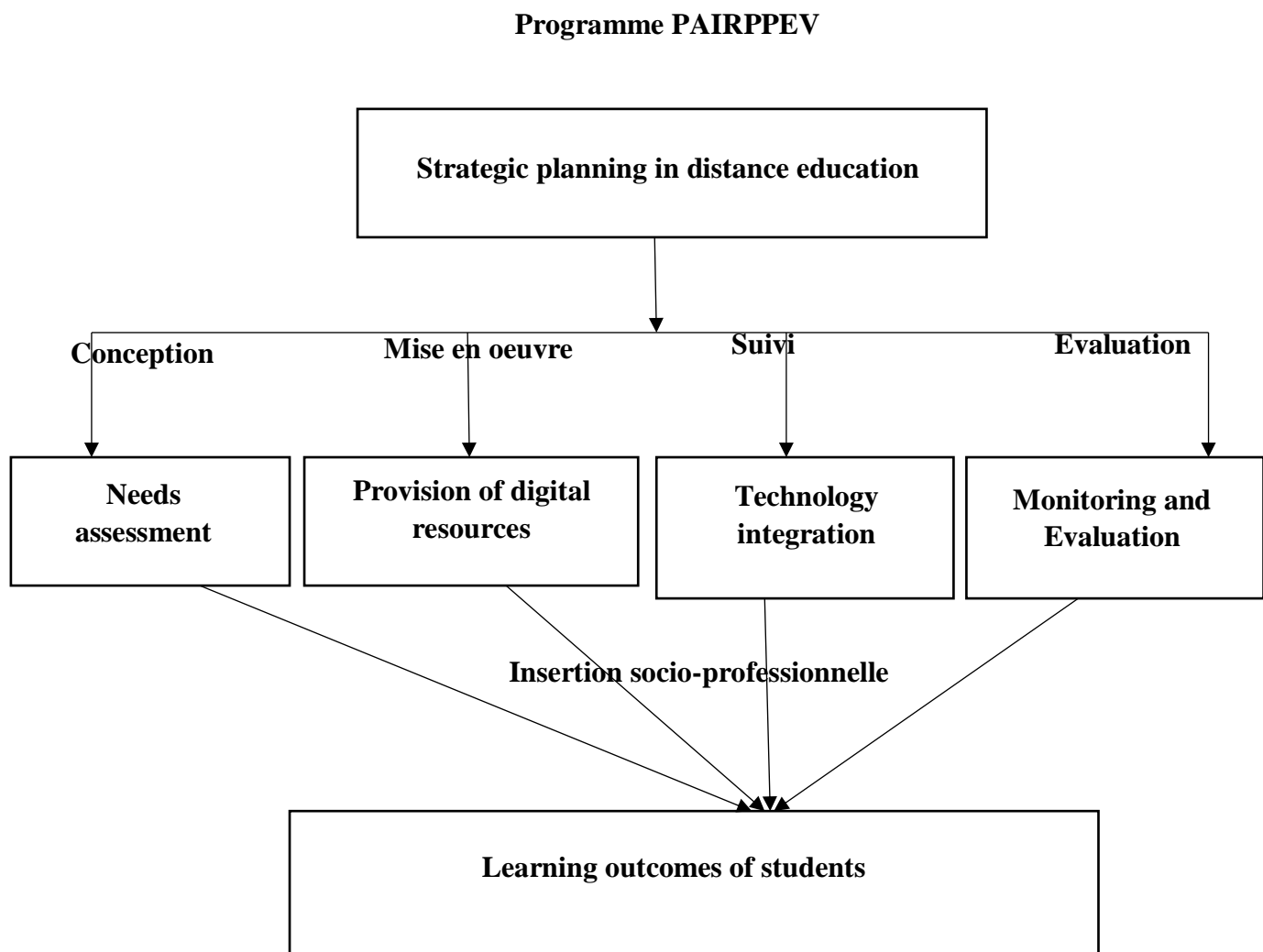
Independent variable

The independent variable, generally known as the predictor refer to the cause variable. It is the variable which is manipulated to understand the dependent variable. It is known as the

predictive variable as it predicts or influences the dependent variable. It is generally used to explain the changes in the dependent variable. In the present study, the independent variable is known as Strategic planning in distance education. This is used to explain the changes in learning outcomes of students. The operationalisation of the independent variable gives room to four modalities which include; needs assessment, provision of digital resources, monitoring and evaluation and technology integration.

Dependent variable

The dependent variable, generally known as the constant variable refer to the effect variable. It is the effect variable or the consequence of something. It is known as the problem variable since the research problem generally comes from it. It is the problem variable because it is the one that is suffering. The dependent variable exists as the result of the effect of the independent variable. In the present study, the dependent variable is known as the learning outcomes of students.

Figure 6: Interconnection of Variables and modalities

Programme PAIRPPEV

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                    ┌─────────────────────────────────────────┐
                    │  Strategic planning in distance education │
                    └─────────────────────────────────────────┘
                                      │
                                      ▼
   Conception        Mise en oeuvre        Suivi              Evaluation
      │                   │                 │                    │
      ▼                   ▼                 ▼                    ▼
┌──────────┐      ┌──────────────┐   ┌────────────┐     ┌──────────────┐
│  Needs   │      │ Provision of │   │ Technology │     │ Monitoring and│
│assessment│      │   digital    │   │integration │     │  Evaluation  │
│          │      │  resources   │   │            │     │              │
└──────────┘      └──────────────┘   └────────────┘     └──────────────┘

              Insertion socio-professionnelle

              ┌─────────────────────────────────────┐
              │    Learning outcomes of students     │
              │                                       │
              └─────────────────────────────────────┘
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Source: field work, 2024

Table 5: Synoptic table of the study

General hypothesis	Specific hypotheses	IV	Modalities	Indicators	Items	DV	Modalities	Items	Instrument of data collection	Techniques of data analysis
There exist a significant relationship between strategic planning in distance education and learning outcomes of students in some selected secondary schools in Mfoundi Division	There exist a significant relationship between the technology integration and learning outcomes of students in secondary schools in Mfoundi Division	IV1	Technology integration	Blended teaching, smart phones, lesson`s projection, Wireless internet, Audio-visual and videocassettes.	1-5	Learning outcomes of students	Strongly agree, Agree, Disagree Strongly disagree	21-25	Questionnaire	Statistical data analysis techniques (Spearman Rank Correlation coefficient)
	There exist a significant relationship between the availability of digitl resources and	IV2	Availability of digital	Distance learning infrastructures, Computer literate,	6-10					

learning outcomes of students in secondary schools in Mfoundi Division		resources	multimedia halls, sophisticated tools, electricity, sufficient finances.	
There exist a significant relationship between the needs assessment and learning outcomes of students in secondary schools in Yaounde IV subdivision	IV3	Needs assessment	Stakeholders involvement, demographic analysis, trends analysis, assessment of resources, gap analysis.	11-15
There exist a significant relationship between			Regular classroom check, online evaluation,	

monitoring and evaluation of distance and learning outcomes of students in secondary schools in Mfoundi Division	IV4	Monitoring and Evaluation	workshops and seminars, challenges, supervisory team.	16-20

Source: fieldwork, 2024.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF RESULTS

The present chapter sets out to present the results of the findings of the study. The chapter focuses on presenting the results gotten from the descriptive and inferential statistics. The first section presents the descriptive results on the demographic variables, needs assessment, provision of digital resources, technology integration, monitoring and evaluation and learning outcome. The second part of the chapter focuses on the presentation of the results of the inferential statistics which determines the link between strategic planning in distance education and learning outcome of students. Below are the results of the study.

Descriptive statistics

The present section focuses on presenting the results of the descriptive statistics of the study. The descriptive statistics focuses on the frequency distribution of the participant's responses. Here, variables such as age, gender, status, level of education, needs assessment, digital resources, technology integration and monitoring and evaluation are explored.

Descriptive statistics of demographic data

The present section presents the findings of the demographic variables. Here, demographic variables such as age, gender, status and level of education of the participants are presented.

Table 7: Age of the participants

	Frequency	Percentage
10 -20 YRS	178	72.1
21 -30 YRS	69	27.9
Total	247	100.0

Source: Fieldwork, 2024

The table above presents the data on the age distribution of the participants. A total of 247 participants were retained for this study. The table reveals that 72.1% were aged between 10 to 20 years old, 27.9% of the participants were aged between 21 to 30 years old.

Table 8: Gender of the participants

	Frequency	Percentage
MALE	145	58.7
FEMALE	102	41.3
Total	247	100.0

Source: fieldwork, 2024

The table above presents the data on the sex distribution of the participants. It is revealed that 58.7% of the participants are male while 41.3% of the participants are female. The male population recorded the highest participation rate.

Descriptive statistics on the variables of the study

The present section presents the descriptive statistics on the independent and the dependent variables of the study. Here, focus is on the variables such as needs assessment, provision of digital resources, integration of technology in schools, monitoring and evaluation processes and the learning outcome of students. The following tables presents the findings on the variables of the study.

Table 9: Descriptive statistics on needs assessment

No	Items	N	SA		A		D		SD		X	Std d
			F	%	f	%	f	%	F	%		
1	Relevant stakeholders are involved and engaged in identifying of needs and priorities.	247	116	47.0	109	44.1	14	5.7	8	3.2	3.3482	0.73268
2	The school conduct demographic analysis to understand the characteristics and needs of the target population.	247	123	49.8	101	40.9	22	8.9	1	0.4	3.4008	0.66663
3	The school conduct trends analysis to anticipate future needs and challenges.	247	97	39.3	119	48.2	26	10.5	5	2.0	3.2470	0.72115
4	The school assesses the availability of resources to address the needs.	247	103	41.7	102	41.3	32	13.0	10	4.0	3.2065	0.81766
5	The school conduct gap analysis which involves comparing the current state versus the desired state to identify gaps in resources, services or infrastructures.	247	70	28.3	112	45.3	55	22.3	10	4.0	2.9798	0.81873
Valid (listwise)		247										

Source: fieldwork, 2024.

The table above presents the descriptive statistics on needs assessment in strategic planning in schools. A considerable number of the participants (91.1%) agreed to the fact that relevant stakeholders are involved in the identification of needs and priorities. In the second item, 89.8% of the participants agreed to the fact that the school conduct demographic analysis to understand the characteristics and specific needs of the targeted population. In the third item, majority of the participants (87.5%) agreed to the fact that the school conduct trends analysis to anticipate future needs and challenges. In the fourth item, a good number of participants (83%) agreed to the statement of whether the school assesses the availability of resources to address the needs. In the fifth and last item, it is revealed that majority of the participants (73.6%) agreed to the statement of whether the school conduct gap analysis which involves comparing the current state versus the desired state in order to identify gaps in resources, services and infrastructures. The table shows that none of the mean is above the cut-off mean which is 2.5, thus we can conclude that majority of the participants strongly agree and agree that needs assessment is significantly related to the

learning outcome of students. This implies that there is a strong and positive relationship between needs assessment and learning outcome of students.

Table 10: Descriptive statistics on provision of digital resources

No	Items	N	SA		A		D		SD		X	Std d
			f	%	ƒ	%	ƒ	%	F	%		
6	Your school possesses well equip distance learning infrastructures	247	66	26.7	109	44.1	58	23.5	14	5.7	2.9190	0.85154
7	Most of the teachers in the school are computer literate.	247	81	32.8	111	44.9	38	15.4	17	6.9	3.0364	0.87111
8	Your school have a multimedia hall equip with latest generation computers.	247	82	33.2	95	38.5	54	21.9	16	6.5	2.9838	0.90152
9	Electricity are provided on daily basis in your school.	247	71	28.7	105	42.5	56	22.7	15	6.1	2.9393	0.86975
10	Your school possess sufficient finances to ensure the effectiveness of distance learning.	247	64	25.9	104	42.1	58	23.5	21	8.5	2.8543	0.90337
Valid (listwise)		247										

Source: fieldwork, 2024.

The table above presents the descriptive statistics on the provision of digital resources in strategic planning in schools. A considerable number of the participants (70.8%) agreed to the fact that the school possesses well equip distance learning infrastructures. In the second item, 77.7% of the participants agreed to the fact that most of the teachers in school are computer literate. In the third item, majority of the participants (71.7%) agreed to the fact that the school possess a multimedia hall equip with latest generation devices. In the fourth item, a good number of participants (71.2%) agreed to the statement of whether electricity is provided on daily basis in the school campus. In the fifth and last item, it is revealed that majority of the participants (66%) agreed to the statement of whether the school possesses sufficient finances to ensure effectiveness of distance learning in school.

The table shows that none of the mean is below the cut-off mean which is 2.5, thus we conclude that majority of the participants agree to the fact that the provision of digital resources is significantly related to the learning outcome of students. This implies that there is a strong and positive relationship between the provision of digital resources and learning outcome of students.

Table 11: Descriptive statistics on integration of technology

No	Items	N	SA		A		D		SD		X	Std d
			f	%	f	%	f	%	f	%		
11	Teachers uses the blended teaching approach in the classrooms.	247	66	26.7	99	40.1	62	25.1	20	8.1	2.8543	0.90785
12	Students are authorised to use smart phones in class when necessary.	247	78	31.6	101	40.9	50	20.2	18	7.3	2.9676	0.90109
13	Teachers frequently project their lessons in classrooms with the use of projectors.	247	68	27.5	114	46.2	49	19.6	16	6.5	2.9474	0.85615
14	Classrooms have wireless internet which facilitates technology integration.	247	69	27.9	107	43.3	48	19.4	23	9.3	2.8988	0.91614
15	Lessons are provided in both audio-visuals and videocassettes.	247	75	30.4	102	41.3	53	21.5	17	6.9	2.9514	0.89128
Valid (listwise)		247										

Source: fieldwork, 2024.

The table above presents the descriptive statistics on the technology integration in strategic planning in schools. A considerable number of the participants (66.8%) agreed to the fact that teachers uses blended teaching approach in the classrooms. In the second item, 72.5% of the participants agreed to the fact that students are authorised to use smart phones in class when necessary. In the third item, majority of the participants (73.7%) agreed to the fact that teachers frequently project their lessons in classrooms with the use of projectors. In the fourth item, a good number of participants (71.2%) agreed to the statement of whether classrooms have wireless internet which facilitates technology integration. In the fifth and last item, it is revealed

that majority of the participants (71.7%) agreed to the statement of whether lessons are provided in both audio-visuals and videocassettes.

The table shows that none of the mean is below the cut-off mean which is 2.5, thus we conclude that majority of the participants agree to the fact that the integration of technology is significantly related to the learning outcome of students. This implies that there is a strong and positive relationship between the integration of technology and learning outcome of students.

Table 12: Descriptive statistics on monitoring and evaluation

No	Items	N	SA		A		D		SD		X	Std d
			f	%	f	%	f	%	f	%		
16	Your school conduct regular classroom check to ensure that digital tools are used in class	247	75	30.4	108	43.7	49	19.8	15	6.1	2.9838	0.86470
17	Students are sometimes evaluated online through google classroom or any other means.	247	73	29.6	105	42.5	51	20.6	18	7.3	2.9433	0.89080
18	The school organises workshops and seminars to track the progress of teachers	247	78	31.6	113	45.7	39	15.8	17	6.9	3.0202	0.86696
19	The school constantly assesses problems faced by teachers in implementing ICT in class	247	88	35.6	97	39.3	52	21.1	10	4.0	3.0648	0.85293
20	There is a supervisory team which look after the integration of distance learning in class	247	83	33.6	118	47.8	35	14.2	11	4.5	3.1053	0.80462
Valid (listwise)		247										

Source: fieldwork, 2024.

The table above presents the descriptive statistics on monitoring and evaluation in strategic planning in schools. A considerable number of the participants (74.1%) agreed to the fact that the school conduct regular classroom check to ensure that digital tools are effectively used in classrooms. In the

second item, 72.1% of the participants agreed to the fact that students are sometimes evaluated online through google classroom or any other means. In the third item, majority of the participants (77.3%) agreed to the fact that the school frequently organises workshops and seminars to track the progress of teachers and students in ICT integration. In the fourth item, a good number of participants (74.9%) agreed to the statement of whether the school constantly assesses problems faced by teachers in implementing ICT in classrooms. In the fifth and last item, it is revealed that majority of the participants (81.2%) agreed to the statement of whether there is a supervisory team which look after the integration of distance learning in classrooms.

The table shows that none of the mean is below the cut-off mean which is 2.5, thus we conclude that majority of the participants agree to the fact that the monitoring and evaluation is significantly related to the learning outcome of students. This implies that there is a strong and positive relationship between the monitoring and evaluation and learning outcome of students.

Table 13: Descriptive statistics on learning outcome

No	Items	N	SA		A		D		SD		X	Std d
			f	%	f	%	f	%	f	%		
21	Use of distance education helps student to develop problem solving and critical thinking skills.	247	83	33.6	103	41.7	53	21.5	8	3.2	3.0567	0.82444
22	Most students are computer literate thanks to the integration of ICT.	247	89	36.0	111	44.9	36	14.6	11	4.5	3.1255	0.81925
23	Students are capable of participating in knowledge construction thanks to ICT in class.	247	97	39.3	106	42.9	43	17.4	1	0.4	3.2105	0.73543
24	Most students has become creative and innovative by generating new ideas and solutions	247	84	34.0	126	51.0	30	12.1	7	2.8	3.1619	0.74223
25	The use of distance education enhance skills development in students	247	85	34.4	131	53.0	24	9.7	7	2.8	3.1903	0.72150
Valid (listwise)		247										

Source: fieldwork, 2024.

The table above presents the descriptive statistics on monitoring and evaluation in strategic planning in schools. A considerable number of the participants (75.1%) agreed to the fact that the use of distance education helps students to develop problem solving and critical thinking skills and abilities. In the second item, 80.9% of the participants agreed to the fact that most students are computer literate thanks to the integration of ICT in schools. In the third item, majority of the participants (82.2%) agreed to the fact that most students are capable of participating in knowledge construction thanks to the use of ICT in classrooms. In the fourth item, a good number of participants (85%) agreed to the statement of whether most students have become creative and innovative by generating new ideas and solutions. In the fifth and last item, it is revealed that majority of the participants (87.4%) agreed to the statement of whether the use of distance education enhance skills development in students.

The table shows that none of the mean is below the cut-off mean which is 2.5, thus we conclude that majority of the participants agree to the fact that the learning outcome of students is significantly influence by strategic planning in distance education. This implies that there is a strong and positive relationship between strategic planning in distance education and learning outcome of students.

Inferential statistics

The present section focuses on hypotheses testing. To do so, the Pearson correlation coefficient analysis was used to determine the link between the independent variable (strategic planning in distance education) and the dependent variable (learning outcome). As such, to establish the link between strategic planning in distance education and learning outcome of students in secondary schools, it is essential to state the null and the alternative research hypotheses. The following tables below presents the results of the inferential statistics of the study.

Research hypothesis one

To determine the relationship between needs assessment and learning outcome of students in secondary schools, it is essential to formulate the alternative and the null hypothesis.

Ha1: There exist a significant relationship between needs assessment and learning outcome of students of Selected secondary schools in Mfoundi Division.

Ho1: There exist no significant relationship between needs assessment and learning outcome of students of Selected secondary schools in Mfoundi Division.

Table 14: Correlation on needs assessment and learning outcome of students

		Needs assessment	Learning outcome
Needs assessment	Pearson correlation coefficient	1	0.000
	Sig. (bilateral)		0. 617**
	N	247	247
Learning outcome	Pearson correlation coefficient	0.000	1
	Sig. (bilateral)	0. 617**	
	N	247	247

**. Correlation is significant at 0.05 level (bilateral)

Source: fieldwork, 2024.

The table above presents the results of the Pearson correlation coefficient analysis on needs assessment and learning outcome of students in Selected secondary schools in Mfoundi Division. It is revealed that the p-value (0,000) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.617. This means that needs assessment is a determinant of learning outcome (61.7%). The correlation coefficient is positive and strong. Basing on this result, the null hypothesis of the study is rejected and the alternative accepted which states that needs assessment significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore means that the more the needs assessment is conducted by school heads and administrators, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

Research hypothesis two

To test the relationship between the provision of digital resources and learning outcome of students in Selected secondary schools in Mfoundi Division, it is primordial to formulate the alternative and the null hypothesis of the study.

Ha2: There exist a significant relationship between the provision of digital resources and learning outcome of students of Selected secondary schools in Mfoundi Division.

Ho2: There exist no significant relationship between the provision of digital resources and learning outcome of students of selected secondary schools in Mfoundi Division.

Table 15: Correlation on the provision of digital resources and learning outcome of students

		Provision of digital resources	Learning outcome
Provision of digital resources	Pearson correlation coefficient	1	0.000
	Sig. (bilatera)		0. 780[**]
	N	247	247
Learning outcome	Pearson correlation coefficient	0.000	1
	Sig. (bilateral)	0. 780[**]	
	N	247	247

**. Correlation is significant at 0.05 level (bilateral)

Source: fieldwork, 2024.

The above table presents the results of the Pearson correlation coefficient analysis on the provision of digital resources and learning outcome of students in Selected secondary schools in Mfoundi Division. It is revealed that the p-value (0,000) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.780. This means that the provision of digital resources influences learning outcome by 78.0%. The correlation coefficient is positive and very strong. Basing on this result, the null hypothesis of the study is rejected and the alternative retained which states that the provision of digital resources significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore implies that the more the digital resources are provided school heads, administrators, teachers and students, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

Research hypothesis three

To test the relationship between the integration of technology and learning outcome of students in secondary schools in Cameroon, it is essential to formulate the alternative and null hypothesis of the study.

Ha3: There exist a significant relationship between integration of technology and learning outcome of students of selected secondary schools in Mfoundi Division.

Ho3: There exist no significant relationship between integration of technology and learning outcome of students of selected secondary schools in Mfoundi Division.

Table 16: Correlation on technology integration and learning outcome of students

		Technology integration	Learning outcome
Technology integration	Pearson correlation coefficient	1	0.001
	Sig. (bilateral)		0. 685[**]
	N	247	247
Learning outcome	Pearson correlation coefficient	0.001	1
	Sig. (bilateral)	0. 685[**]	
	N	247	247

**. Correlation is significant at 0.05 level (bilateral)

Source: fieldwork, 2024.

The above table presents the results of the Pearson correlation coefficient analysis on the integration of technology and learning outcome of students in Selected secondary schools in Mfoundi Division. It is revealed that the p-value (0,001) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.685. This means that technology integration influences learning outcome by 68.5%. The correlation coefficient is positive and strong. Basing on this result, the null hypothesis of the study is rejected and the alternative retained which states that technology integration significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore implies that the more the use of technology by school heads, administrators, teachers and students, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

Research hypothesis four

To measure the relationship between monitoring and evaluation of distance education and learning outcome of students in secondary schools and colleges in Cameroon, it is essential to formulate the null and the alternative hypothesis.

Ha4: There exist a significant relationship between monitoring and evaluation and learning outcome of students of selected secondary schools in Mfoundi Division.

Ho4: There exist no significant relationship between monitoring and evaluation and learning outcome of students of selected secondary schools in Mfoundi Division.

Table 17: Correlation on monitoring and evaluation and learning outcome of students

		Monitoring and evaluation	Learning outcome
Monitoring and evaluation	Pearson correlation coefficient	1	0.000
	Sig. (bilateral)		0. 791[**]
	N	247	247
Learning outcome	Pearson correlation coefficient	0.000	1
	Sig. (bilateral)	0. 791[**]	
	N	247	247

**. Correlation is significant at 0.05 level (bilateral)

Source: fieldwork, 2024.

The above table presents the results of the Pearson correlation coefficient analysis on monitoring and evaluation of distance education and learning outcome of students in Selected secondary schools in Mfoundi Division. It is revealed that the p-value (0.000) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.791. This means that monitoring and evaluation of distance education influences learning outcome by 79.1%. The correlation coefficient is positive and very strong. Basing on this result, the null hypothesis of the study is rejected and the alternative retained which states that monitoring and evaluation significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore implies that the more the monitoring and evaluation f distance education by school heads, administrators, teachers and students, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

Table 18: Summary of findings

Hypotheses	Pearson Correlation value	P-value	Decision
Ha1: There exist a significant relationship between needs assessment and learning outcome of students in Selected secondary schools in Mfoundi Division	0.617	0.000	Retained
Ha2: There exist a significant relationship between the provision of digital resources and learning outcome of students in Selected secondary schools in Mfoundi Division	0.780	0.000	Retained
Ha3: There exist a significant relationship between technology integration and learning outcome of students in Selected secondary schools in Mfoundi Division	0.685	0.001	Retained
Ha3: There exist a significant relationship between monitoring and evaluation and learning outcome of students in Selected secondary schools in Mfoundi Division	0.791	0.000	Retained

Source: fieldwork, 2024.

Interpretation of results of the findings

The present section focuses on the interpretation of the results of the findings. Interpretation involves providing meanings to the results achieved. The results are interpreted basing on the various research objectives of the study.

Research objective one

The first research objective of the study seeks to examine the effect of needs assessment on learning outcome of students in Selected secondary schools in Mfoundi Division. The data collected and analysed reveals the following results. It is revealed that the p-value (0.000) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.617. This means that needs assessment is a determinant of learning outcome (61.7%). The correlation coefficient is positive and strong. Basing on this result, the null hypothesis of the study is rejected and the alternative accepted which states that needs assessment significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore means that the more the needs assessment is conducted by school heads and administrators, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

The above result means that the learning outcome of students is largely influenced by needs assessment, which is a key determinant of strategic planning in distance education. Planning is thus a process which consists of developing contingency plans aims at resolving issues affecting the educational system. The first aspect of planning is needs analysis. Needs analysis involves the identification of the specific needs of the targeted population and outlining possible strategies and measures to achieve them. In this sense, needs assessment requires educational planners to first and foremost identifies the pressing needs of the targeted population. By doing this, it will help to develop a contingency plan which respond to the needs and expectations of the targeted population. This requires educational planners to make sure that all the relevant stakeholders are involved and engaged in the identification of needs and priorities of the targeted population. Involving and engaging individuals in the school planning processes enhance the learning outcome of students at all levels since the specific needs of each and every student will be addressed.

The findings also revealed that needs analysis requires the school heads and administrators to conduct demographic analysis to understand the characteristics as well as the needs of the targeted population. Demographic analysis involves determining the exact number of children under the schooling age. This analysis will help educational planners to develop educational policies, strategies, guidelines and orientations for the next 10 to 15 years. Again, needs assessment equally helps educational planners to conduct trends analysis. This involves carefully analysing the evolution in the educational sector at all levels of the educational system. Trends analysis appears to be a necessity since it helps policy makers, educationists, and governments to anticipate future needs and also challenges which might affect the educational system.

The findings once again revealed that needs analysis in educational planning requires the school heads and administrators to assess the available resources to address the needs. Resources here involves human, material, financial, temporal and informational resources. These resources significantly contribute to the achievement of the educational goals and objectives at all levels of the educational system. It thus, appears that the learning outcome of students is determined by the availability and use of resources by school heads and administrators. This is so because assessing the available resources helps in determining which action to take, when, and how to do it. Learning outcome of students therefore depends on the ability of school heads and administrators to effectively use the available resources put at their disposal. This means that the misuse of the resources can hamper learning outcome of students at all levels of the educational system.

The findings also revealed that needs analysis as a determinant of strategic planning in distance education involves gap analysis. Conducting gap analysis in schools involves comparing the current state versus the desired state so as to identify the gaps in resource utilisation, services and infrastructures. Gap analysis in strategic planning is thus a determinant of learning outcome of students in schools as it helps educational planners to carefully address the specific needs and expectations of the targeted population.

Research objective two

The second research objective of the study seeks to analyse the relationship between the provision of digital resources and learning outcome of students in Selected secondary schools in Mfoundi Division. The data collected and analysed reveals the following result. It is revealed

that the p-value (0.000) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.780. This means that the provision of digital resources influences learning outcome by 78.0%. The correlation coefficient is positive and very strong. Basing on this result, the null hypothesis of the study is rejected and the alternative retained which states that the provision of digital resources significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore implies that the more the digital resources are provided school heads, administrators, teachers and students, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

This implies that the provision of digital resources has a significant influence on the learning outcome of students. Strategic planning in distance education involves the definition of policies, strategies, guidelines, orientations, objectives and activities. The realisation of these policies and guidelines requires individuals, educationists, policy makers, educational community and governments to mobilise resources aim at ensuring effective realisation of educational actions. As such, the effectiveness of distance education in African countries including Cameroon, requires the provision of digital resources considered to be indispensable for the success of distance learning in Cameroonian secondary schools and colleges. The provision of digital resources is thus a strong and positive predictor of learning outcome of students.

Distance education over the years has grown from a luxury to an absolute necessity in most if not all the countries in the developed and less developed economies. This is so because countries across the globe intends to ensure lifelong learning opportunities for all irrespective of age, cultural background, religion, race, and ethnic belonging. In order to achieve this, policy makers, educationists and governments are required to mobilise both the material, financial, human, informational and temporal resources necessary for the effectiveness of distance education.

The findings thus reveal that the provision of digital resources is a key determinant of learning outcome of students in secondary schools and colleges in Cameroon. In terms of digital resources, attention is paid to the material resources specifically the present state of digital infrastructures in secondary schools in Cameroon. The success of distance education largely depends on the availability of current and sophisticated digital infrastructures like multimedia halls, e-library, wireless campuses etc. As such, digital infrastructures play a vital role in ameliorating the learning outcome of students in the digital age as it provides students with

means and abilities to go beyond boundaries to overcome challenges faced in the teaching and learning process.

The findings also reveal that the provision of digital resources is essential to ensure good performance from students and improve the learning outcome of students but this requires instructors to be computer literate. In the digital age, possessing skills and abilities in computer science has been proven to be an absolute necessity. This is because it has become very difficult or practically impossible to succeed in the 21st century without mastering computer science. As such, teachers are required to master the use of ICT in class. This will to boast the performance of students by making them autonomous and independent.

The findings also reveal that the provision of digital resources as a determinant of learning outcome of students requires policy makers, educationists and governments to make sure that all secondary schools and colleges have access to electricity on daily basis. It is believed that there is no distance education without electricity. In order to ensure the effectiveness of distance education at all levels of the educational system, it is essential to electrify school campuses. This will enhance easy use of digital resources in schools and colleges and thus improve the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

Finally, the findings once again reveal that the provision of digital resources in distance education requires policy makers and governments to provide finances required for the implementation of distance education. Any action in education necessitates investment. This investment requires educationists and governments to allocate financial resources for the execution of educational actions. Money thus appear to be a key determinant for the success of distance education. As such, to ensure the success rate of students and also to improve the learning outcome of students at all levels of the educational system, it is essential to allocate financial resources to each action.

Research objective three

The third research objective of the study seeks to address the relationship between the integration of technology and the learning outcome of students in Selected secondary schools in Mfoundi Division. The data collected and analysed reveals the following result. It is revealed that the p-value (0,001) is less than 0.05, which is the alpha value in social sciences. The Pearson

correlation coefficient value is equal to 0.685. This means that technology integration influences learning outcome by 68.5%. The correlation coefficient is positive and strong. Basing on this result, the null hypothesis of the study is rejected and the alternative retained which states that technology integration significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore implies that the more the use of technology by school heads, administrators, teachers and students, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

This implies that technology integration significantly influences the learning outcome of students in secondary schools and colleges in Cameroon. Following the digital revolution, all the domains in the society are influenced by technology and so too is the educational sector. Due to the multiple crisis affecting the educational system with the most recent being the Covid 19, there is the desire by educationists, policy makers and governments to develop a complementary means through which education can be delivered at any time irrespective of geographical location, time and space. It is for this reason that strategic planning in distance education involves developing mechanisms for the effective integration of technology in schools and colleges across the national territory. Doing this requires educational actors to make use of a number of practices consider to be essential for the success of the digitalisation process in secondary schools and colleges.

Technology integration in secondary schools and colleges requires the teachers to use both the blended teaching methods to handle class lectures. This requires the teachers to use both the traditional method of teaching as well as the innovative teaching method which requires the teachers to provide lectures both physically and from afar. Though the conventional teaching method appear to be essential to improve learning outcome of students, it is essential to introduce innovative teaching approach which also gives room for students to be followed even from a far distance. This will go a long way to improve the learning outcome of students at all levels of the educational system.

Technology integration is seen as a key determinant of learning outcome of students in secondary schools and colleges in Cameroon. Ensuring the effectiveness of digitalisation of teaching and learning process requires educational stakeholders to adopt practices which can

promote the technology integration in schools. In order to do this, school heads and administrators are required to authorise the usage of smart phones in school whenever necessary. This is because with the digital revolution, students are required to participate in knowledge construction. The use of smart phones helps students to be autonomous and can address all kind of situations.

The findings also reveal that the technology integration in schools requires teachers to project their lessons on daily basis. The act of projecting the lessons helps to boast the learning outcome of students in secondary schools and colleges. This is so because projecting lessons helps students to have alternative means of understanding a lessons away from only listening. It provides room for students to visualise the content of the program. Also, technology integration requires school heads and administrators to provide wireless internet in the campuses. Effective technology integration requires the provision of free internet connectivity.

Finally, technology integration in distance education helps to boast the learning outcome of students in secondary schools in Cameroon. This is so because with technology integration, lessons are provided in both audio-visual and videocassettes.

Research objective four

The fourth research objective seeks to address the relationship between monitoring and evaluation and learning outcome of students in Selected secondary schools in Mfoundi Division. The data collected and analysed reveals the following result. It is revealed that the p-value (0.000) is less than 0.05, which is the alpha value in social sciences. The Pearson correlation coefficient value is equal to 0.791. This means that monitoring and evaluation of distance education influences learning outcome by 79.1%. The correlation coefficient is positive and very strong. Basing on this result, the null hypothesis of the study is rejected and the alternative retained which states that monitoring and evaluation significantly influences learning outcome of students in Selected secondary schools in Mfoundi Division. This therefore implies that the more the monitoring and evaluation f distance education by school heads, administrators, teachers and students, the better the learning outcome of students in secondary schools and colleges in Yaounde in particular and Cameroon in general.

Strategic planning in distance education directly influences the learning outcome of students in secondary schools and colleges. This involves continuously monitoring and evaluating the plan

so as to make sure that the stated objectives. Monitoring and evaluation serves as a determinant of learning outcome as it helps school heads and administrators to constantly track the progress of the plan. This is done through the regular classroom check to make sure that digital tools are effectively used in class. Classroom visiting intensify the use of digital tools in schools and subsequently influence the learning outcome of students.

The findings also reveal that monitoring and evaluation of strategic planning in distance education is a determinant of learning outcome as it helps school heads and administrators to track the progress of the plan. In doing so, the schools organise workshops and seminars aims at improving the abilities of teachers and students in using distance learning tools. Equally, through monitoring and evaluation, the school constantly track and assess problems faced by teachers in implementing ICT in class. In order to do this, policy makers and educationists develops supervisory team whose aim is to look into it that distance education enhances the learning outcome of students in secondary schools and colleges in Cameroon.

CHAPTER FIVE

DISCUSSION OF FINDINGS, RECOMMENDATIONS, PERSPECTIVES FOR FURTHER STUDIES AND CONSTRAINTS

The present chapter focuses on discussion of findings, suggestions, perspective for further studies and constraints. Discussion of findings serves as a crucial component that not only validates the study's objectives but also provides insights into the significant obtained. Discussion of findings involves analysing and offering a comprehensive interpretation of the data collected in relation to existing literature. Furthermore, we have suggestions which highlight actionable steps that can be taken to address identified issues or capitalize on opportunities. Additionally, we have the perspective for further studies which outlines potential avenues for future research endeavors by identifying gaps in knowledge or areas requiring more analysis. Finally, we have the constraints which sheds light on limitation which we encountered which may impact the interpretation of the study.

Discussion of Results

Needs Assessment and Learning Outcomes

Our findings on needs assessment in strategic planning in schools shows that a considerable number of the participants agreed to the fact that relevant stakeholders are involved in the identification of needs and priorities. They equally agreed to the fact that the school conduct demographic analysis to understand the characteristics and specific needs of the targeted population. We also have a good number of participants who agreed to the fact that the school conduct analysis to anticipate future needs and challenges. Some participants, a good number of them agreed to the statement of whether the school assesses the availability of resources to address the needs. Participants also agreed to the statement of whether the school conduct gap analysis which involves comparing the current state versus the desired state in order to identify gaps in resources, services and infrastructures. After analysing the responses of the various participants, we had the conclusion below on the relationship between needs assessment and learning outcome.

The results obtained from the field work on the variables needs assessment, carried out in Selected secondary schools in Mfoundi Division validate the hypothesis. It shows that majority

of the participants strongly agree and agree that needs assessment is significantly related to the learning outcome of students. This implies that there is a strong and positive relationship between needs assessment and learning outcome of students. This results are in line with the work of our predecessors which are seen below. The present results of this study is corroborated by the findings in a study conducted by Kilfoil (2003) He found out that need assessment is an important step in strategic planning in education. He argues that need assessment is directly link to student`s learning outcomes as it provides the ground for planners to conduct the planning taking in to consideration the learning requirements of the learners as well as the audiences. Kilfoil further argued that need assessment is the preparatory phase of strategic planning in distance education. To him, an effective need assessment in strategic planning in education will help to boast the outcomes of learners since their needs and expectations will be taken into consideration during the planning phase. This simply means that need assessment permits planners to tailor the plan to the needs of the students. Also, Hershkowitz (1976) conducted a study in which he found out that needs assessment can be grouped into two broad group, that is; learner needs and administrator needs. He found out that the former are related to the educational deficiency while the latter look after educational accountability.

Needs assessment is essential for informing strategic planning in distance education by aligning objectives with stakeholder's expectations, enhancing learner's satisfaction and retention and supporting continuous improvement efforts. There is thus a strong and positive relationship between needs assessment and learning outcome of students. Need assessment serves as a foundation for learning that promote personalized instruction, targeted intervention, active engagement and continuous improvement.

The present results can be explained by Mintzberg's theory. This theory emphazises that strategy is not solely about planning but also about emergent pattern and action. Needs assessment is a critical component of strategic planning. It involves identifying gaps or deficiencies in an organization's or instruction's or establishment's current state, understanding what is required to meet future goals, and determining the necessary resources and actions. This could better be understood in the 5 Ps of strategy developed by Mintzberg where, the third "P" pattern, discusses the need for recognising and mastering past actions and outcomes which can affect the program. The fourth "P" position, emphasises on importance of the position of the organisation vis-a-vis the competitor. It has to do with understanding market dynamics, customer preferences, and

organisation positive to create and sustain competitive advantage. Mintzberg's theory encourages a more flexible approach to strategy, allowing for adjustments based on emerging information and learning. Needs assessment provides valuable input for strategic planning, and Mintzberg's perspective encourages a dynamic, adaptive approach to strategy.

Provision of Digital Resources and Learning Outcome

The survey carried out on the provision of digital resources in strategic planning in schools shows that a considerable number of participant reacted positively. A huge number of the participants of the targeted population agreed to the fact that the school possesses well equip distance learning infrastructures. It was also realized that participants agreed to the fact that most of the teachers in school are computer literate. we found out that a majority of the participants agreed to the fact that the school possess a multimedia hall equip with latest generation devices. Furthermore, a good number of participants agreed to the statement of whether electricity is provided on daily basis in the school campus and to the statement of whether the school possesses sufficient finances to ensure effectiveness of distance learning in school, it is revealed that majority of the participants agreed.

In the above discuss of results on provision of digital resources to school, the hypothesis is positive. In conclusion, majority of the participants agree to the fact that the provision of digital resources is significantly related to the learning outcome of students. This implies that there is a strong and positive relationship between the provision of digital resources and learning outcomes of students. This results are in line with the work of our predecessors which is seen below. The finding of our results shows that provision of digital resources to school is a determinant of learning outcomes of students of secondary schools in Cameroon. The present results of this study is corroborated by the findings in a study by the University of Waterloo (2020) which found out that digital learning resources has a significant impact on the learning outcomes of students in secondary schools and colleges and even universities. It argues that distance learning resources are powerful tools which can be used to improve the learning outcomes of students in ways a textbook may not be able to. This means that the provision of digital learning materials such as assign readings, upload media, assign online quizzes, suggest supplementary subject-related videos for clarification, utilise Google documents, greatly influences the performance of students. Another study by Ali et l. (2021) found out that digital resources have a positive impact on the performance of students. They argue that the way in which digital resources are presented

to students can greatly influence the outcome of students in schools. To them, students' retention is a direct correlates of student perception of quality. This means that teachers can only attracts and retains students with digital learning resources if they provide educational services which are known to meet the expectations of students and also add value to students learning. We also find similar study conducted by Marna et al. (2019) *and* Lin, Chen, and Liu (2016) and many others.

The present results can be explained by diffusion innovation theory. The theory of diffusion of innovation focuses on how new ideas, new methods or new approaches are adopted in the society by individuals. It is very essential for modern day`s organisation for the simple reason that both the business organisations and social organisations cannot survive in the 21st century if they fail to integrate technology in their day-to-day practices. Integrating technology means also acquiring new types of resources that will permit them to meet up with new technology. With the need to change from the old ways of doing things to new ways. It focusses on the process by which innovation migrates from creation to widespread use. The theory is essential in the present study as it provides a framework to understand how new ideas, new methods or new approaches are adopted in the society by individuals. The diffusion theory will help strategic planners adopt method that will permit effective use of digital resources provided, thereby living a positive influence on learning outcomes of students.

Integration of Technology and Learning Outcome

Our findings on technology integration in strategic planning in schools shows that a considerable number of the participants agreed to the fact that teachers uses blended teaching approach in the classrooms. Again some participants agreed to the fact that students are authorised to use smart phones in class when necessary. Furthermore, majority of the participants agreed to the fact that teachers frequently project their lessons in classrooms with the use of projectors. Also, a good number of participants agreed to the statement of whether classrooms have wireless internet which facilitates technology integration. The survey revealed that majority of the participants agreed to the statement of whether lessons are provided in both audio-visuals and videocassettes.

 The information gathered from participants shows that majority of them agree to the fact that the integration of technology is significantly related to the learning outcome of students. This implies that there is a strong and positive relationship between the integration of technology and learning outcome of students. This results are in line with the work of our predecessors which is

seen below. The present results of this study is corroborated by the findings in a study conducted by Fouda et al (2013) who found out that the integration of technology into the secondary school's curriculum has a significant influence on student performance. They argue that though the integration of technology in secondary schools is pledged by a number of shortcomings such as poor internet connectivity, unstable production of electricity or even lack of electricity in some interior villages, absence of latest generation computers and modern digital infrastructure, technology integration produces a positive result in areas where these digital resources are made available. Technology integration according to these authors is a correlates of the learning outcome of students in secondary schools in Cameroon. A similar study was carried out by Mbangwana in 2008. In K. Toure, T.M. Tchombe, & T. Karsenti (Eds.) found out that the integration of ICTs in Cameroonian secondary schools and colleges has significantly influence in the performance of students. The findings reveal that the integration of technology enables student`s centered discussion which helps to upgrade the performance of students. This involves the use of digital tools such as computers, smartphones, interactive boards, projectors, video and audiocassettes. The use of these resources greatly influence the performance and outcome of secondary school students.

The present results can be explained by the Theory of Diffusion of innovation. The diffusion of innovations is a general theory of how new ideas are spread and also adopted in the society. The theory once again explain how communication channels and opinion leaders shape the adoption of new ideas or innovations in a community. The theory of diffusion of innovation by Rogers is based on the assumptions that communication is the principal element which determines how an idea diffuses through a specific population over time. This theory explains how new ideas, technologies, or innovations spread through cultures and communities. It focusses on the process by which innovation migrates from creation to widespread use. Effective technology integration aligns with the principles of diffusion theory by considering adoption factors and ensuring smooth transition. Strategic planning should integrate technology thoughtfully, considering adoption dynamics and leveraging insight from diffusion theory. By doing so, technology integration in strategic planning in schools will have strong and positive relation on learning outcome.

Monitoring and Evaluation and Learning Outcomes

The results of the survey on monitoring and evaluation in strategic planning in schools reveals that a considerable number of the participants agreed to the fact that the school conduct regular classroom check to ensure that digital tools are effectively used in classrooms. Some of the participants agreed to the fact that students are sometimes evaluated online through google classroom or any other means. Also, others agreed to the fact that the school frequently organises workshops and seminars to track the progress of teachers and students in ICT integration. In the fourth item, a good number of participants agreed to the statement of whether the school constantly assesses problems faced by teachers in implementing ICT in classrooms. Again, it is revealed that majority of the participants agreed to the statement of whether there is a supervisory team which look after the integration of distance learning in classrooms.

We conclude that majority of the participants agree to the fact that the monitoring and evaluation is significantly related to the learning outcomes of students. This implies that there is a strong and positive relationship between the monitoring and evaluation and learning outcome of students. The present results of this study is corroborated by the findings in a study conducted by Durak and Saritepeci (2017) who found out that monitoring and evaluation plays a vital role in shaping the performance of students in schools. They explain that the effectiveness of distance education depends in larger part on the constant monitoring and evaluation of ICT policies and its implementation. Monitoring and evaluation provides the framework for planners to evaluate the attainment of the stated objectives as well as the measures which can be adopted to adapt the plan to the needs of learners. In another study by Jabali and Walker (2021) found out that monitoring a plan requires educational planners to carefully handle the plan so as to ensure the effectiveness of distance education. Learner outcome is seen as a top priority in schools. The integration of technology in education is believed to have an impact on the performance of students. As such, it becomes very necessary for planners to make sure that distance education is carefully monitored and evaluated to make sure it has a positive effect on student's outcome.

This could be explained by Theory of structural contingency by Kannan. Monitoring and evaluation involves systematically tracking the progress of strategic initiatives, projects, or programs. It ensures that activities are on track, resources are utilized effectively, and goals are being achieved. The present results can be explained by the Structural Contingency Theory of Kanna. This theory argues that there is no universally optimal organizional structure. Instead, the

effectiveness of a structure depends on specific contextual factors or contigencies. No one – size fits – all, different organizations require different structures based on their unique circumstances. The relationship lies in the alignment of monitoring and evaluation practices with the specific organizational context, which includes structural factors.

Suggestions

A plan is a well-conceived model which helps the ministry of secondary education achieve the predefined objectives within a specific framework. It is a guideline which guides the activities of individuals in an organisation. For planning to be successful, it has to take in consideration strategic points that will directly impact the vision and main objective. In this light we think for distance education to positively influence learning outcomes, planners should include Need Assessment, Provision of Digital Resources, Technology Integration and Monitoring and evaluation at all the levels. Here, we are going to limit ourselves at the level of the government, (strategic level) and the level of the school administrators (tertiary level).

Need Assessment

To the Government of Cameroon (MINESEC): The ministry of secondary education which is the governing body responsible for secondary education and in charge of the Distance education centre in Cameroon should prioritize needs assessment in education policy and practice. By implementing this it will permit planners at the strategic level to have a better vision and strategies to achieve the main objective of the Cameroon government and any other state, which is better learning outcome. It will help the government of Cameroon to better understand the unique challenges and opportunities facing its education system and take targeted actions to improving learning outcomes of learners. This could be done by:

- Allocate resources and support initiatives aimed at conducting need assessment across various educational levels in the ten regions of the country. This may involve gathering data on infrastructures, teacher's qualification, student's demographics and community needs.
- Enhance the capacity of educational institutions and relevant government agencies to collect, analyse and interpret data related to students learning needs.

- Create a good relationship and foster collaboration and dialogue among government agencies, education institutions, teachers, students, parents and community members to actively participate in need assessment process.
- Assure equity and access by taking into consideration the reality of each community and prioritize needs assessment efforts in underserved and marginalized communities to address disparities in access to quality education.

The government of Cameroon should decentralize needs assessment in other to obtain better results that will permit education planners at strategic level to derive strategies that will help distance education to produce great impact on learning outcomes of students.

To school administrators: They should prioritize needs assessment in making decisions because this will help them identify and address some factors that can impact learning outcome. This could be done by:

- Create a good relationship and foster collaboration and dialogue among teachers, students, parents and community members and local authorities to actively participate in need assessment process.
- Use data from need assessment to tailor support and inventions to meet specific needs of students and teachers.
- School administrators are encouraged to conduct regular needs assessments to gather insights into the diverse needs, interests, and challenges of students and teachers and the broader school community and take immediate action or relate it to the right quarters.
- School administrators are encouraged to use need assessment data as a foundation for planning, implementation and evaluation of educational programs.

Provision of Digital Resources

To the Government of Cameroon (MINESEC): Digital resources is very fundamental for distance education since it provide quick access to huge amounts of engaging instructional content, flexibility in implementation and helpful organizational tools, provide new opportunities for teaching and learning and facilitate communication and collaboration among students, teachers and stakeholders, which goes a long way to enhance learning outcomes of students. The government should make sure the necessary digital resources are provided to various schools in the country by:

- Identify current gaps and challenges in the government's digital infrastructure and understand requirements of different before embarking on any strategic planning for digital resources.
- Ensure that the adequate financial resources needed to support the implementation of digital strategy is allocated.
- Ensure that members of the planning committee include a number of expert in that domain.
- Strategic planners should make provision for government establish partnerships with private tech companies for expertise and innovation.
- Include digital industry as a subject at level of technical schools in Cameroon

To school administrators: They should prioritize provision of digital material in making decisions because it will support distance education and promote learning outcomes of students. This could be done by:

- Identify the specific needs of teachers, students, and administrators regarding digital resources.
- Involve all stakeholders in strategic planning, this is to ensure that digital resources selected align with the needs and expectations of the parties involved.
- Explore variety of digital tools and platforms that align with the school's reality.

Technology Integration

To the Government of Cameroon (MINESEC): In today's digital age, technology integration is crucial for governments to enhance efficiency. Here are some the recommendations for strategic planning in technology integration in distance education for the government:

- Define specific goals and objectives that align with the government's overall mission and vision.
- Identify the current technological infrastructure, capabilities, and limitations within the government.
- Identify technologies that could help the government achieve its strategic goals and select the most appropriate technology solution to address the needs and include them in the curricula

- Consider factors such as budget constraints, existing skill sets and potential risk to choose a suitable technology for Cameroon.

- Make provision for training of the team on the use of technology so that all team members can use it to its full potential.

- Education planners should come up with a strategy for conversion and which conversion method to be adopted.

To school administrators:

- Define specific goals and objectives for technology integration that is align with state and develop an integration plan which involve stakeholders, teachers, and students.

- Ensure that these goals are measurable, realistic and relevant to the needs of both students and teachers.

- Evaluate current technological infrastructure of school, including hardware, software internet connectivity, and technical support.

- Consider the budgetary constraints and resource availability when assessing technology needs and select the most appropriate technology solution to address the needs.

- Adapt to their own reality by adopting solutions that can fit their context and make provision for technical support in their program and pedagogical support for teachers.

Monitoring and evaluation

To the Government of Cameroon (MINESEC): The strategic planners at the level secondary education of Cameroon should set up the following:

- Develop a detail plan for monitoring and evaluation for the whole school year.

- Implement a reliable data collection system for effective monitoring and evaluation in their system and make provision for a system of regular reporting on performances that will start from top to bottom.

- Develop mechanisms that will help track progress toward main objectives.

- Put mechanisms to make monitoring and evaluation continuous and ongoing process which could serve as lessons to be used for future planning and strategy development (source: European commission). Establish clear and measurable objectives for each strategic initiative

To school administrators:

- School administrators should define specific goals and key performance indicators that align with the school strategic plan, this will provide a clear framework for monitoring and evaluating progress.
- Make provision in their plan for regular meetings to review progress towards the established objectives and report to hierarchy on time.
- Collect relevant data and channel information to the right quarters within specific dateline, this will help strategic planners make provisions for the future.

Perspectives for Further Studies

In this study, strategic planning in distance education and its influence on learning outcomes of students in some schools of the Mfoundi division, we adopted a quantitative approach. In order to get more valid results, it is advisable for future researchers to go in for a mixed approach which involved the combination of quantitative and qualitative data so as to get reliable results. The survey was conducted in one school, future researchers can conduct a comparative study of strategic planning in distance education and its influence on learning outcomes in a private and a public secondary school in Mfoundi division. Also this research on strategic planning in distance education and its influence on learning outcomes was conducted in Mfoundi division which is an urban area in other to obtain more reliable results, another researcher can conduct a comparative study between a public school in an urban area and one in a remote rural area on the same topic. Furthermore, in this study we adopted a sample size of 247 a future researcher can open the scopes by adopting a sample of 1000 in order to ensure generalization of the study.

Limitations and Constraints

In this study, accessibility of participants was not easy, we needed to go to the school several times in order to finalize the survey. Also we were faced with the problem of documentation, access to information about distance education and strategic planning was not an easy task. To assess administrative bottlenecks was also challenging. Return rate of questionnaire was a constraint, out of 278 questionnaires distributed, we only succeeded to collect 247. It was not easy to put together the necessary finances for this work as we had to move from one angle to another and also pay for some access to information. Printing of questionnaires also cost us a

huge amount of money. In fact, the whole process from the beginning to the end requires money which is not easily obtained these days.

CONCLUSION

This study, Strategic Planning in Distance Education and its influence on learning outcomes of students in some secondary schools in the Mfoundi division, is a results of two years' program at the faculty of science of education in the department of management of education and the specialty of educational planning and information system. This work is divided into five chapters. In chapter one we have the introduction where we discuss on the background of study, in which we find the contextual, conceptual, historical and theorical background of study, we also have the statement of problem where we elaborate on the research objective, research question and research hypothesis. Furthermore, we also have significance of study, scope of study and the definition of terms. Next to this is chapter two, literature review of the study. It begins with conceptual review of the study, followed by empirical review of related literature and theoritical review of literature, where we presented the implication and limitation to present study. Our chapter three is entitled the methodology of research. Here we make mention of the research type, research design, area of study, population of study, targeted population, sampling techniques, source of data, data collection instruments, description of the instruments of data collection, validity of the data collection instruments, reliability of the data collection instrument, data analysis techniques, ethical consideration and identification of variables. Our chapter four deals with data analysis, presentation of results and interpretation of results. Our work finally ends with chapter five in which we had discussion of results of findings,suggestions, perspective for further study and limitations or constraints.

In this study, the researcher opted for a survey research, since the researcher wishes to examine the impact of strategic planning in distance education in enhancing the learning outcomes of students in secondary schools in Mfoundi division. A deductive research design was adopted in this study since the researcher intended to move from hypotheses to draw conclusions. The study is conducted precisely in Government Bilingual High School Ekounou which is found in yaounde IV sub-division, one of the 7 sub-division that makes up the Mfoundi division. Mfoundi division is one of the 10 divisions of the Centre region which is the Political capital of Cameroon, Yaounde. The population of study comprises of all the person resource in G.B.H.S Ekounou. This involves the principals, the staff, the teachers and the students of the school mentioned above which constituted our case study. The present study targeted all the teachers

and students of the school which constituted our case study. The accessible population were all the participants who were on the field at the time of data collection and these were teachers and students. In the case of the present study, a total of 278 participants were sampled for the study, comprising of the teachers and students selected from Selected secondary schools in Mfoundi Division which constituted the case study. In all, a total of 97 teachers, and 181 students, both males and females, were retained for this study. In each category of the participants, male and female were all considered. The researcher opted for the random sampling techniques as the technique for the selection of the participants, more precisely the simple random technique. In the study data was collected from both the primary and secondary sources. Primary data was obtained from the participant`s responses to a self-completed questionnaire which was administered to them throw the direct delivery mood, while secondary data was obtained from books, articles, journals, magazines, thesis, master`s dissertations, newspapers, laws, degrees, web sites etc. With the objective of the present study being to examine the impact of the strategic planning in distance education on the learning outcomes of learners, and considering the fact that the research design is basically the deductive research design, the researcher opted for a questionnaire as instruments of data collection in order to facilitate the attainment of the required number of the participants so as to ensure generalisation. In bit to ensure the generalisation of the results at the end of the study, the researcher made sure that the variable explores in the questionnaire were actually the variables of the study and the instrument of data collection was effectively administered to the rightful population for which the instruments were designed. To test the reliability of the data collection instrument, a pilot study was conducted on a smaller portion of the population having the same characteristics as the sample population of the study. A quantitative data analysis techniques was used to analyse the data. The researcher in corroboration with Fouka and Mantzorou (2011), ensured the respect of the participants and avoided any situation whereby the participants might feel oblige to participate in the study. In the present study, we have the independent and the dependent variables. The independent variable is the Strategic planning in Distance Education which is used to explain the changes in Learning Outcomes of students (dependent variable).

The results obtained from the field work on the variables needs assessment, provision of digital resources, technology integration and monitoring and evaluation, carried out in G.B.H.S Ekounou validate the hypothesis. The study concludes that needs assessment, provision of digital

resources, technology integration and monitoring and evaluation, significantly influences learning outcomes of students in some secondary schools in Mfoundi division. This implies Strategic planning in distance education has a statistically significant on learning outcomes of students in some secondary schools in the Mfoundi division.

Garrett and Weiner (1999) in a study found out that regardless of the details, effective distance pedagogy is more the result of the preparation or planning than innovation. This entails that distance education requires innovation for it to be effective but its effectiveness much more depends on the ability of governments, individuals, stakeholders to effectively plan ahead of time. In line with Garrett and Weiner (1999), the following suggestions could be made to the Ministry of Secondary Education and school administrators:

The Ministry of Secondary Education should include needs assessment, provision of digital resources, technology integration and monitoring and control at all levels of planning for distance education, especially at the strategic level, since it is at this level that the main objective and vision of secondary education is defined.

Develop a detail plan for needs assessment, provision of digital resources, technology integration and monitoring and evaluation for the school year, at the level of strategic and tertiary planning.

Identify current gaps and challenges in the government's digital infrastructure and understand requirements of different structures, means of delivery, budget involved and suitable method of monitoring and evaluation, before embarking on any strategic planning for distance education.

Study the realities of our country, the gap between the urban and remote areas and solution that are flexible, before embarking on any strategic planning for distance education.

In this study, strategic planning in distance education and its influence on learning outcomes of students in some secondary schools of the Mfoundi division, we adopted a quantitative approach. In order to get more valid results, it is advisable for future researchers to go in for a mixed approach which involved the combination of quantitative and qualitative data so as to get reliable results. Also this study on strategic planning in distance education and its influence on learning outcomes was conducted in Mfoundi division which is an urban area, in order to obtain more reliable results, another researcher can conduct a comparative study between a public school in an urban area and one in a remote rural area on the same topic.

This study, strategic planning in distance education and its influence on learning outcomes of students in some secondary schools in the Mfoundi division, was a success, though we faced challenges such accessibility of participants, return rate of questionnaires and difficulties in assessing information and not forgetting one of the important instrument of the study finances.

REFERENCES

Adam S (2004). Using learning outcomes – a consideration of the nature, role, application and implications for Europeans education of employability earning outcomes at local, national and international levels, *Scottish Executive*. *http://www.scotland.gov.uk/library5/lifelong/tehea-00.asp*

Adamu. J. N (2020). An analysis of secondary education in Nigeria: A need for rethinking in philosophical perspective, *BSU/Journal of Educational Management,* 2(1).

ALEMNGE. F. L. (2018). Distance Education in Cameroon: Evolution and Challenges *Scholars Journal of Arts, Humanities and Social Sciences, 6(11) 2053-2058*

Ali, S., Muhammad, A.U., & Muhammad, B. (2021). Research investigating individual device preference and e-learning quality perception: can a one-solution-fits-all-e-learning solution work? *Heliyon, 7(2):* e07343.

Allen, N.H. (2010). *Education for All: Access? Equity? Quality?* Presentation for the Standing Conference of Presidents (SCOP) Policy Forum held at Pretoria, South Africa.

Amstrong, J.S. (1982). The value of formal planning for strategic decisions: review of empirical research. *Strategic management journal, 3(3):* 197-211.

Anderson, B., & Simpson, M. (2012). History and heritage in distance education. *Journal of open, flexible and distance learning, 16(2).*

Ansoff, I. H. (1988). *The new corporate strategy*. New York: John Wiley & Sons.

Anthony, W. P. (1985). *Practical strategic planning*. Westport, CT: Quorum.

Armed Forces Staff College (1997). *The joint staff officer's guide (AFSC Pub 1).* Washington, DC: Government Printing Office.

Atkins, D.E., Brown, J.S., and Hammond, A.L. (2007). *A Review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities*. Retrieved on 25 January 2024 from http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf

Barone, Carole A., & Hagner, Paul R. (2001). *Assessing conditions for campus transformation. In Barone, Carole A., & Hagner, Paul R. (Eds.). Technology-enhanced teaching and learning: Leading and supporting the transformation on your campus* (pp. 93- 106). San Francisco: Jossey-Bass.

Bary, B. W. (1998). A beginner's guide to strategic planning. *The Futurist*, 32(3): 33-36.

Bean, W. (1993). *Strategic planning that makes things happen.* Amherst, MA: HRD Press.

Bloom, B.S. (1956). *Taxonomy of educational objectives: The classification of educational goals.* LONGMANS, GREEN and CO LTD.

Boar, B.H. (1993). *The art of strategic planning for information technology*, New York: John Wiley & Sons.

Bozkurt, A. (2019*). From distance education to open and distance learning: a holistic evaluation of history, definitions and theories.* In S. Sisman-Ugur, & G. Kurubacak (Eds.), Handbook of research on learning in the age of transhumanism (pp. 252-273). Hershey, PA: IGI Global.

Bracker, J.S., et al. (1988). Planning and financial performance among small firms in a growth industry. *Strategic management journal.*

Buselic, M. (2012). Distance learning – concepts and contributions. *Oeconomica Jadertina, 2(1).* https://doi.org/10.15291/oec.209

Cohen, L., Manion, L., & Morrison, K. (2010). *Research method in Education (6th Ed.).* New York: Routledge.

Cook, B. (1990). *Strategic planning for America's schools*. Arlington, VA: American Association of School Administrators.

Cope, R. G. (1981). *Strategic planning, management and decision making. AAHE-ERIC/Higher education research report No. 9.* Washington D.C: American Association of Higher Education.

Covey, S. R. (1992). *Principle-centered leadership*. New York: Fireside

Creswell, J.W. & Clark, V. L. P. (2007). *Designing and conducting mixed methods research.* Thousand Oaks: Sage Publications.

D'Amico, J. J. (1989). Strategic planning for educational reform and improvement. *Planning and Changing. 20.* 237-251.

Daniel, J. (2010). The Commonwealth of Learning: How a Small Agency Achieves Development Impact. Digital learning resources, and learning motivation on digital native learning outcomes in Smanz Panian. *Advanced Economics, Business and management Research,* 124.

Drucker, F. (1993). *The rise of the knowledge society*. Wilson Quarterly.

Durak, H. Y., & Saritepeci, M. (2017). Investigating the effect of technology use in education on classroom management within the scope of the FATİH project. *Cukurova University Faculty of Education Journal, 46(2),* 441–457. https://doi-org.ezproxy.bethel.edu/10.14812/cuefd.303511

Enhassi, A.S., Mohamed, & El-Karriri. (2010). Factors affecting the Bid/No Bid decision in the Palestinian construction industry. *Journal of Finance Management Prop Construct, 15*(2).

Fouda, M.N., Virginie, B. N., & Zobo, E.P. (2013). Un profil de compétences pour les professeurs d'informatique de l'enseignement secondaire camerounaise, *International review of education, 59(2):* 177-196.

Fouka, G., & Marainna, M. (2011). What are the major ethical issues in conducting research? Is there a conflict between the research ethics and the nature of nursing? *Health science journal,* 5(1): 3-14.

Garrett, Larry Neal, & Weiner, Barbara J. (1999). Keys to success in delivering distance learning on the Internet. *Distance Education Report, 3(4),* 6-7.

Gilbert, N. (2008). *Researching social life (3rd ed.).* London: Sage.

Glaser, B. G & Strauss, A. (1967). *The discovery of grounded theory.* Chicago: Aldine.

Going Global (2012): *The Shape of Things to Come: Higher Education Global Trends and Emerging Opportunities to 2020.* Retrieved on 25 January 2024 from https://www.britishcouncil.org/sites/default/files/the_shape_of_things_to_come_-_higher_education_global_trends_and_emerging_opportunities_to_2020.pdPresentation for the Canadian International Development Agency, Ottawa, ON, Canada.

Guillemin, M. & Gillan, L. (2008). *Ethics, reflexivity and ethically important moments in research. in A. Bryman (ed). Qualitative research 2: volume 3 - Issues of representation and reflexivity.* London: Sage.

Gunawardena, C. N., & McIsaac, M.S. (2004). Distance education. In D. H. Jonassen, *Handbook of Research in Educational Communications and Technology* (2nd ed ed., pp. 355-395). Mahwah, NJ: Lawrence Erlbaum Associates.

Gunta, K. (2013). Theoretical Background for Learning Outcomes Based Approach to Vocational education, *International Journal for Cross-Disciplinary Subject in Education, 3(3).*

Hache, D. (n.d). Strategic Planning of Distance Education in the Age of Teleinformatics.

Hanley, Gerard L. (2001). Designing and delivering instructional technology: A team approach In Barone, Carole A., & Hagner, Paul R. (Eds.). Technology-enhanced teaching and learning: Leading and supporting the transformation on your campus (pp. 57-64). San Francisco: Jossey-Bass.

Hauer, J., & Quill. (2011). Educational needs assessment, development of learning objectives and choosing a teaching approach. *Journal of Palliative Medicine, 14(14).*

Herman, J. J. (1990). Getting results: Is bona fide strategic planning more effective? *Educational Planning. 8 (3),* 36-40.

Hershkowitz, M. (1976). Critical issues in educational needs assessment, *Educational planning, 3(2):* 6-15.

Holmberg, B. (1986). *Growth and structure of distance education, (3rd ed.).* London:Croom Helm.

Hunt, C. M., et al. (1997). *Strategic planning for private higher education.* New York: Haworth.

Idrus, A.B. (2001). *Development procedure and tool for evaluating and selecting concrete floor systems for concrete frame buildings. PhD Thesis.* London: Imperial College of Science Technology and Medicine.

Jabali, M. & Walker, C. (2021). An exploratory cross-sectional study: FlipQuiz as a digital tool for learning English vocabulary in language classroom. *International Journal of Technology in Education (IJTE), 4(3)*, 516-526. https://doi.org/10.46328/ijte.149

Kannan (2008). Structural contingency theory.

Karsenti, T., Collin, S., & Harper-Merrete, T. (2012). *Pedagogical integration of ICT: Success and challenges from 100+ African schools*. Ottawa, ON: IDRC.

Kaufman, R. & Herman, J. (1991a). *Strategic planning and education*. Lancaster, PA: Technomic Publishing.

Kaufman, R. (1992). *Strategic planning plus: An organizational guide (revised ed.).* Newbury Park, CA: Sage

Kaufman, R. (1995). *Mapping educational success (revised ed.).* Newbury Park, CA: Corwin Press.

Kaufman, R., Watkins, R., & Guerra, I. (2001). The future of distance learning: Defining and sustaining useful results. *Educational Technology, 41(May-June),* 19-26.

Keegan, D. (1988). Problems in defining the field of distance education. *The American Journal of Distance Education,* 2(2), 4-11.

Kerlinger, F. N. (1986). *Foundations of behavioral research.* Orlando: Holt, Rinehart and Winston Publishers.

Kilfoil, (2003). *Strategic planning in distance education*. Distance education and training council, Washington DC.

Kinyanjui, P. (1998). *Distance and Open Learning in Africa: What Works or Does Not Work.* Paper presented at the EDI/World Bank workshop on Teacher Education Through Distance Learning, Addis Ababa, Ethiopia.

Lin, Chen & Liu. (2016). *A study on the effects of digital learning on learning motivation and learning outcome,* EURASIA.

Lin, R.L., & Miller, J. (2005). *Measurement and assessment in teaching (9ᵗʰ ed.).* Upper Saddle River, NJ: Pearson Education Inc.

Lindstrom, G., Pers, C., Rosberg, J., Stromqvist, J., & Arheimer, B. (2010). Development and testing of the HYPE (Hydrological predictions for the environment) water quality model for different spatial scales. *Hydrology research, 41*(3-4): 295-319. doi:https://doi.org/10.2166/nh.2010.007

Marna, J.E., Oknaryyana, Siwp, M.K., & Yani S.R. (2019). The effect of social media, digital learning resources and learning motivation on digital native learning outcomes in SMAN 2 Painan. *Advances in economics, business and management research, 124.*

Martin, (2022). The impact of technology integration on secondary school student learning, *Spark repository.*

Mbabngong, F & Yaro, L. (2013). Course content organization in distance learning programs in Cameroon higher education institutions. *International Journal of Educational Research* 6, 77-91.

Mbangwana, (2008). *Introduction of ICT in schools and classrooms in Cameroon.* In K. Toure, TM Tchombe, & T. Karsenti (Eds.) "ICT and changing mindsets in education". ERNWCA/ROCARE.

McCune, S. D. (1986). *Guide to strategic planning for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation: Revised and expanded from qualitative research and case study applications in education.* San Francisco: Jossey-Bass Publishers.

Ministry of Basic Education, (2021), *school map literacy data analysis report*. MINEDUB.

Mintzberg, H. (1994). *The fall and rise of strategic planning*. Harvard Business Review.

Mollov, M. (2019). Google classroom - an innovative approach to a more efficient organization of learning. *Mathematics & Informatics, 62(5),* 509–516.

Moore, G.C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information systems research, 2:* 173-191.

Morrison, J. L., Renfro, W. L., & Boucher, W. I. (1984). *Futures research and the strategic planning process: Implications for long-range planning in higher education.* ASHE-ERIC Higher Education Research Report No. 9. Washington D.C.: Association for the Study of Higher Education.

Moscow, M. H. (1981). *Strategic planning in business and government*. New York: Committee for Economic Development.

Nachmias, Frankfort, C. & Nachmias, D. (1996). *Research methods in the social sciences.* (éd. 5th edition). London: Arnold.

National institute of statistic – Cameroon. (2022). *World population day*. National institute of statistic – Cameroon.

Ndongfack, M. N. (2016). *Baseline Study on the Current State of Open and Distance learning in Cameroon.* COMMONWEALTH of LEARNING.

Ndongfack, M.N. (2010). *ICT integration in Cameroon primary schools: case study of government primary practicing school Angele, South Region*. Kuala Lumpur: Open University of Malaysia.

Ndongfack, M.N. (2015). *Mastery of active and shared learning processes for techno-pedagogy (MASLEPT): a model for teacher professional development on technology integration.* Creative education.

Nganji, J., Kwemain, R., & Taku, C. (2010). Closing the digital gap in Cameroonian secondary schools through the CIAC project. *International journal of education and development using information and communication technology (IJEDICT), 6(2)*: 106-114.

Nji, A. (2008). The Distance Education project at the University of Dschang, Cameroon: challenges and opportunities. *https//www.researchgate.net.*

Nsolly, N, B. & Ngo, M.M.C. (2016). Integration of ICTs into the curriculum of Cameroon primary and secondary schools: A review of current status, barriers and proposed strategies for effective integration. *International journal of education and development using information and communication technology (IJEDICT), 12(1):* 89-106.

Offir, Baruch (2000). Map for decision making in operating distance learning systems: Research results. *Educational Media International, 37(1),* 9-15.

Onen. (2020). Differentiating between population and target population in research studies. *International Journal of Medical Science and Clinical Research Studies.*

Radhika. K (2019). Meaning and significant of secondary education, *International Journal of Law, Management and Social Science,* 3(1).

Republic of Cameroon (2013). *Cameroon Education and Training Sector Strategy Paper.* Published by the Ministry of Economy, Planning and Regional Development.

Rogers, E.M. (1983). *Diffusion of innovations, 3ʳᵈ edition*. London: Collier Macmillan Publishers.

Rogers, E.M. (2003). *Diffusion of innovations, 5th edition.* Business and Economics.

Ross, (2020). Technology infusion in k-12 classrooms: A retrospective look at three decades of challenges and advancements in research and practice, *Educational research technology & development.*

Ross, K. N. (2005). *Sample design for educational survey research.* (K. N. In Ross, Éd.) Paris: IIEP - UNESCO.

Rumble, G. (1986). *The planning and management of distance education*. London: Croom Helm.

Saykili, A. (2018), Distance Education: Definitions, generations, key concepts and future directions. *International Journal of Contemporary Educational Research,* 5 (1), 2-17.

Shaibou, A. H. (2015). *Science Teacher's Attitudes towards the Use of Information and Communication Technology in Secondary Schools in Cameroon.* International Journal of Social Science and Humanities Research ISSN 2348-3164 (online) 2 (3), 573-585.

Shaibou, A. H. (2017). Teacher's use of Information and Communications Technology in Education: Cameroon Secondary Schools Perspective, *The Turkish Online Journal of Education Technology*, 3(16).

Soylu, A. (2008). Structural contingency theory in, population-ecology theory out. *The journal of human resource and adult learning, 4(1).*

Sparks, D. (1993). 13 tips for managing change in schools. *Education Digest. 58 (6)*, 13-15.

Staff writers. (2021). Synchronous learning vs asynchronous learning: what is the difference? *Best colleges.*

Ukah, J. (2020). Towards the acquisition of digital instructional resources for effective teaching in the 21st century classroom in public secondary schools in Cross River State. *International Journal of Curriculum and Instruction, 12(1),* 339–350.

University of Maryland (2001). Models of distance education. Retrieved August 12, 2002, from the Institute for Distance Education, University of Maryland web site: www.umuc.edu/ide/modlmenu.html

University of Waterloo. (2020). *Synchronous and asynchronous online learning: Keep learning,* Strategies for remote learning.

Zibran, M. F. (2007). *Chi-Square test of independence.* Canada: Department of computer science, university of Calgary, Alberta.

APPENDIX

Research Questionnaire

    Dear respondents,

I am a Master's student in the University of Yaounde I, Faculty of Science of Education and in the department of Management of Education. I am conducting a study on the following topic "**Strategic planning in distance education and its influence on learning outcomes of students in secondary schools in Younde".** The objective of this study is to examine the impact of strategic planning in distance education on the learning outcomes of learners in secondary schools in Cameroon. You are hereby guarantee that the information provided will be handled diligently and will remain confidential with the researcher. You are also reminded that your identity will not be disclose. You are free to participate or not in the survey. Dear respondents kindly tick the box which correspond to your level of agreement or disagreement with the statement. **Instructions: SA = Strongly Agree, A = Agree, D = Disagree and SD = Strongly Disagree.**

Needs Assessment

CZ	No	Item	SA	A	D	SD
	1	Relevant stakeholders are involved and engaged in identifying of needs and priorities.				
	2	The school conduct demographic analysis to understand the characteristics and needs of the target population.				
	3	The school conduct trends analysis to anticipate future needs and challenges.				
	4	The school assesses the availability of resources to address the needs.				
	5	The school conduct gap analysis which involves comparing the current state versus the desired state to identify gaps in resources, services or infrastructures.				

Provision of digital resources

CZ	No	Item	SA	A	D	SD
	6	Your school possesses well equip distance learning infrastructures				
	7	Most of the teachers in the school are computer literate.				
	8	Your school have a multimedia hall equip with latest generation computers.				
	9	Electricity are provided on daily basis in your school.				
	10	Your school possess sufficient finances to ensure the effectiveness of distance learning.				

Technology integration

CZ	No	Item	SA	A	D	SD
	11	Teachers uses the blended teaching approach in the classrooms.				
	12	Students are authorised to use smart phones in class when necessary.				
	13	Teachers frequently project their lessons in classrooms with the use of projectors.				
	14	Classrooms have wireless internet which facilitates technology integration.				
	15	Lessons are provided in both audio-visuals and videocassettes.				

Monitoring and evaluation

CZ	No	Item	SA	A	D	SD
	16	Your school conduct regular classroom check to ensure that digital tools are used in class				
	17	Students are sometimes evaluated online through google classroom or				

CZ	No	Item				
		any other means.				
	18	The school organises workshops and seminars to track the progress of teachers.				
	19	The school constantly assesses problems faced by teachers in implementing ICT in class				
	20	There is a supervisory team which look after the integration of distance learning in class				

Learning outcome

CZ	No	Item	SA	A	D	SD
	21	Use of distance education helps student to develop problem solving and critical thinking skills.				
	22	Most students are computer literate thanks to the integration of ICT.				
	23	Students are capable of participating in knowledge construction thanks to ICT in class.				
	24	Most students has become creative and innovative by generating new ideas and solutions				
	25	The use of distance education enhance skills development in students				

Socio-demographic information
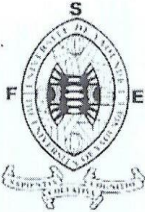
26. Gender: Male ☐   Female ☐

27. Age: 10-20years ☐   21-30 years ☐   31-40 years ☐   41-50 years ☐   50 and above ☐

28. Status: Teacher ☐   Student ☐   Staff ☐

29. Level of education: FSLC ☐   O/L ☐   A/L ☐   Degree ☐   Others ☐

Thanks for your collaboration!!!!!!

Authorization

Le Doyen
The Dean

N° ____ΛΛЦ____ /24/UYI/FSE/CD

AUTORISATION DE RECHERCHE

Je soussigné, **Professeur BELA Cyrille Bienvenu**, Doyen de la Faculté des Sciences de l'Education de l'Université de Yaoundé I, certifie que l'étudiante **MIJANG Ernestine Emma NDIMAH**, Matricule **22W3335**, est inscrite en Master II à la Faculté des Sciences de l'Education, Département : *CURRICULA ET EVALUATION*, Spécialité : *GESTION DES SYSTEMES D'INFORMATION ET PLANIFICATION DE L'EDUCATION*.

L'intéressée doit effectuer des travaux de recherche en vue de la préparation de son diplôme de Master. Elle travaille sous la direction du **Pr. NDI Julius NSAMI.** Son sujet est intitulé: « *Strategic Planning in Distance Education and its Influence on Learning Outcomes* ».

Je vous saurai gré de bien vouloir la recevoir et mettre à sa disposition toutes les informations susceptibles de l'aider à conduire ses travaux de recherches.

En foi de quoi, cette attestation de recherche lui est délivrée pour servir et valoir ce que de droit.

Fait à Yaoundé le 1 9 FEB 2024

Pour le Doyen

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