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DEPARTMENT OF CURRICULUM AND EVALUATION

ASSESSING LECTURER'S READINESS FOR DIGITAL PEDAGOGY IN CAMEROON STATES UNIVERSITIES" A CASE STUDY OF UNIVERSITY OF YAOUNDE I.

A Dissertation submitted in Partial Fulfilment of the Requirements for the Award of a Masters' Degree in curriculum and evaluation

Option: Curriculum Developer and Evaluator

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Academic year 2021/2022

DECLARATION

I hereby declare that this dissertation titled "**Assessing lecturers' Readiness for Digital Pedagogy in Cameroon states universities a case study of university of Yaounde 1**" has been written by TADOUM TALLA Christian (19P3884) and it is a record of my own research efforts. This dissertation has not been submitted previously in whole or in part to qualify for any other academic or professional award. All borrowed ideas have been duly referenced using the APA 7 referencing style.

Signature_____ Date:_____

TADOUM TALLA Christian (19P3884)

CERTIFICATION

I certify that this work was carried out by TADOUM TALLA Christian (Matriculation Number: 19P3884) under my supervision, in partial fulfilment of the requirements for the award of a Master's degree in Curriculum development and evaluation at the Faculty of Education, University of Yaounde 1. It is therefore approved for its contribution to scientific knowledge and library presentation.

Signature_____ Date_____

Dr NGNOULAYE JANVIER

Senior Lecturer (CC) at ENS

DEDICATION

To my lovely Mummy, Madam NEMBOT GISELE

ACKNOWLEDGEMENTS

I want to sincerely extend my profound gratitude to the following persons for their immeasurable efforts, encouragement and pieces of advice that have driven me to the realization of this project.

I would like to specially thank my supervisor, Dr NGNOULAYE Janvier, for his timeless contributions, counsels and guidance made this research work possible. He encouraged and inspired me through each section of the work. I am indebted to you Sir.

I am especially grateful to Lecturers of the Faculty of Education, University of Yaounde 1, who played significant role in shaping this work; I Specifically thank Dr Egbe Martha, Prof. Maureen Ebanga Tanyi, Dr Shaibou H., Dr Wirngo Ernestine, Dr Ndjonmbog Joseph, Dr Chaffi Ivan. A special thanks goes to all the staffs at the Directorate of Academic Affairs and Cooperation (DAAC) for their infinite support specially to the director Prof. Toney Alphonse, Mr Ewane Michael Metuge, Mrs Tcheuntcheu Marie-Jeanne and Mr Ebolekem Martin for their effort at assuring the success of this work.

I wish to also say thanks to all my classmate and friend for their support toward the completion of this work. I specially want to say thanks to Martha, Emmanuel, Ange and Giresse for their significant contribution to my work

I owe a very special appreciation to my family who believed in me and supported me morally, financially and spiritually. A special thanks goes to Pastor Innocent, Mummy Gisel, Mr Kawo Talla Robenson, Mr Mbou Nicolas, Mr Kamdem Ledoux, Mrs. Kamdem chancelline, Mrs Mbou Francine just to name few. You supported me morally, socially and financially in making my dream a reality. Our Lord God will richly bless and reward you all.

Finally, I give honour to my God for giving me divine health and wisdom that made it possible for the completion of this work.

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LIST OF ABBREVIATIONS

CUTI: University Center for Information and technology

CRTV: Cameroon Radio Television

E-LEARNING: Electronic learning

HTTC: Higher Teacher Training College

ENSPY: National Advance School of Engineering

FALSH: Faculty of Arts, Letters and Social Sciences

FS: Faculty of Sciences

FSE: Faculty of Education

FMBS: Faculty of Medicine and Biomedical Sciences

ICT: Information and Communication technology

MINESUP: Ministry of Higher Education

OECD: Organization for Economic Co-operation and Development

PBL: Project and Inquiry Based learning

WWW: World Wide Web

ABSTRACT

Research findings over the past decades have provided some evidences as to how the rapid changes in technology have positively affected education (Canadian Center of Science and Education, 2013). It is important for teachers to understand the role of technology in the learning process and the principal behind integrating it in a way that promotes learning without being a distraction. The researcher carried out this study to assess lecturers' readiness for digital pedagogy at the University of Yaoundé 1. The scope of the research was; to assess competence readiness of lecturers, to evaluate technological readiness of lecturers and to assess motivation readiness of lecturers. This study was guided by the following theories namely: Conscious competence theory of learning a new skill, Technology Acceptance Model, Technology Readiness Index Model (TRI) and Self-determination Theory (SDT). Questionnaires were administered to lecturers from the University of Yaoundé 1. A sample size of 147 lecturers was used. Data was analyzed using SPSS Version 21 software where techniques for Descriptive statistics and inferential statistics (simple linear Regression Analysis) were employed. The results revealed that 80% of lecturers had the required competence to implement digital pedagogy in our campuses, but needed some improvement in their skills. The mean score for competence readiness was greater than the expected readiness level [Mc=3.54>Melr=3.4]. Also the results reveal that 70% of lecturers did not have the required technology skills to implement digital pedagogy and the mean score for technology readiness was below the expected readiness level [Mtr=2.55<Melr=3.4]. Finally the results revealed that 75% of lecturers were motivated to effectively implement digital pedagogy and the mean score for motivation readiness was greater than the expected readiness level [Mmr=3.59>Melr=3.4]. The simple linear Regression analysis was used to explained that, even though the lecturers were competent and motivated to implement digital pedagogy, their competence and motivation readiness did not have a significant influence on digital pedagogy implementation as their P-values were greater than 0.05. On the contrary the findings revealed that the majority of the lecturers did not have access to the required technology to effectively implement digital pedagogy and it had a significant influence on digital pedagogy readiness as the P-value was less than 0.05 Conclusively technology readiness had the greatest influence on digital pedagogy readiness as compare to competence and motivation.

Key words: Digital pedagogy, Competence Readiness, Technology Readiness, Motivation.

RESUME

Les résultats de la recherche au cours des dernières décennies ont fourni des preuves de la façon dont les changements rapides de la technologie ont eu une influence positive sur l'éducation (Centre canadien des sciences et de l'éducation, 2013). Il est important que les enseignants comprennent le rôle de la technologie dans le processus d'apprentissage et le principe derrière son intégration d'une manière qui favorise l'apprentissage sans être une distraction. Le chercheur a réalisé cette étude pour évaluer la préparation des enseignants à la pédagogie numérique à l'Université de Yaoundé 1. La portée de la recherche était; évaluer l'état de préparation des compétences des enseignants, évaluer l'état de préparation technologique des enseignants et évaluer l'état de préparation de la motivation des enseignants. Cette étude a été guidée par les théories suivantes, à savoir : la théorie de la compétence consciente pour l'apprentissage d'une nouvelle compétence, le modèle d'acceptation de la technologie, le modèle d'indice de maturité technologique (TRI) et la théorie de l'autodétermination (SDT). Des questionnaires ont été administrés aux enseignants de l'Université de Yaoundé 1. Un échantillon de 147 enseignants a été utilisé. Les données ont été analysées à l'aide du logiciel SPSS version 21 où des techniques de statistiques descriptives et de statistiques inférentielles (analyse de régression linéaire simple) ont été employées. Les résultats ont révélé que 80 % des enseignants avaient les compétences requises pour mettre en œuvre la pédagogie numérique dans nos campus, mais avaient besoin d'une amélioration de leurs compétences. Le score moyen de préparation à la compétence était supérieur au niveau de préparation attendu [Mc = 3,54> Melr = 3,4]. De plus, les résultats révèlent que 70 % des enseignants n'avaient pas les compétences technologiques requises pour mettre en œuvre la pédagogie numérique et que le score moyen de préparation à la technologie était inférieur au niveau de préparation attendu [Mtr=2,55<Melr=3,4]. Enfin, les résultats ont révélé que 75 % des enseignants étaient motivés pour mettre en œuvre efficacement la pédagogie numérique et que le score moyen de préparation à la motivation était supérieur au niveau de préparation attendu [Mmr=3,59>Melr=3,4]. L'analyse de régression linéaire simple a été utilisée pour expliquer que, même si les enseignants étaient compétents et motivés pour mettre en œuvre la pédagogie numérique, leur niveau de compétence et de motivation n'avait pas d'influence significative sur la mise en œuvre de la pédagogie numérique car leurs valeurs P étaient supérieures à 0,05. Au contraire, les résultats ont révélé que la majorité des enseignants n'avaient pas accès à la technologie requise pour mettre en œuvre efficacement la pédagogie numérique et cela avait une influence significative sur la préparation à la pédagogie numérique car la valeur P était inférieure à 0,05. influence sur la préparation à la pédagogie numérique par rapport à la compétence et à la motivation.

Mots clés : Pédagogie numérique, Préparation aux compétences, Préparation à la technologie, Motivation

CHAPTER ONE

GENERAL INTRODUCTION

Education system throughout the world now is in fact, changing. With the proliferation of technology that offers robust opportunities to educational fields, the learning environments are now becoming more innovative, interactive and effective. The role of technology in education is undeniably significant. Research findings over the past decades have provided some evidences as to how the rapid changes in technology have positively affected education (Canadian Center of Science and Education, 2013), Therefor any education system in order to survive this rapid change of the 21st century is required to create an environment that will help them to adapt to the changes and help them to improve the quality of education and also for effective pedagogic practices within the 21st century, teachers are required to be much versed with the 21st century challenges that actually influences education today (Lawyer, 2021).

Lawyer (2021) in her book (pedagogic practices for the 21st century teachers) states out 3 important challenges faced by the 21st century pedagogic practices that need to be addressed namely: digital revolution and globalisation, knowledge economy and skill for jobs and finally equity and inclusion, but looking at digital revolution and globalisation, the majority of learners in this era are born and grown into a digital world which affect every aspect of their daily life. Therefore the role of digital technology and ICTs cannot longer be neglected and undermined in today's society. Teachers are therefore encouraged to find ways of integrating these technologies into teaching and learning processes because digital revolution is breaking geographical boundaries and creating access to learning facilities and institutions (Lawyer, 2021). Teachers need to understand that education is no longer limited to classroom only.

This chapter therefore presents the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, hypotheses of the study, Scope of the study, Justification of the study, Significance of the study, operational definition of terms and concepts.

1.1 BACKGROUNDS OF THE STUDY

According to Malik (2018) pedagogic practices of the 21st century should equip citizens of this era with a cosmopolitan outlook, cross-cultural understanding capable of working in

multicultural settings on group project and capacity of thinking creatively and critically due to the interconnected world in which we live in now where globalisation, information communication technology and knowledge explosion have shrunk the world into a global village. It is important to note that, today all students are digital native (Prensky, 2001), they've grown up with technology and that has woven into their lives, therefore there is a need to incorporate technology into education when developing school curriculum.

With the outburst of the technology mediated teaching and learning, teaching in the traditional sense has given way to electronic and, increasingly, digital media in the overall media landscape (Koskimaa, 2007) this has influenced teaching in our universities today. Students of the 21st generation enjoy independent learning, interactivity, and interaction with other (Haneen, 2017). They tend to use electronic media to, explore, brainstorm, debate, and make sense of their experiences. Students of the 21st century have different expectations about learning that Tapscott summarizes in eight shifts: 1) from linear to hypermedia learning, 2) from instruction to construction and discovery, 3) from teacher-centered to learner centered,4) from absorbing material to learning how to navigate and how to learn, 5) from school to lifelong learning, 6) from one-size-fits-all to customized learning, 7) from learning as torture to learning as fun, 8) from teacher as transmitter to teacher as facilitator (Haneen, 2017). Traditional learning strategies were developed and designed to meet the needs of an industrialized print-based society and we will be able see in our literature how education evolved throughout the years as a results of industrial revolution and technological revolution. The global economy depends on the quality of education delivered to students by the education systems that are responsible for preparing the students for the marketplace and helping them reach their full potentials. However, despite numerous efforts to improve educational standards, school systems around the world are struggling to meet the demands of 21st century learners and employers. The ubiquitousness of technology made people around the world become increasingly reliant on social networking technologies to connect, collaborate, learn, create, and work. It is surprising and a little disappointing to see that schools have done too little to catch up with this worldly shift towards exploiting technology. In order to prepare students for the increasingly competitive workplace, educational institutions are urged to rethink teaching and learning in ways that match the demands of the global market and the innovation economy (Haneen, 2017). Using technology as a catalyst, education has shifted from being a knowledge transfer model to an active learning process that is collaborative, self-directed, promotes students to explore and construct knowledge and

form the skills that are needed in the innovation economy. Learners in developed and developing countries are becoming more technologically savvy through using social networks such as YouTube and Facebook to communicate, post videos, blogs, and images, and collaborate and socialize anytime anywhere. There is an urgent need and a growing trend to incorporate technology is teaching.

1.1.1 **Historical background**

The evolution of Education has been largely influence by the two major factors in the world namely: the Industrial Revolution and the development of the World Wide Web. According to Mokyr (1999) "The Industrial Revolution1 refers to the period of industrialization characterized by profound technological change sparked by such inventions as the steam engine and mechanical spinning, their diffusion, adaptation, and improvement, the rise of the factory system, and accompanying social changes in households and markets." The first industrial revolution (Industry 1.0) was marked by the mechanization of industries with short scale production based on the use of oil and steam engines as the main source of energy and following that was the second industrial revolution (industry 2.0)which was structured on the organization of work and the use of electricity to promote mass production. The third industrial revolution (industry 3.0) was focused on the integration of electronic components and technology in the industry which led to the automation of production tasks. In this era most activities were directed toward automation for massive and quality production of good and services. Presently we can observe how the third industrial revolution is leading to the development of intelligent industrial system as a result of permanent integration of advance technology such as Artificial intelligent, cloud computing, big data, Robotics and many more thereby favouring a progress to the fourth industrial revolution (industry 4.0). According to Schawb (2017) the fourth industrial revolution is characterized by the technological fusion of the boundary between the physical, biological and digital worlds in order to design intelligent cyber-physical systems.

Due to this change in the industrial revolution, it is imperative for a shift in the education system in other to meet-up with demand of this revolution. The directorate of the OECD in charge of Education and Skills, Andreas Schleicher commented in 2019 that "Education is no longer about teaching students something alone; it is more important to be teaching them to develop a reliable compass and the navigation tools to find their own way in a world that is increasingly complex, volatile and uncertain. Our imagination, awareness, knowledge, skills

and, most important, our common values, intellectual and moral maturity, and sense of responsibility is what will guide us for the world to become a better place." On the other hand we see how the World Wide Web has evolved greatly to influence education; according to (Salmon, 2019) the Web started off as transmissive (1.0), then social (2.0), and 3.0 (semantic). The big change from Web 1.0 to 2.0 was not the technology but in the way that it was used. Education is mapped onto the emergence and development of the Web and the revolutions known as 'Industrial' over the last 250 years (Salmon, 2019). The evolution of the world wide web and technological advancement have also encourage the adoption of several pedagogical approaches such as online training, flipped classroom, blended learning etc aimed at increasing the quality of education. The drastic and persistence change in technology has brought up the rethinking and transformation model of teaching and learning thereby encouraging a proper integration of technology into education in order to attain intelligent collaboration and coordination of physical and /or virtual actors involved in the service of education.

1.1.2 **Contextual background**

The Government of Cameroon through the Minister of Higher Education showed their interest in the implementation of digital Pedagogy by increasing the internet bandwidth from 263 to 9333 megabit per second in all the State Universities. According to Business in Cameroon News web page, (2020), On September 8, 2020, in Yaoundé, Cameroon's Minister of Higher Education (Minesup) Pr. Jacques Fame Ndongo, and Judith Yah Sunday Achidi (Managing Director of the state-owned telecom company Camtel), signed a framework agreement for the provision of bandwidth higher enough to interconnect state universities and the Congo-Cameroon Inter-State University of Sangmelima. According to information disclosed during the signing ceremony, the Internet connection offered by Camtel to public universities will increase from 263 to 9333 Megabits per second. The agreement also includes the establishment of digital development centers in these State Universities. The digital development centers will boost distance-learning, digitalization, collaborative networking, and secure connection between public and private universities in Cameroon. For the Minesup, this agreement is another step taken towards the "E-National Higher Education" project through which President of the Republic of Cameroon decided, in 2016, to donate laptops to 500,000 students in public and private universities in the country.

The University of Yaoundé I is Cameroon's pioneer university and, is supposed to be the leading university in the country. In matters of technological insertion and advancement this university has recorded significant strides, and though much is still to be done in the domain of ICT, the current report is quite good and forecasts a rich future (Teke, 2012). Teke (2012) in his work states that the university of Yaoundé 1 had the ambition to provide, foster and sustain new e-learning methodologies and techniques to improve teaching, learning and research of credibility and quality. The objectives are therefore to provide more learning materials to more students, provide programmes to different target groups than campus students only and to start a reform process of education by providing the means to change from transfer oriented concepts to study and learning concepts of education through the provision of e learning materials. From all the above discussion, it is obvious that both the Government and the University of Yaoundé 1 are willing to implement the digital pedagogy in our campuses.

The University of Yaoundé 1 through its multiple actions has shown its determination to implement digital pedagogy on campus to improve learning, we can see from the majors actions taken during the lockdown due the global pandemic of covid-19. University's rector Prof. Maurice Aurelien Sosso, said there was going to be a fundamental change in the way lessons were dished out to students (crtv.cm). He said there will be a shift from traditional classroom teaching to digital pedagogy. So he instructed University Centre for Information and Technology (CUTI) to create a platform where teachers were to upload their lessons online. Students and teachers of different departments will share a platform where they can share information electronically and have video conference lessons. Despite all these efforts it was not really effective as many student complained of lecturers not being available on the platform with many other complains alongside. So there is a necessity to carry out need assessment to assess the lecturer's readiness for digital pedagogy and also to develop a readiness assessment model the lecturers of the said university which is the focus of this research project

1.1.3 Theoretical background

Modern society, with an exponential and rapid scientific and technological advancement, has seen an exceptional rise in accessible knowledge and continuously changing and emerging technologies. The emergence of information and communication technology has ushered us into a wide range of opportunity for new forms of communication and knowledge formation

inside and outside of formal educational institutions. Previous ways of acquiring and gathering knowledge are likely to prove ineffective in these new contexts. In this new context knowledge is literally a set of connection between entities. In humans, this knowledge consists of connection between humans and their artefacts. Learning is the creation and removal of connections between the entities or adjustment of the strength of those connections. A learning theory is literally, a theory describing how these connections are created or adjusted (Downes, 2012). Most teachers in the school will be familiar with the main theories of learning, but because instructors in post-secondary education are hired primarily for their subject experience, or research or vocational skills, it is essential to introduce and discuss, if only briefly, these main theories. In practice, even without formal training or knowledge of different theories of learning, all teachers and instructors will approach teaching within one of these main theoretical approaches, whether or not they are aware of the educational jargon surrounding these approaches. Also, as online learning, technology-based teaching, and informal digital networks of learners have evolved, new theories of learning are emerging. With knowledge of alternative theoretical approaches, teachers and instructors are in a better position to make choices about how to approach their teaching in ways that will best fit the perceived needs of their students, within the very many different learning contexts that teachers and instructors face. This is particularly important when addressing many of the requirements of learners in a digital age. Furthermore, the choice or preference for one particular theoretical approach will have major implications for the way that technology is used to support teaching (Bates, 2016).

For the past decades behaviourism, Cognitivism and constructivism have been the three broad learning theories often utilized in the creation of instruction environments. These theories were however developed in a period when learning was not impacted technology. Over the last two decades technology has restructured how we live, how we communicate, and how we learn Siemen (2005). The emergence of a technology sensitive world requires a proper reorganisation and revision of traditional learning theories due to the fact that learning in the 21st century is shaped by access to the internet and digital devices (Lawyer, 2021). So in our present world, learning theories that have an impact on how teaching is conducted should reflect the society in which we live.

Siemen (2005) in his work connectivism; a learning theory for the digital age was able to state out the limitation of behaviourism, Cognitivism, and constructivism. He went further to say that the central tenet of most learning theories is that learning occurs inside a person.

Social constructive views, which hold that learning is a socially enacted process, promote the principality of individual in learning. So these theories do not address learning that occur outside of people (i.e. learning that is stored and manipulated by technology). They also fail to describe how learning happens with organisation.

In an attempt to denounce boundaries of behaviourism, Cognitivism and constructivism George Siemen and Stephen Downes developed a theory for digital age, called connectivism (betsy et al., 2013). According to betsy et al., 2013 their proposed learning theory has led to a debate over whether it is a learning theory or instructional theory or merely a pedagogical view. Connectivism is still being refined and developed, and it is currently highly controversial, with many critics (Bates, 2016). Theory takes into consideration trend in learning, the use of technology and networks, and diminishing the half-life of knowledge. It combines relevant element of many learning theories, social structures and technology to create a powerful theoretical construction for learning in the digital age (Lawyer, 2021).

With respect to our present study, which was to assess the lecturers' readiness for digital pedagogy; the researcher did not focused on the aforementioned theories to conduct this work. He rather focused on the following theories: Conscious competence theory of learning a new skill, Technology Acceptance Model, Technology Readiness Index Model (TRI) and Self-determination Theory (SDT) and these theories were discussed in detailed in the literature review.

1.2 Digital Pedagogy

The evolution of ICTs has led to new ways of learning and epistemological issues concerning how knowledge is generated, acquired and disseminated. It is therefore important for educators to understand the fact that knowledge creation goes beyond the borders of traditional system of education (Lawyer, 2021). The important role teachers are to play in the digital age is that of a lead learner. It is important for teachers to understand the role of technology in the learning process and the principal behind integrating it in a way that promotes learning without being a distraction. The transformative use of educational technology demands changes to pedagogy (Lawyer, 2021).

According to Charles (2013) digital pedagogy simply refers to the embedment into the art of teaching, computer driven digital technologies, which enrich learning, teaching, assessment and the whole curriculum. (Howell, 2012) Points out, research-based evidence suggests that an application of technology enables us to "learn differently and to engage in different types

of knowledge creation", so she defined digital Pedagogy as "the study of how to teach using digital technologies." Esther Wojcicki (2013), a pioneer in digital pedagogy presented an interesting list of the skills needed in the 21st century these are, "accessing and evaluating information, analyzing media, creating media products, applying technology effectively, be adaptable to change, managing time and goals, working independently and with other, become self-directed learners, guiding and leading others, managing projects and producing results". In order to prepare learners properly to meet up the needs of the 21st century, there is an urgent need to revamp the educational systems and design humanities courses that reflect the nature of the digital generation. (Sayegh, 2017) in his work states that there is a major gap or disconnection between educators who are referred to as 'digital immigrants' who were not born into a digital world and who are different from their students that are referred to by Prensky (2001) as "digital natives". Unlike their teachers, digital natives are wired to receive information really fast, and are used to parallel process and multitask, prefer graphics over text, and function best when networked (Prensky 2001). Not only digital immigrants have little appreciation for these new skills, but they also find it challenging to tailor their teaching methods to match the nature and habits of their students. These differences pose a challenge for most of the educators from all subject areas. Even though most teachers are using technology every day, but the types of technology they use might not be as up to date as their students, nor even their teaching requirements, need them to be, so Technological skills are not the defining factor for an effective digital pedagogy because Digital pedagogy is more about an attitude towards and aptitude with digital technologies. It is more about a willingness to use them in the classroom effectively and to understand how and why they should be used. It can also be observed that it is not only the expectations of students that need to be considered. Increasingly, parents, employers and the wider community expect the education system to produce technologically fluent students—students who can use a wide variety of digital technologies, and who have the behaviors and knowledge that will enable them to use emerging technologies (Oxford University Press).

1.3 Readiness for Digital Pedagogy

Readiness is defined as being "prepared mentally or physically for some experience or action" (Webster's New Collegiate Dictionary). Borotis & Poulymenakou (2004) define e-learning readiness as "the mental or physical preparedness of an organization for some e-learning experience or action". Wannemacher, (2006) stated that Universities should be ready to adopt eLearning systems to improve learning as well as to gain competitive advantage. E

Learning readiness assessment helps an organization to design e-learning strategies comprehensively and to implement its ICT goals effectively (Kaur & Abas, 2004). Oketch (2013) said in her work that Readiness assessment allows institutions to design systems and put in place appropriate measures that are required for its success. The assessment should include learner's ability to adapt to technological changes, collaborative training and synchronous as well as asynchronous self-paced training. Learners must also be "e-ready" so that a coherent achievable strategy, tailored to meet their needs, may be implemented (infodev, 2001). Aydin, C. H., & Tasci, D. (2005) states that the literature on organizational readiness for e-learning provides managers questions, guidelines, strategies, models and instruments for assessing the readiness of their companies for e-learning. In sum, e-learning readiness assessment provides key information to organizations to supply solutions which can cater to the specific needs of each learning group (McConnell International, 2000). Therefore there is a need to carry out need assessment to evaluate lecturer's readiness toward digital pedagogy and for that some authors came out with some models to measure readiness. For example Chapnick (2000) has developed an instrument for assessing organizational readiness for e-learning. She considers her instrument as an e-learning needs assessment model and she states that the model helps to answer three main questions, (1) 'Can we do this?', (2) 'If we can do this, how … are we going to do it?', and (3) 'What are the outcomes and how do we measure them?'. Building on Chapnick's model, Kaur and Abas (2004) designed a model for measuring the e-learning readiness of the Open University Malaysia. Their model consists of eight constructs: learner, management, personnel, content, technical, environmental, cultural and financial readiness. As eLearning gains popularity in developing countries whose e-maturity is considered low, users readiness assessment is also becoming critical (Oketch, 2013). The assessment should look at the variables that are crucial, and from the existing research, there are some factors that are common e.g. technical readiness, content readiness, human resources readiness and financial readiness. In addition, there are demographic factors such as age, gender and education level (Aydin and Tasci, 2005) that are considered as important factors in eLearning. Furthermore, it is important to understand that readiness is not a onetime event rather it should be a continuous process of assessment (Oketch, 2013).

1.4 Problem statement

The world is experiencing a global change due to digital technology innovations as we can see in all sphere of life. The education is not left behind, so, many education system seek to meet up with these changes that is why many institutions are introducing digital pedagogy on

their campuses. Therefore, for the digital pedagogy to be implemented effectively it requires a certain number of conditions, such technological infrastructure, financial resources and skilled lecturers. According to Oketch (2013) lecturers have been identified to be a major factor influencing the successful implementation of digital pedagogy. Therefore the lecturers needs to be well equipped with ICT skills and trained on how to make course materials available online and take advantage of new teaching methods, with the rapidly changing in technology. Lecturers training and development is of upmost importance in order to keep up with this change. It was observed by some authors that many lecturers are reluctant to implement technology in their lessons as stated by Gerstein (2014), who says that "most educators have the same common complaints such as: they don't have enough time; they don't have enough resources; they need more training; they need to teach using textbooks; they are afraid of losing control of the class and that they have always successfully thought that way, so he suggested teacher were suffering from a fixed mind set symptom. Therefore they have the tendency to remain in their comfort zone. This could explain the reaction of lecturers during the period, when the whole world was siege by the violent pandemic of Covid-19. This pandemic took so many lives around the world and led to a complete locked down in many countries of world, of which, Cameroon was not left out. This situation forced much government to implement digital pedagogy for the continuity of education, as it was impossible for students to meet on campuses. The Cameroon Government through the minister of Higher Education instituted the implementation of online learning. Many learning platform were developed in many Universities of Cameroon to that effect. And it was observed that at the University of Yaoundé 1, many platforms put in place by the University for Distant learning was not really effective. Most students felt they were abandoned to themselves, lecturers were not really active on the platforms and learning was very difficult at that moment. Some students have to drop their studies because they could not cope with the system. That could be attributed to the fact that many lecturers may have not been prepared enough for the implementation of the online studies, and this preparedness could be due to some factors that actually determined the readiness of the lecturers for digital pedagogy which needs to be identify, which is therefore the focus of this research study.

1.5 General Objective

The general objective of this study was to Assess Lecturer's Readiness for Digital Pedagogy implementation at the University of Yaounde 1.

1.6 Specific Objective

The study was guided by the following research objectives:

- To assess competence readiness of lecturers for digital pedagogy implementation
- To evaluate technology readiness of lecturers for digital pedagogy implementation
- To assess motivation readiness of lecturers for digital pedagogy implementation

1.7 Research Question

1.7.1 General research question

The general research question of this study was; to what extent does lecturers' readiness influences digital pedagogy implementation at the University of Yaoundé 1?

1.7.2 Specific research questions

The study was guided by the following research questions:

- To what extent does competence readiness of lecturers influence digital pedagogy implementation?
- To what extent does technology readiness of lecturers influence digital pedagogy implementation?
- To what extent does motivation readiness of lecturers influence digital pedagogy implementation?

1.8 Hypothesis

1.8.1 General Hypothesis

The general hypothesis of this study was; Lecturers' readiness do not significantly influence the implementation of digital pedagogy at the University of Yaounde 1

1.8.2 Specific Hypothesis

The study was guided by the following research hypothesis

- HO1: Lecturer's competences readiness does not significantly influence digital pedagogy implementation.
- HA1: Lecturer's competences readiness significantly influences digital pedagogy implementation.

- HO2: Lecturers' technology readiness does not significantly influence digital pedagogy implementation.
- HA2: Lecturers' technology readiness significantly influences digital pedagogy implementation.
- HO3: Lecturer's motivational readiness does not significantly influence digital pedagogy implementation.
- HA3: Lecturer's motivation readiness significantly influence digital pedagogy implementation.

1.9 Significant of the study

This study is important for the following reasons; the results of this study will be useful to the university and the various stakeholders in the sense that both the university and the stakeholders will be able to know their level of readiness for the implementation of digital pedagogy to make informed decision. It will help the policy makers to take the appropriate steps in the implementation of digital pedagogy knowing the readiness of the lecturers and the university, thereby reducing wastage of resources and time; this will help them to clearly identify loopholes that could affect the effective implementation of digital pedagogy. This work will help provide insight into digital pedagogy system and help in the appropriate use of ICT tools in teaching, learning, and sharing of institutional knowledge. Finally this work will help clear out all misunderstandings about digital pedagogy and present the benefits of it in our education system.

1.10 Scope of the study

This research focuses on the readiness of lecturers for digital pedagogy at the higher education. The research is conducted at one university in Cameroon, University Yaounde 1, and in four faculties and two higher schools namely: Faculty of Arts, Humanities and Social Sciences (FALSH), Faculty of Sciences (FS), Faculty of Medicine and Biomedical Sciences (FMBS), Faculty of science of education (FSE), Higher Teachers' Training College (ENS), National advanced school of engineering (ENSPY). The data gathering is carried out in the faculties and higher schools as mention earlier specially among lecturers who are full-time staffs at the university of Yaounde 1and employed by the Government. However, the number of samples used in this research and their diversity provide ample objective results to

establish a proposed a clear picture of lecturer readiness for digital pedagogy within the Cameroon Higher Education sector.

1.11 Operational definition of key terms

Digital pedagogy: "the use of electronic elements to enhance or to change the experience of education" (Croxall & Koh, 2013) "using digital tools thoughtfully...deciding when not to use digital tools, and paying attention to the impact of digital tools on learning" (Stommel, J., 2014).

Competency readiness: White (1959: p.297) defines competence as "… an organism's capacity to interact effectively with its environment…" One of the most influential definitions was developed in the OECD DeSeCo-Project in line with Weinert's definition of competence: "A competence is defined as the ability to meet individual or social demands successfully or to carry out an activity or task" (OECD, 2002).

A competency readiness is generally defined as a combination of skills, knowledge, attributes and behaviours that enables an individual to perform a task or an activity successfully within a given job. Competencies are observable behaviours that can be measured and evaluated, and thus are essential in terms of defining job requirements and recruiting, retaining and developing staff.

Technology readiness: Technology readiness is defined as "people's propensity to embrace and use technologies for accomplishing goals in home life and at work" (Parasuraman, 2000, p. 308). It is a combination of both positive and negative feelings of individuals about new technological product and services.

Motivational readiness: Motivation refers to the degree of readiness of an organism to pursue some designated goal, and implies the determination of the nature and locus of the forces inducing the degree of readiness (Golembiewski, 1973, p.597). Therefore motivational readiness refers to a psychological experience of the willingness to attain a given state of affairs. Motivational readiness may be depicted as lying on a dimension of intensity or magnitude, from low to high degrees of readiness.

1.12 **Organisation of the study**

Organization of the study is an outline of the chapters of the research project. Chapter one is systematically organized to cover the background to the study, statement of the problem, scope of the study, research objectives, research questions, significance of the study, definition of terms and organization of the study, conceptual definition of terms, operational definition of terms . Chapter two outlines review of literature which is basically the views advanced by other scholars about the subject matter of the study. The chapter also discusses theoretical review and conceptual framework of the study. Chapter three on the other hand, describes the methodology that was employed in the study. It entails research design, nature of the research, study population, sample techniques and sampling frame, instrument and instrumentation, data analysis procedure, validity and reliability of the instrument, methodological challenges. Chaptered four presents the analysis of data collected from the two items in the study questionnaire. The findings are analysed and presented in the form of frequency tables, numerical values and percentages for comparison of the responses. The responses are presented followed by a brief interpretation guided by the research objectives and a discussion on research findings from the analysis of the data. This chapter presents the summary of the study findings together with conclusions of the study. Chapter five covers a summary of the findings and discussions of the research questions; it also presents the discussions and conclusions recommendations of the study as well as suggestions for further studies.

Table 1.0: chapter one summary

Research theme	Research question	Objective of the study	Hypothesis	dependent and independent variables
ASSESSING LECTURER'S READINESS FOR DIGITAL PEDAGOGY IN CAMEROON STATES UNIVERSITIES" A CASE STUDY OF UNIVERSITY OF YAOUNDE I.	General research question: to what extent does lecturers' readiness influences digital pedagogy implementation at the University of Yaoundé 1?	General objective: was to Assess Lecturer's Readiness for Digital Pedagogy implementation at the University of Yaoundé 1.	General hypothesis: Lecturers' readiness do not significantly influence the implementation of digital pedagogy at the University of Yaoundé 1	Lecturers' readiness and digital pedagogy
	Specific question1: To what extent does competence readiness of lecturers influence digital pedagogy implementation?	Specific objective 1: To assess competence readiness of lecturers for digital pedagogy implementation	Hypothesis 1: Lecturer's competences readiness does not significantly influence digital pedagogy implementation.	Competences readiness
	Specific question 2: To what extent does technology readiness of lecturers influence digital pedagogy implementation?	Specific objective 2: To evaluate technology readiness of lecturers for digital pedagogy implementation	Hypothesis 2: Lecturers' technology readiness does not significantly influence digital pedagogy implementation. .	Technological readiness
	Specific question 3: To what extent does motivation readiness of lecturers influence digital pedagogy implementation?	Specific question 3: To assess motivation readiness of lecturers for digital pedagogy implementation	Hypothesis 3: Lecturer's motivation readiness does not significantly influence digital pedagogy implementation.	motivational readiness

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the relevant literature for this study. The first part presents historical evolution of education. This focused on how the industrial revolution and the World Wide Web contributed to the evolution of education from education 1.0 to education 4.0. The second part presents the theoretical review and this will focused on the following theories: Conscious competence theory of learning a new skill, Technology Acceptance Model, Technology Readiness Index Model (TRI) and Self-determination Theory (SDT). The third part presents the empirical literature that revolves around the three objectives stated earlier in chapter one. These include: competence readiness of lecturers for digital pedagogy; Technological readiness of lecturers for digital pedagogy; and the motivational readiness of lecturers for digital pedagogy implementation. The last part presents the conceptual framework.

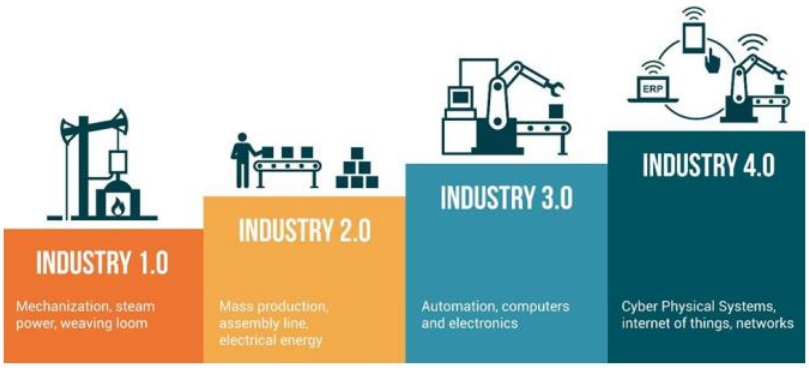
2.1 Historical Evolution of education

This section of the literature review will focused basically on the historical evolution of education, how education evolved from education 1.0 to education 4.0 as a results of industrial revolution and the development of the World Wide Web.

2.1.1 The Evolution of Education from Education 1.0 to Education 4.0

The evolution of Education has been largely influence by the two major factors in the world namely: the Industrial Revolution and the development of the World Wide Web (www). According to Mokyr (1999) "The Industrial Revolution1 refers to the period of industrialization characterized by profound technological change sparked by such inventions as the steam engine and mechanical spinning, their diffusion, adaptation, and improvement, the rise of the factory system, and accompanying social changes in households and markets." The first industrial revolution (Industry 1.0) was marked by the mechanization of industries with short scale production based on the use of oil and steam engines as the main source of energy and following that was the second industrial revolution (industry 2.0)which was structured on the organization of work and the use of electricity to promote mass production. The third industrial revolution (industry 3.0) was focused on the integration of electronic components and technology in the industry which led to the automation of production tasks. In this era most activities were directed toward automation for massive and quality

production of good and services. Presently we can observe how the third industrial revolution is leading to the development of intelligent industrial system as a result of permanent integration of advance technology such as Artificial intelligent, cloud computing, big data, Robotics and many more thereby favouring a progress to the fourth industrial revolution (industry 4.0). According to Schawb (2017) the fourth industrial revolution is characterized by the technological fusion of the boundary between the physical, biological and digital worlds in order to design intelligent cyber-physical systems. The figure 1.1 below shows us the different industrial evolution era.

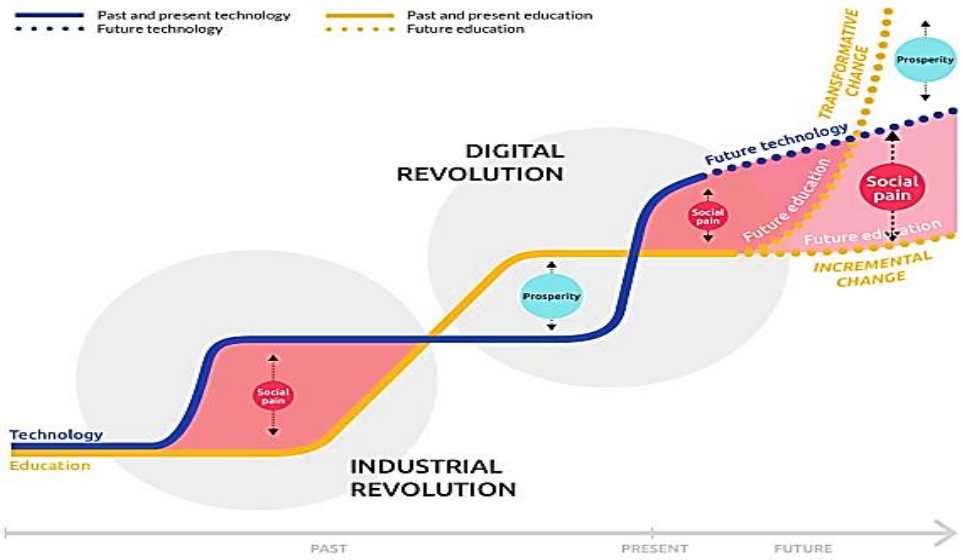


Source: McLellan (2018).

Figure 1.0: Industry 1.0 to 4.0

Due to this change in the industrial revolution, it is imperative for a shift in the education system in other to meet-up with demand of this revolution. The directorate of the OECD in charge of Education and Skills, Andreas Schleicher commented in 2019 that "Education is no longer about teaching students something alone; it is more important to be teaching them to develop a reliable compass and the navigation tools to find their own way in a world that is increasingly complex, volatile and uncertain. Our imagination, awareness, knowledge, skills and, most important, our common values, intellectual and moral maturity, and sense of responsibility is what will guide us for the world to become a better place." On the other hand we see how the World Wide Web has evolved greatly to influence education; according to (Salmon, 2019) the Web started off as transmissive (1.0), then social (2.0), and 3.0 (semantic). The big change from Web 1.0 to 2.0 was not the technology but in the way that it was used. Education is mapped onto the emergence and development of the Web and the revolutions known as 'Industrial' over the last 250 years (Salmon, 2019). The evolution of the world wide web and technological advancement have also encourage the adoption of several pedagogical approaches such as online training, flipped classroom, blended learning

etc aimed at increasing the quality of education. The drastic and persistence change in technology has brought up the rethinking and transformation model of teaching and learning thereby encouraging a proper integration of technology into education in order to attain intelligent collaboration and coordination of physical and /or virtual actors involved in the service of education. Figure two below shows the race between Technology and Education



Source: Goldin and Katz (2010)

Figure 2.0: The Race between Technology and Education

The industrial revolution and the evolution of the World Wide Web can be used to trigger how education should also be moving, developing and evolving from education 1.0 toward that of an education 4.0. Thus these evolutions have significantly influence people's ways of thinking, doing and being leading to the influence on the development of content of education and the way of teaching. The following paragraphs will discuss the evolution of education as presented by Jackie (2014).

1.0 Education 1.0 : A pedagogical, Essentialist education

According to Jackie (2014) Education 1.0 is a type of essentialist, behaviourist based on the three Rs that is (i) receiving by listening to the instructor or teacher, (ii) responding by taking notes, studying text and doing worksheets, (iii) regulating by taking the same assessments as all other students in the class. Learners are considered as receptacles of the knowledge. Here all the students are considered to be the same. It is a standardized/one-size fits all education so it does take into consideration differences in students everybody is in the same box both slow learners and fast learners. Before the advent of internet, the teachers were the primary

gatekeepers of information. Education 1.0 was the best way of passing on of the resources and technologies of that time in history. Apart from libraries and news outlet, the student were totally dependent on the teacher to provide them with information. As such, a major role of the teacher similar to the beginning stage of the internet, was to provide student with the content of knowledge in a one-way direction. Education 1.0 can be seen to be similar to web 1.0 where there is a one-way transfer of knowledge from teachers to students.

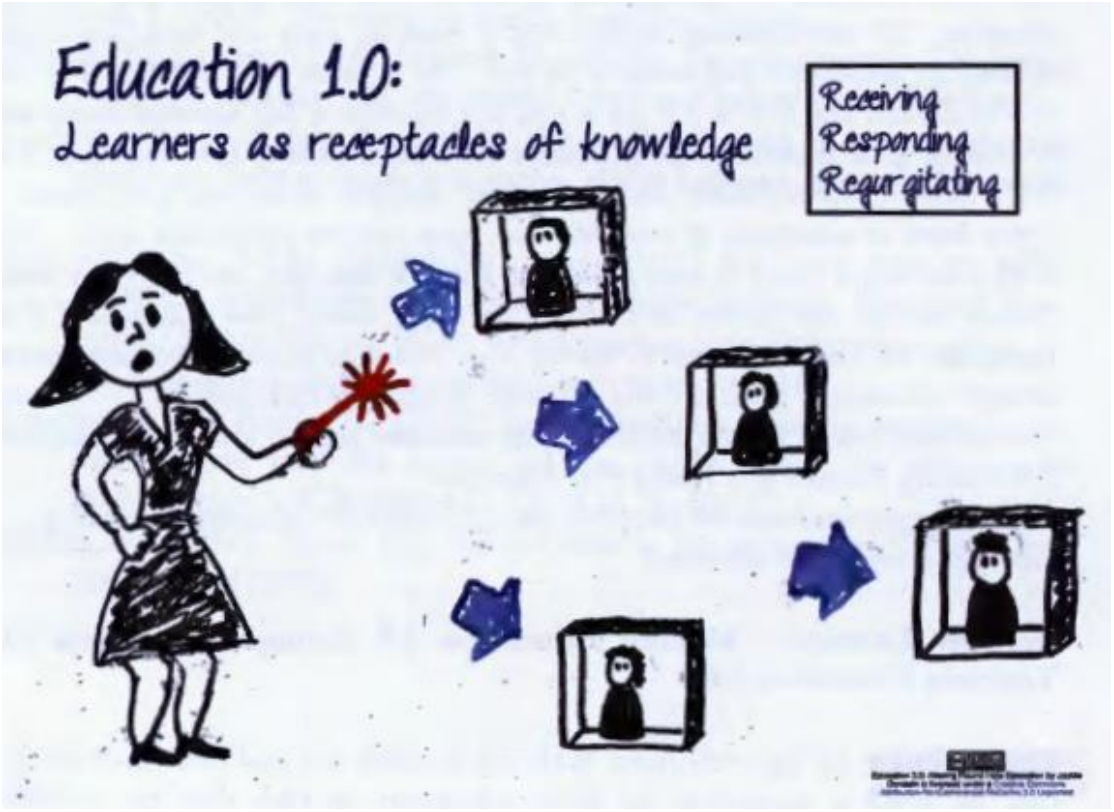
Education 1.0 is similar to the first generation of the web, which is a one-way process. Student go to school to get education from the teachers who provide them with information in the form of a stand-up routine that may include the use of class notes, hand-out, textbooks, videos and in recent time the world wide web. Students are said to be largely consumers of information resources dished to them by teachers in Education 1.0.

Education 1.0 is based on the philosophical foundation known as essentialism or instructivism. Essentialist seek to instil to all the student with the most basic or essential academic knowledge and skills and character development. According to the essentialist student are expected to master a set body of knowledge and techniques for their grade level before they are promoted to the next higher level. Their ideology is that a classroom should be a teacher-oriented, the teacher decide what is most important for the student to learn without their concern or opinion. The teacher also focuses on achievement test scores as a means of evaluation progress.

Even in these modern times of ubiquitous information and technology, education 1.0 only allow student:

- To access information via eBooks, and websites without any interaction, with no opportunity for the learner to comment, share or interact with content.
- To watch, learn, and take note from live and/or video lectures purposely for content delivery.
- To student to use technology and mobile apps only to receive instructions from the teacher and to answers of quiz and provide the correct response

In conclusion Education 1.0 is basically a one-way transfer of knowledge; from the teacher to the learners. Students are considered to be recipient of knowledge while the teachers are considered as the main source of information.



Source: Jackie Gerstein *Boise State University* (2013)

Figure 3.0: Shows a diagrammatic representation of education 1.0

2.0 Education 2.0: An Andragogical, Constructivist Approach to Teaching and Learning

According to Jackie (2014) Education 2.0 is similar to Web 2.0, it permit interaction between the content and users, and between the users themselves. With Web 2.0, users go beyond from just accessing information and content to being capable to directly interact with the content through commenting, sharing and remixing it via social networks. Web 2.0 also introduced the development of social media which permit users to communicate directly with one another both synchronously and asynchronously. In the same way to Web 2.0, Education 2.0 encourages more interaction between teachers and learners, students to students and student to content and experts.

Education 2.0 was developed from the progressives and humanistic philosophical approach where the human element is most important to learning. So here the teacher-student and student to student relationship are considered as part of the learning process. Education 2.0 focuses on three Cs, that is: (i) communicating, (ii) contributing, and (iii) collaborating.

Education 2.0 was developed or evolved when the technologies of web 2.0 began to be used to enhanced traditional approaches to education. Education 2.0 make use mainly of Blogs, Podcasts, social bookmarking and related participation technologies, but the circumstances under which the technologies are used are still largely embedded within the framework of education 1.0. The process of education itself remains almost the same even though a plan for total transformation is being put in places.

A number of educators are taking progressive steps and are moving into a more connected, creative education 2.0 through using of project-based and enquiry learning, cooperative learning, global learning projects, Skype in classroom, and shared wikis, blogs, and other social networking in the classroom. In education 2.0 the teacher is still the one organizing the learning experiences, so the teacher develops the learning activities and he or she is the facilitator of learning. As mention earlier education 2.0 takes on the characteristic of an andragogical, more constructivist approach of teaching where the principles of active, experiential, authentic, relevant, and socially-networked learning experiences are built into a class or course structure. The andragogical model is mostly concerned with providing procedures and resources for helping learners acquire information and skills. Teachers are considered as facilitators in this model who prepare a set of procedures for involving the learners in a process as proposed by (Holmes, Abigton cooper 2000) below:

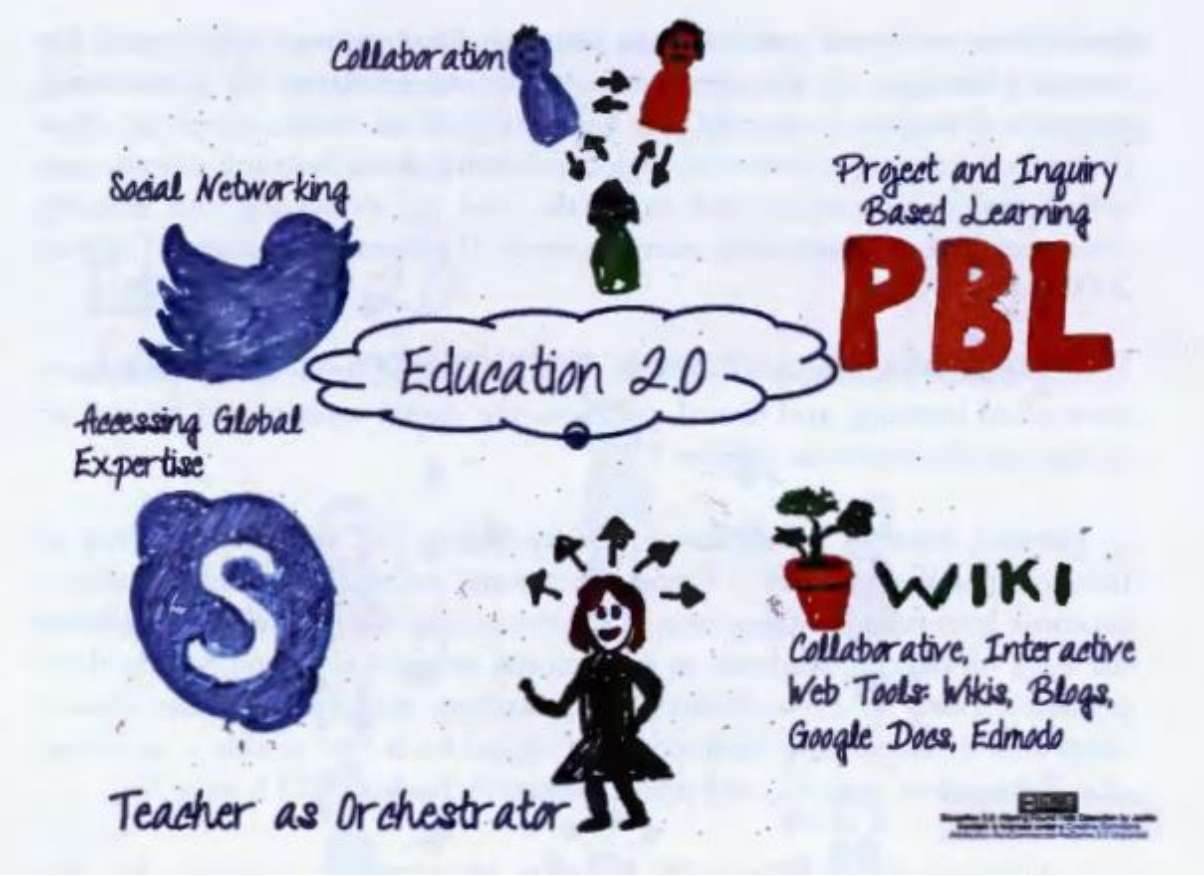
- Establishing a conducive environment for learning.
- Creating a mechanism for mutual planning.
- Diagnosing the needs of learning.
- Formulating program objectives.
- Design a pattern of learning experiences.
- Conducting these learning experiences with suitable techniques and materials.
- Evaluating the learning out comes and re-diagnosing, learning needs.

An andragogical, constructivist learning environment typically has the following characteristics:

- Constructivist learning environments provide multiple representations of reality.
- These representations represent that complexity of the real world.

- Knowledge construction is emphasized over knowledge reproduction.
- Learners participate in authentic tasks in meaningful contexts.
- Real world settings are provided.
- Thoughtful reflection on experience is encouraged.
- Collaboration and social negotiation is encouraged among learners.
- There's an integration and activation of prior knowledge.
- Discovery learning, collaborative activity, and hands-on activities are often integrated into the learning activities

In conclusion education 2.0 the teacher is considered as a facilitator who organizes the learning experience and students are allowed to interact with the teacher, their mates and the content.



Source: Jackie Gerstein *Boise State University* (2013)

Figure 4.0 shows the diagrammatic representation of education 2.0

3.0 Education 3.0: A Heutagogical, Connectivist Approach to Teaching and Learning

Education 3.0 is more of a Heutagogical, Connectivist approach to teaching and learning. The teachers, learners, networks, connections, media, resources, and tools create a unique entity that has the potential to meet individual learners', educators', and even societal needs. Education 3.0 recognizes that each educator's and student's journey is unique, personalized, and self-determined.

According to Blaschke (2012) Heutagogical approach place the learner at the centre with full autonomy and self-determination and emphases is placed on the learner's capacity and capability development. Since Heutagogy approach is a learner-centered design, web 2.0 offers an environment to support it most importantly by supporting development of learner generated content and learner self-directedness in information discovery and in defining the learning paths. Heutagogical approach has always been considered for adult-learners, but today due to abundant of learning materials on the web, learners as young as the elementary level have the potential to engage in self-determined and self-driven learning.

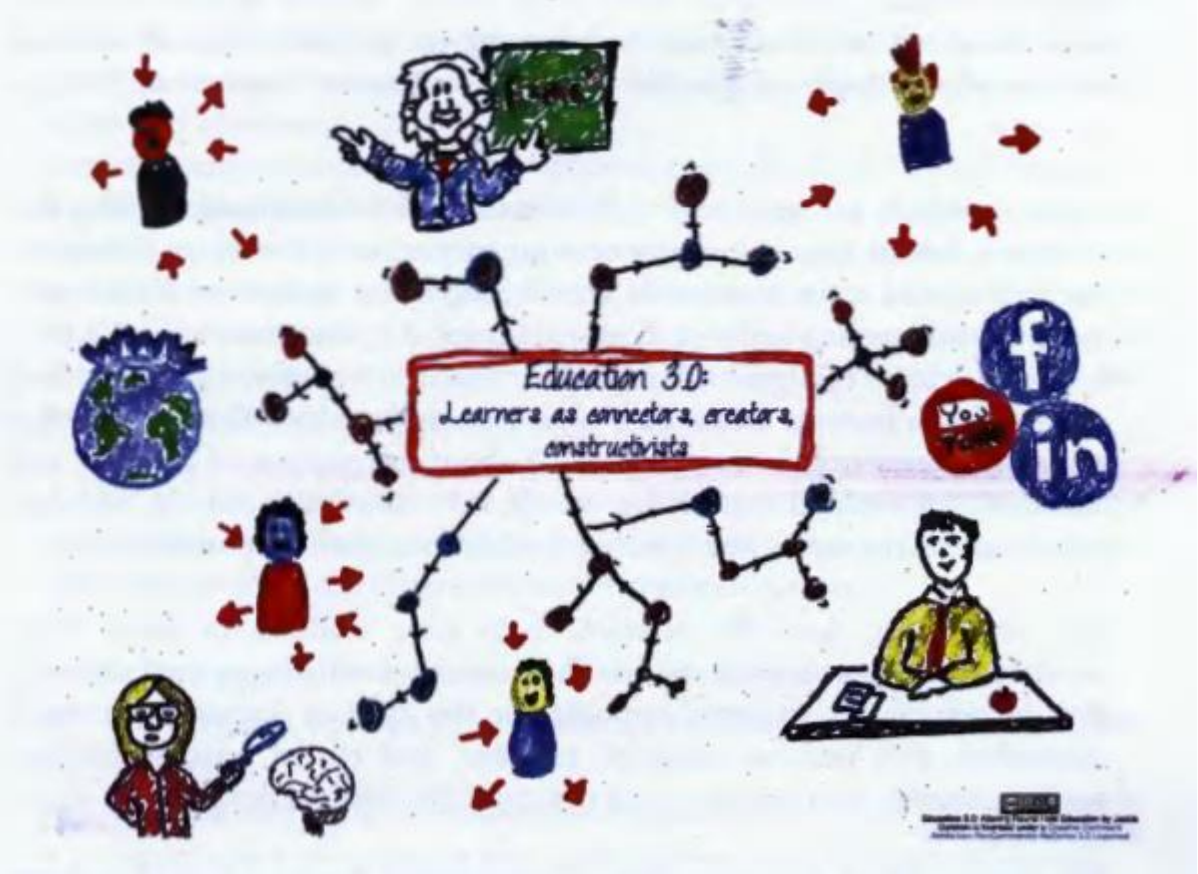
The Heutagogical approach of learning and teaching has created opportunities for deep, broad, and global connection. George Siemen (2004) has defined the characteristic of connectivism as:

- Learning and knowledge rest in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known.
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all Connectivist learning activities.

All of these principles of learning naturally lead to Education 3.0. The learner's in an Education 3.0, Heutagogical, Connectivist learning environment:

- Determine what they want to learn and develop their own learning objectives for their learning, based on a broad range of desired course outcomes.

- Use their learning preferences and technologies to decide how they will learn.
- Form their own learning communities, possibly using social networking tools suggested and/or set up by the educator. Possible networks, many with corresponding apps, include: Facebook®, Twitter, Edmodo, Instagram, blogging sites, YouTube®, and other social networks.
- Utilize the expertise of educators and other members of their learning communities to introduce content-related resources and suggest Web 2.0 and other online tools for that the students could use to demonstrate and produce learning artifacts.
- Demonstrate their learning through methods and means that work best for them. It could include using their mobile devices to blog, create photo essays, do screencasts, make videos or podcasts, draw, sing, dance, etc.
- Take the initiative to seek feedback from educators and their peers. It is their choice whether or not to utilize that feedback.



Source: Jackie Gerstein *Boise State University* (2013)

Figure 5.0 shows the diagrammatic representation of education 3.0

4.0 Education 4.0: promotes intelligent and smart thinking in education.

In general, Education 4.0 is an institute of believed that promotes intelligent and smart thinking in education. Education 4.0 promotes education differently, mainly by consuming technology-based tools and resources. This means that students will not learn to use textbooks, pens, and essay teachers in traditional classrooms. Instead, Education 4.0 allows remote students to access the Internet and enrol in courses through a variety of open online courses, video chats, or voice calls to learn more dynamic material about the same students. You may not learn as much as you do. Education 4.0 was recognized as a respond to Industry 4.0, greatly increasing the use of Internet technologies and cross-communication tools. Many other industries are responding to this change in business practices and creating Healthcare 4.0, Technology 4.0, and more. The same is true for the education ecosystem. Education 4.0 is developed for Industry 4.0 and prepares qualified and qualified professionals to prepare for a very global and digital work environment (Sharma, 2019).

Education 4.0 uses a unique technology and tools Education 4.0 to create a similar environment for both, ensuring that the educational experience is similar to the work experience. Therefore, Education 4.0 is a more realistic and practical learning method, which can produce excellent results for student learning. Maintaining a changing world is important and Education 4.0 is the method used by educational institutions to ensure this. Research has shown that student learning outcomes can improve as education becomes more personal. Education 4.0 uses intelligent school management systems, learning management software, communication tools, and other teaching and learning tools. Personalized learning with Education 4.0 promotes understanding and allows students to reach really interested, more professional and memorable materials. It also means that students can become interested professionals. General education 4.0 allows students to achieve better learning outcomes based on real scientific or professional interests (Sharma, 2019).

Through Education 4.0, teachers can ultimately teach students, not classes. Use tools and techniques that promote this personalized learning goal. This leads to better learning outcomes for students and better educational outcomes depending on what results educators and teachers bring. This is the most important goal of Education 4.0 for all educational institutions: to encourage students and improve students' learning outcomes. Students are the

main stakeholders of the educational ecosystem and are the main beneficiaries of the educational ecosystem. Education 4.0 treats students as beneficiaries as before. Using technology, students can connect in a better way with many other stakeholders in the system, better communication with teachers, parents and management. Student learning outcomes are directly proportional to the level of implementation of Education 4.0.

Digitization in education is motivating, inspiring and potentially broad challenges for individuals and societies as was seen through the evolution education from education 1.0 to education 4.0. These changes were impulse by the industrial revolution and web development and these calls for concern on educators' readiness and preparedness. The effective implementation of digital education depends mostly on the educators. Considering the fact that we are now in a perfect storm of free and available online resources, tools for creating and sharing information and networking opportunities, what could prevent educators from implementing the new approaches in education. According to Gerstein (2014) most educators have the following complaints of: they don't have enough time; they don't have enough resources; they need more training; they need to teach using textbooks; they are afraid to lose control of the class and that they have always successfully thought that way, so he suggested teacher were suffering from a fixed mind set symptom. Most educators are reluctant to changes, they have the tendency to remain in their comfort zone. Any educator willing to survive this generation must have a change of mind set and willing to learn new skill. As educators, they have the responsibility to prepare the students for this technological age thereby keeping the pace with the student world and providing them with a secure and sustainable future.

2.2 Theoretical Review

Modern society, with an exponential and rapid scientific and technological advancement, has seen an exceptional rise in accessible knowledge and continuously changing and emerging technologies. The emergence of information and communication technology has ushered us into a wide range of opportunity for new forms of communication and knowledge formation inside and outside of formal educational institutions. Previous ways of acquiring and gathering knowledge are likely to prove ineffective in these new contexts. In this new context knowledge is literally a set of connection between entities. In humans, this knowledge consist of connection between humans and their artefacts. Learning is the creation and removal of connections between the entities or adjustment of the strength of those connections. A

learning theory is literally, a theory describing how these connection are created or adjusted (Downes, 2012). Most teachers in the school will be familiar with the main theories of learning, but because instructors in post-secondary education are hired primarily for their subject experience, or research or vocational skills, it is essential to introduce and discuss, if only briefly, these main theories. In practice, even without formal training or knowledge of different theories of learning, all teachers and instructors will approach teaching within one of these main theoretical approaches, whether or not they are aware of the educational jargon surrounding these approaches. Also, as online learning, technology-based teaching, and informal digital networks of learners have evolved, new theories of learning are emerging. With a knowledge of alternative theoretical approaches, teachers and instructors are in a better position to make choices about how to approach their teaching in ways that will best fit the perceived needs of their students, within the very many different learning contexts that teachers and instructors face. This is particularly important when addressing many of the requirements of learners in a digital age. Furthermore, the choice or preference for one particular theoretical approach will have major implications for the way that technology is used to support teaching (Bates, 2016). In this work the researcher focused on four main theories namely: the self-determination theories, Technology Acceptance model, Readiness index Theories and Conscious competence theory of learning a new skill.

Self-determination Theory (SDT)

SDT developed by Deci and Ryan in 2000 offers a conceptualization that allows the measurement of the level and type of motivation. The theory was developed from five mini theories. Each of these theories was designed to help explain a set of motivational phenomena that emerged from their research. Each mini-theory addresses one aspect of motivation or personality functioning.

1. **The Cognitive Evaluation Theory (CET)** focuses in intrinsic motivation and highlights the critical roles of competence and autonomy in developing intrinsic motivation.

2. **The Organismic Integration Theory (OIT)** has its focus on extrinsic motivation and the properties, determinants and consequences of this type of motivation. This represents outcomes of the behaviour. The OIT highlights the need for autonomy and relatedness and as these increases, the level of extrinsic motivation increases.

3. **The Causality Orientations Theory (COT)** describes how people regulate and orient their behaviours. There are three levels of causality orientation.

a. **Autonomy Orientation** is when people act out of interest in or valuation of what is occurring.

b. Control Orientation focuses on rewards and approval.

c. Impersonal or Amotivated Orientation focuses on anxiety that results from a sense of a lack of competence.

4. **The Basic Psychological Needs Theory (BPNT)** elaborates on the relationship of evolved psychological needs and psychological health and well-being and forms the fourth mini-theory. Optimal functioning is dependent upon autonomy, competence and relatedness.

5. **Goals Contents Theory (GCT)** grew out of the distinctions between extrinsic and intrinsic goals and the resulting impact on wellness and motivation ("Self-determination Theory," 2011).

There are three major types of motivation: intrinsic, extrinsic and amotivation.

Intrinsic motivation emerged from the Cognitive Evaluation Theory (CET) and has an internal locus of control. Extrinsic motivation begins with an external locus of control and as it approaches integrated regulation becomes an internal locus. Amotivation is non-regulated and has an impersonal locus of control (Deci & Ryan, 2000).

According Ryan & Deci (2000), to be motivated, means an individual is moved to do something. Motivation is a transition from amotivation to intrinsic motivation. Deci & Ryan (2000) states that, depending on the situation; an individual has both extrinsic and intrinsic motivation. There is variation in the degree of motivation as well as the type of motivation. The orientation or the type of motivation concerns the underlying goals and attitudes that give rise to action (Ryan & Deci, 2000). While it is unlikely that an individual's motivation can be altered, awareness of the continuum of motivation does have implications on education. According Duvall (2012), it is unclear whether motivation is a trait or a state: however, since the level of motivation changes it is most likely a state. The ability to identify the motivation for performing a task can have implications for teaching assignments. If an individual has insecurity or discomfort regarding technology, it is unlikely that the individual will be motivated to incorporate technology into education.

Likewise, those individuals who are optimistic regarding the benefits of technology and are innovative in the approach to nursing education are much more likely to be motivated to use the newest technologies (Duvall, 2012).

Intrinsic motivation: Intrinsic motivation is defined as doing something for its own sake because it is interesting and enjoyable. Intrinsic motivation is autonomous. Two concepts that are intrinsically motivated are optimism and innovativeness, which are identified as being contributors to technological readiness (Parasuraman & Colby, 2000). Intrinsic motivation is highly associated with the basic psychological needs of autonomy, competence, and relatedness.

The need for autonomy is related to the universal urge to be causal agents, to experience free choice and to act in accordance with interests and values. To be autonomous does not mean to be independent of others but rather to feel a sense of choice when acting. Actions can be independently initiated or can be in response to a request from others (Deci & Vansteenkiste, 2004). In the SDT, autonomy retains its primary meaning of "self-governance or rule by the self" (Ryan & Deci, 2006 p.1562). The theory specifically differentiates autonomy from independence. An individual can be autonomously dependent or forced into independence. If fact, often people are more prone to be dependent upon those who support their autonomy (Ryan & Deci, 2006). The need for competence reflects the individual's inborn desire to be effective in dealing with the environment. The need for relatedness concerns the universal desire to interact with, to be connected to and to experience caring for others (Deci & Vansteenkiste, 2004).

Although in one sense intrinsic motivation exists within the individual, it also exists in the relationship between the individual and the task. From birth, healthy humans are inquisitive, active and curious beings who display a readiness to explore and learn without extrinsic rewards. This natural motivation plays a role in cognitive, physical and social development. The inclination to remain interested in novelty is not limited to infancy and childhood, but rather it affects performance, well-being and persistence across the life span (Ryan & Deci, 2000).

Extrinsic motivation: The SDT proposes that there are varied types of extrinsic motivation and they exist on a continuum from a very impoverished form of motivation to an active, autonomous form of motivation (Ryan & Deci, 2000). Extrinsic motivation is defined as doing something for instrumental reasons or specific outcomes. The reasons differ depending

upon how internalized the motivation has become. Internalization is taking in a regulation that was once regulated by external factors, like rewards and punishments, and thereby regulating it internally. Extrinsic motivation can be completely externally motivated or can be partially or completely internally regulated (Gagne, Forest, Gilbert, Aube, Morin & Malorni, 2010).

An individual can perform extrinsically motivated actions with resentment, disinterest or resistance or with an attitude of willingness that reflects the inner acceptance of the value of a task. This is an important concept because educators or supervisors cannot always rely on intrinsic motivation to foster performance (Duvall, 2012). Many tasks in daily work are not inherently interesting or enjoyable, but knowing how to promote more active forms of extrinsic motivation has significant implications for supervisors or educators (Ryan & Deci, 2000).

The lowest level of extrinsic motivation is known as external regulation. This is doing an activity to avoid punishment or to obtain rewards. This type of motivation is completely non-internalized and is either a social or material regulation. For example, this could be doing a task for the reimbursement or to please a supervisor. An educator might be mandated to develop a simulation program by a supervisor or a salary stipend; however, there may be a lack of a sense of innovativeness or optimism that would contribute to the educator's technological readiness.

External regulation has an external locus of control.

Introjected regulation is doing an activity through self-worth regulation, such as guilt or ego-involvement. Introjected people engage in a behaviour or perform an activity out of guilt, compulsion, or to maintain a sense of self-worth. Introjected regulation also has an external locus of control and therefore is not autonomous.

Identified regulation is doing an activity because one identifies with the value or meaning of the activity. The activity then becomes autonomously regulated. These behaviours or activities are completed because of the perceived meaning or relation to personal goals. Identified regulation is a more autonomous driven form of extrinsic motivation (Ryan & Deci, 2000).

Integrated regulation refers to doing an activity and identifying with its value to the point that it becomes part of the person's habitual functioning and a part of the person's sense of self

(Duvall, 2012). This is the most autonomous type of extrinsic motivation (Deci & Ryan, 2000). Identification and integration are driven by values and goals, whereas intrinsic motivation is driven by emotions that emerge while doing the activity (Gagne et al., 2010).

Amotivation: Amotivation is a state in which there is a lack of intention to act. Amotivation results from a lack of valuing the activity, not feeling competent to do the activity or not feeling that a desired outcome will be achieved. Amotivation is not internalized and is completely non-autonomous (Ryan & Deci, 2000). Inhibitors to technological readiness are insecurity and discomfort (Parasuraman & Colby, 2000). The inhibitors to technological readiness can result in amotivation.

Technology Acceptance and Readiness Theories

Technology Acceptance Model

According to Pangriya & Singh (2021), the technology acceptance model was developed to predict individual adoption and use of new technologies. It posits that individuals' behavioural intention to use technology, is determined by two beliefs: perceived usefulness, defined as the extent to which a person believes that using technology will enhance his or her job performance, and perceived ease of use, defined as the degree to which a person believes that using technology will be free of effort (Davis, 1989). It further theorizes that the effect of external variables (e.g., design characteristics) on behavioural intention will be mediated by perceived usefulness and perceived ease of use (Viswanath Venkatesh & Bala, 2008).

The TAM model initially proposed by Davis (1989) is one of the various models that information technology and information systems researchers have used to predict and explain the underlying factors that motivate users to accept and adopt new technology. TAM was adopted from the Theory of Reasoned Action (TRA) (I. Ajzen & Fishbein, 1980). The TAM, as shown in Figure 3, Davis proposed the constructs, perceived ease of use (PEOU) and perceived usefulness (PU), as the key determinants of IT or IS acceptance behaviour.

Devis defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance", and defined perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort". According to TAM, greater PU and PEOU positively influences the person's attitude toward technology.

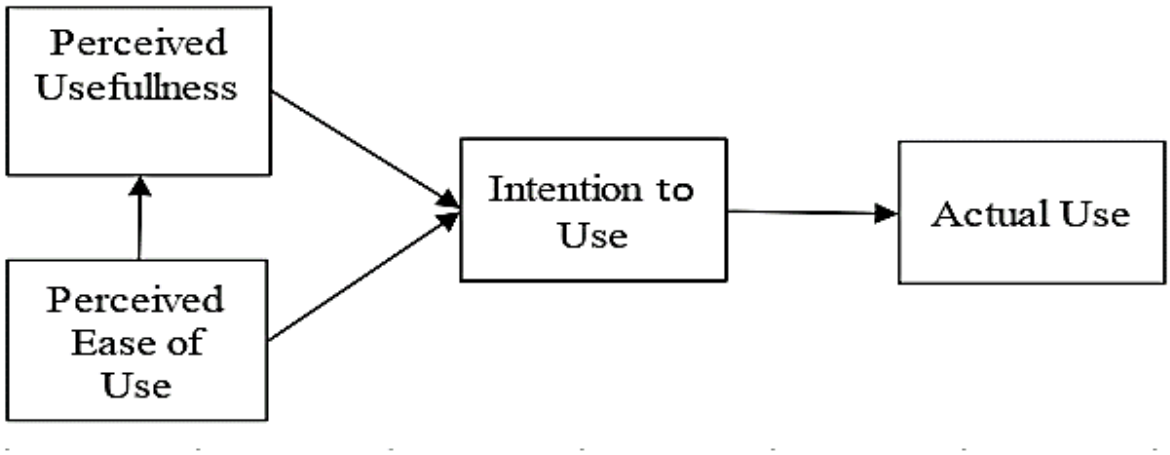


Figure 6.0: The Technology Acceptance Model (Davis, 1989)

Technology Readiness Index Model (TRI)

Technology Readiness Index (TRI) was developed by Parasuraman (2000) to measure consumers' enduring propensities to embrace new technologies. He introduces four dimensions of technology belief that impact an individual's level of techno-readiness. The four dimensions are optimism, innovativeness, discomfort, and insecurity. Optimism represents "a positive view of technology and a belief that it (technology) offers people increased control, flexibility, and efficiency in their lives" (Parasuraman & Colby, 2001), where thoughts of positivity regarding technology are measured. Innovativeness represents "a tendency to be a technology pioneer and thought leader" (Parasuraman & Colby, 2001), indicating how far ahead an organization believes itself to be in terms of implementing new technologies. Discomfort represents "a perceived lack of control over technology and a feeling of being overwhelmed by it" (Parasuraman & Colby, 2001). In general, the amount of concern and unease people have when confronted with technology is measured by this dimension. Insecurity represents "a "distrust of technology and skepticism about its ability to work properly" (Parasuraman & Colby, 2001), measuring the issues people may have while doing business with technology.

Optimism and innovativeness are drivers of technology readiness. A high score on these dimensions will increase overall technology readiness. Discomfort and insecurity, on the other hand, are inhibitors of technology readiness. Thus, a high score on these dimensions will reduce overall technology readiness (Parasuraman, 2000). Results show that the four dimensions are fairly independent, each of them making a unique contribution to an individual's technology readiness (Parasuraman & Colby, 2001).

Based on an individual's technology-readiness score and the TRI, Parasuraman and Colby (2001) used cluster analysis to further classify technology users (customers) into five technology readiness segments, namely, explorers, pioneers, skeptics, paranoids, and laggards. They stated that "explorers" are highly optimistic and innovative individuals who score highly in technology readiness; "pioneers" are relatively early adopters of new technology, but they are simultaneously held back by inherent discomfort and insecurity; "skeptics" are fairly techno-ready, but they have low motivation and need to be convinced of the benefits of using the emerging technology; "paranoids" are more insecure and are later adopters of new technology; and "laggards" are the resistant individuals who are likely to be the last adopters of new technology (Lai, 2008; Parasuraman & Colby, 2001).

According Badri, Al Rashedi, Yang, Mohaidat, & Al Hammadi (2014), Some studies have examined the relationships between technology readiness and technology acceptance by using an aggregated measure of the four TR constructs (Liljander, Gillberg, Gummerus, & Van Riel, 2006; Parasuraman, 2000; Parasuraman & Colby, 2001). A study by Lin et al. (2007) found that TRI has a significant effect on TAM and people's self-determining engagement in the e-service design and delivery process. Panday (2018) has investigated the relationships and effect of TRI on TAM in utilizing the university system in Jakarta. The study proved that all TRI factors have a favorable influence on Perceived Ease of Use, challenging the hypothesis, since both inhibitors factor in TRI are also positively significant. A study by Larasati et al. (2017) incorporated TRI and TAM in their study to assess SMEs' preparedness and adoption of Enterprise Resource Planning, particularly in the craft industry, to help with the implementation of strategic management planning. This study found that only Perceived Ease of Use is predicted by optimism, although prior research has shown otherwise. In comparison, innovativeness impacts Perceived Usefulness and Perceived Ease of Use. Some researchers pointed out that, these approaches may have limited value because the four dimensions clearly have different meanings and relate to different psychological processes underlying technology acceptance (Lam, Chiang, & Parasuraman, 2008; Son & Han, 2011). Lee, Chiu, Chiang, and Chiu (2009) used the TR Index to serve as an insight into a person's own motivations and inhibitions regarding the adoption of technology. The TRI is calculated by subtracting the discomfort and insecurity item-scores from the optimism and innovativeness item scores.

Conscious competence theory of learning a new skill

The Conscious Competence Ladder is a framework that helps us understand four stages of learning (the theory was developed at Gordon Training International by Noel Burch in the 1970s). The model highlights the factors that affect our thinking as we learn a new skill: Consciousness (awareness) and skill level (competence). It identifies four levels that we move through as we build competence in a new skill.

The four stages suggest that individuals are initially unaware of how little they know, or unconscious of their incompetence. As they recognize their incompetence, they consciously acquire a skill, then consciously use it. Eventually, the skill can be utilized without it being consciously thought through: the individual is said to have then acquired unconscious competence (Joe, 1999).

1. Unconscious incompetence (Ignorance) The individual does not understand or know how to do something and does not necessarily recognize the deficit. They may deny the usefulness of the skill. The individual must recognize their own incompetence, and the value of the new skill, before moving on to the next stage. The length of time an individual spends in this stage depends on the strength of the stimulus to learn.

2. Conscious incompetence (Awareness) though the individual does not understand or know how to do something, he or she does recognize the deficit, as well as the value of a new skill in addressing the deficit. The making of mistakes can be integral to the learning process at this stage.

3. Conscious competence (Learning) the individual understands or knows how to do something. However, demonstrating the skill or knowledge requires concentration. It may be broken down into steps, and there is heavy conscious involvement in executing the new skill.

4. Unconscious competence (Mastery) The individual has had so much practice with a skill that it has become "second nature" and can be performed easily. As a result, the skill can be performed while executing another task. The individual may be able to teach it to others, depending upon how and when it was learned.

EMPIRICAL REVIEW BASED ON THE OBJECTIVE

2.3.1. Competence readiness

Digital competence" is a concept that seems to be elusive, in that the preconditions, opportunities and challenges, as well as the contextual and societal circumstances, change. The concept can be used differently in different contexts and by different actors. It also seems to depend on what someone wants to highlight, or whether it is conceptualized in a narrow or wider sense. However, efforts have been made to describe what it could mean. For instance, in the DigComp project, five areas of digital competence are identified: (a) information and data literacy, (b) communication and collaboration, (c) digital content creation, (d) safety and (e) problem solving (Carretero, Vuorikari, and Punie 2017).

In the educational context, the DigCompEdu framework for educators was proposed as a "framework for the development of educators" digital competence in Europe' (Redecker 2017). The framework focuses on six areas: (a) professional engagement, (b) digital resources, (c) assessment, (d) teaching and learning, (e) empowering learners and (f) facilitating learners' digital competence, and relates to six levels of proficiency, from newcomer to pioneer. The DigCompEdu framework draws on competences claimed to be of importance for teachers. This can be illustrated by the area of "digital resources", which highlights competences such as identifying, assessing and selecting digital resources, creating, modifying and managing digital resources, safety, protecting resources and information and sharing digital resources safely, correctly and in accordance with copyright rules. Further, based on a literature review of 76 educational research articles concerning digital competence, Ilomäki et al. (2016) describe digital competence as the skills and knowledge that citizens need to take part in and contribute to a digitalized knowledge society.

To sum up, research on teachers' digital competence shows that there are challenges related to (a) defining digital competence in educational policy and practice, (b) teachers' current levels of digital competence and the time and contexts for CPD and (c) the degree of readiness at an organizational level for the digitalized school.

2.3.2. Technology readiness

The term technology readiness was first used by the research Parasuraman in the year 2000. According to him, the technology-readiness construct refers to "people's propensity to embrace and use new technologies for accomplishing goals in home life and at work"

(Parasuraman, 2000). Technology Readiness speaks to a gestalt of mental incentives and inhibitors that by and large decide an individual's inclination to utilize new advancements. During the adoption stage of new technologies, consumers develop positive or negative feelings concerning the technological product, through their either positive or negative opinions regarding the product. These feelings are examined under four sub-dimensions as Optimism, Innovativeness, Discomfort, and Insecurity (Ruchita Pangriya, 2021).

Technology readiness relates to the perceptions, beliefs, and feelings an individual hold concerning high-tech products and services. Past studies propose that an individual can simultaneously, present both enthusiastic and adverse technology reliance and the harmony between these convictions decides their inclination to acknowledge or dismiss a new technology (Rosenbaum & Wong, 2015).

Studies on the use of technology and its assimilation in learning environments have shown that there is a link between the teachers' concepts and lesson planning (Cuban, 1986; Park & Ertmer, 2008) and the teachers' conduct in a technology-rich classroom (Ertmer & Ottenbreit-Leftwich, 2010).

An empirical study by Wendy Barber (2014) looked at Online learning and flipped class room models present pedagogical challenges to instructors in developing a sense of community within digital learning environments. She asserts that instructors battle to find contemporary teaching strategies to establish and maintain these flipped and blended digital communities.

Students want more assignments that are technology based, yet teachers struggle to incorporate technology into the curriculum. According to an empirical study by Michele Dornisch (2013), the wedge between student’s satisfaction with utilizing technology for learning and teacher satisfaction in utilizing technology for teaching students highlight a need for more appealing technology based assignments and teachers point out a variety of reasons for their reluctance to utilize technology. Teachers having access to technology doesn’t ensure implementation into curriculum when teaching. An empirical study by Reinhart (Year), reveals that access to current technology doesn’t guarantee teachers will integrate technology to create or advance to higher order thinking for students.

According to Davis (1989) the main contributor to actual use of a new technology is its perceived usefulness. Hence, people mostly adopt new technologies based on their

functions, rather than based on practically. Users are, for instance, willing to adopt a difficult system if it captures a critical function. However, in practical terms, about 90% of research done on TAM also shows direct effects of perceived ease of use on actual use (Schepers & Wetzels, 2007).

2.3.3. Motivational readiness

Motivation is the characteristic that pushes an individual toward acting, performing actions and achieving. When an individual lacks motivation to perform an action, that person either gets no results, or only mediocre results whereas, when there is motivation, the individual attains good results and achievements (Pinder, 2008). Motivation can either be extrinsic or intrinsic. Extrinsic motivations, also known as hygiene factors, are rewards surrounding a job (e.g. salaries, fringe benefits and job security), while intrinsic motivations are rewards of the job itself (e.g. self-respect, sense of accomplishment and personal growth). According to Herzberg (1987), intrinsic rewards are more satisfying and motivating. Ellis (1984) concluded that educators are primarily motivated by intrinsic rewards such as self-respect, responsibility and a sense of accomplishment.

According to Weiner (1990), motivation is determined by what one expects to get and the likelihood of getting it. This is related to self-efficacy i.e. belief that one is capable of performing in a certain manner to attain certain goals (Ormrod, 2006). According to Bandura (1977), self-efficacy is the individual's belief about his/her capabilities to produce designated levels of performance that exercise influence over events that affect one's life. Bandura (1977) has shown that self-efficacy has an impact on an individual's psychological state and motivation. Individuals with low self-efficacy believe difficult tasks are beyond their capabilities; they are also likely to lose confidence in personal abilities (Bandura, 1977). Agreeing with this argument is Ellis (1984), who posits that educators are mostly motivated by intrinsic factors which may include one's self-efficacy.

Research has shown that teachers who do not feel ready and confident to use the technology are unlikely to integrate it in their pedagogy (Lau & Sim, 2008; Chigona & Chigona, 2010). Other intrinsic factors affecting the use include inadequate knowledge to evaluate the role of ICT in teaching and learning, and lack of skills to use the ICTs. It is argued that the ICT training the educators get is implemented in such a way that it hardly equips them with the Technological Pedagogical Content Knowledge (TPCK). This knowledge is required for the teachers to integrate ICTs in their teaching (Mishra & Koehler, 2006). Some educators do not

use ICT in their teaching because they are computer-phobic (Sherman & Howard, 2012). As much as the educators' intrinsic factors towards ICT can affect the use of the technology in the classroom, extrinsic factors, such as the ratio of learners to a computer in the school's laboratory, and ICT policies in the schools, could demotivate educators from using the technology. For Sylvia and Hutchinson (1985), educator motivation is based on the freedom to try new ideas, the achievement of appropriate responsibility levels, and intrinsic work elements. According to the researchers, true job satisfaction among educators is derived from the gratification of higher- order needs – social relations, esteem and actualization, rather than lower-order needs.

Another study carried examined the teachers' perceptions on the implementation of mobile learning via mobile phone at schools. The sample for this study comprised thirty eight teachers who were teaching Information Technology (IT) subjects from various primary schools in Penang, Malaysia. A quantitative survey was administered to the respondents whereby results indicated that the adoption of mobile learning via mobile phone at schools was not perceived well among respondents. Moreover, respondents also were quite skeptical about future of mobile learning should it be implemented at their schools. The article concludes with emerging concerns which may have implications for future studies, specifically on whether or not mobile phone can effectively be adopted as teaching and learning tools for Malaysian mainstream schooling.

A study carried by Mahande & Akram, (2021) with the aim at empirically creating and trying out a dimension model of various motivational constructs with the assumptions of indicators that construct it. This research proposes a theoretical mannequin which can be built-in into three motivational theories: ARCS, McClelland's needs, and Self-Determinant Theory (SDT). The assemble warning signs have been developed and then validated empirically at two universities in Makassar, Indonesia. A quantitative technique with survey method used to be used. The research pattern consisted of seventy one lecturers and 210 students selected purposively. The evaluation of dimension fashions used partial least rectangular (PLS). The outcomes show that the assemble of motivation with warning signs that constructed it met validity and reliability requirements. The effects of this lookup present two choice units for explaining the relationship between motivational elements including the symptoms that impact the use of on-line getting to know systems in tertiary institutions.

2.4 digital pedagogy

In the previous paragraphs it was discussed how education evolve from education 1.0 to education 4.0 as a result of an unprecedented revolution in technology thereby causing a shifting in education from a traditional classroom teaching to a digital platform of teaching. Pedagogy was also discussed in detailed in the previous paragraphs. This section focuses on digital pedagogy and that is reason why it was important to discuss about the first two concepts in order to clearly describe what digital pedagogy is all about. With the great industrial revolution the future of educational technology seems brighter, with explosion of devices such as smartphones, tablet, netbooks, artificial intelligent, robotic, high internet bandwidth and many more. As a result of this it is suddenly seen how students and lecturers have access to powerful computing technology that offers the possibility of a new way of learning and teaching. According to (Srivastava, 2016), "Digital pedagogy, the term emerged from the juxtaposition of technical skills, pedagogical practices and understanding of curriculum design approach, which are appropriate for learners. Digital Pedagogy is effective in supporting, enhancing, and transforming the process of teaching and learning and in consequence provides enriched, assorted and flexible learning opportunities for learners. It also offers a base to engage learners in constructive learning through which learners dynamically construct and apply learning in decisive, purposeful and significant ways." The Digital Pedagogy program incorporates contemporary teaching and learning strategies. It features personalised approaches, intellectual rigour and engagement, connectedness to global contexts, supportive and collaborative classroom environments and a clear alignment of curriculum, assessment and reporting to improve outcomes for students." It is a technique to work and learn with ICT tools to assist quality enriched learning experiences for 21st century learners (Srivastava, 2016). Digital Pedagogy means the use of ICT tools, techniques and gadgets i.e. social media, multimedia applications, cloud computing, online games and applications, mobile devices, web 2.0 tools, productivity applications, and interoperable systems to enhance or to change to experience of education and transforms teaching and learning to provide rich, diverse and flexible learning opportunities for a digital generation (Srivastava, 2016).

2.5 Digital Pedagogy Readiness

According to Brown, (2002) E-readiness concept has been used as from the year 2000 and it refers to the readiness of a country to adopt information and communication technology (ICT). Therefore the term "E-readiness" is defined as the level of development at which an

individual is ready to undertake learning with specific hardware (Brown, 2002). Readiness for university education can be defined according to Corley (2007) as the level of preparation students need in order to enrol and succeed, without remediation in a credit-bearing program at higher education institution. As it can be seen today e-readiness is introduced in several field of life such as e-commerce, e-government, e-business and many others. Choucri et al., 2003 also defined e-readiness as the capacity to pursue opportunities facilitated by the use of e-resources such as internet. Also since the use of e-learning is growing it becomes increasingly important to determine the readiness of organizations for adoption before and even after using e-learning.

According to Oketch (2013) lecturers have been identified to be a major factor influencing the success of e-learning, therefore the lecturers needs to be well equipped with ICT skills and trained on how to make course materials available online and take advantage of new teaching methods, with the rapidly changing in technology, lecturers training and development is of upmost importance in order to keep up with this change. Some authors such as Wang (2002) and Fallan (1994) support the point that the teaching method of teachers is generally founded on their own schooling, training and experiences. Lecturers therefore need to be equipped with appropriate pedagogical training on how to integrate ICT into their teaching program. Altogether, lecturers' motivation, skills and pedagogical approach are in imperative issues that form an essential part of a good and quality digital pedagogy system. According to Oketche (2013) digital pedagogy readiness assessment is essential for universities that want to implement digital pedagogy and those that have the system in place. In general, readiness assessment provide key information to provide solution which can cater to the specific needs of each teaching group. Institutional management support, web content availability, ICT infrastructure, alongside with skilled human resources are crucial in determining readiness for digital pedagogy.

Readiness assessment model

E-readiness assessment allows one to design comprehensive e-learning strategies and effectively implement ICT goals. Therefore an e-readiness assessment help to calibrate the degree of ability and the capacity to pursue knowledge in a specific context. E-readiness assessment is imperative because different groups of people, different nations and population have different ways of responding to knowledge oriented initiatives, so e-readiness assessment is done in order to take into account those differences and design digital pedagogy

readiness model specific to a particular group of people. Every tool referred to the need to consider: organizational readiness in the categories of organizational culture, human resources, and financial resources; learner readiness in areas such as learner characteristics equipment

readiness that covers infrastructure as well as readiness with reference to the operation of the equipment. For these tools, similarities were identified in broad headings, but there were variations in how the authors interpreted the categories within these headings; for example what Aydin and Tasci (2005) classify as self-development what can be easily categorized as learner self- efficacy and motivation, this same concept would fall under human resources in Chapnick's (2000) and Borotis's and Poulymenakou's (2004) models. These variances provided a basis for the designing and developing this new tool for e-learning readiness. Here are some models discussed below and they have factors that have been used in institutions of learning and therefore look at factors that are useful in carrying out this research.

Chapnick (2000) E-Learning Readiness Model

According Chapnick (2000) e-learning needs assessment is designed to answer these questions: Can we do this? If we can do this, how the heck are we going to? What are the outcomes and how do we measure them? Here's a model that can help with one part of the assessment process--determining your e-learning readiness.

Many training and development professionals receive negative responses from clients and managers upon hearing the term needs assessment. Many others, including myself, have noticed that such terminology substitutions as "organizational diagnosis" or "determining goals" make the "maybe we should step back and see what's really going on here before we implement the solution" discussion go much more smoothly. It would be a mistake to assume this backlash is merely a jargon battle. A traditional needs assessment, which is defined as a process for determining the gap between what learners know and what they need to know, may result in the creation of excellent training. However, in today's dynamic workplace, and given the proliferation of new high-tech education tools (you know, e-learning), focusing exclusively on creating excellent training is missing the mark.

Chapnick (2000) was able designed a model which could be used to measure eLearning readiness of institutions. It looked at; psychological, sociological, environmental, human

resources (HR), financial readiness, technological skill (aptitude), equipment, content readiness. He said his readiness model was designed to simplify the process of getting the basic information necessary to answer the questions. Grouping together a wide variety of factors into eight categories allows practitioners to use the same process to assess the vastly different stakeholders in the system. The proposed model grouped different factors into eight categories, which are summarized in the Table 7.0. This model has been used by a variety of institutions in a number of countries to assess their own eLearning readiness.

Figure7.0: E-Learning Readiness Factors Model (Chapnick, 2000)

E-Learning Readiness Factors	Explanation of Factors
Psychological readiness	The effect of an individual's state of mind on the outcome of the e-learning initiative. Considered a particularly important factor, because it can sabotage the implementation process
Sociological readiness	The interpersonal aspects of the environment within which the e-learning program will be implemented
Environmental readiness	The major forces operating on stakeholders, both inside and outside the organization
Human resource readiness	The availability and design of the human support system
Financial readiness	The budget size and allocation process for the e-learning program
Technological skill (aptitude) readiness	The observable and measurable technical competencies of the organization and individuals involved
Equipment readiness	Possession of the proper equipment
Content readiness	The subject matter and goals of the construction

Source: Chapnick (2000)

Borotis and Poulymenakou (2004) ELearning Readiness Model

Borotis and Poulymenakou (2004) proposed a model with seven components, based on previous research and his own experience, to counter the lack of congruency in predefined

components of e-learning readiness models. He looked at the following; Business, technology, Content, Training process, Culture, Human resources and financial.

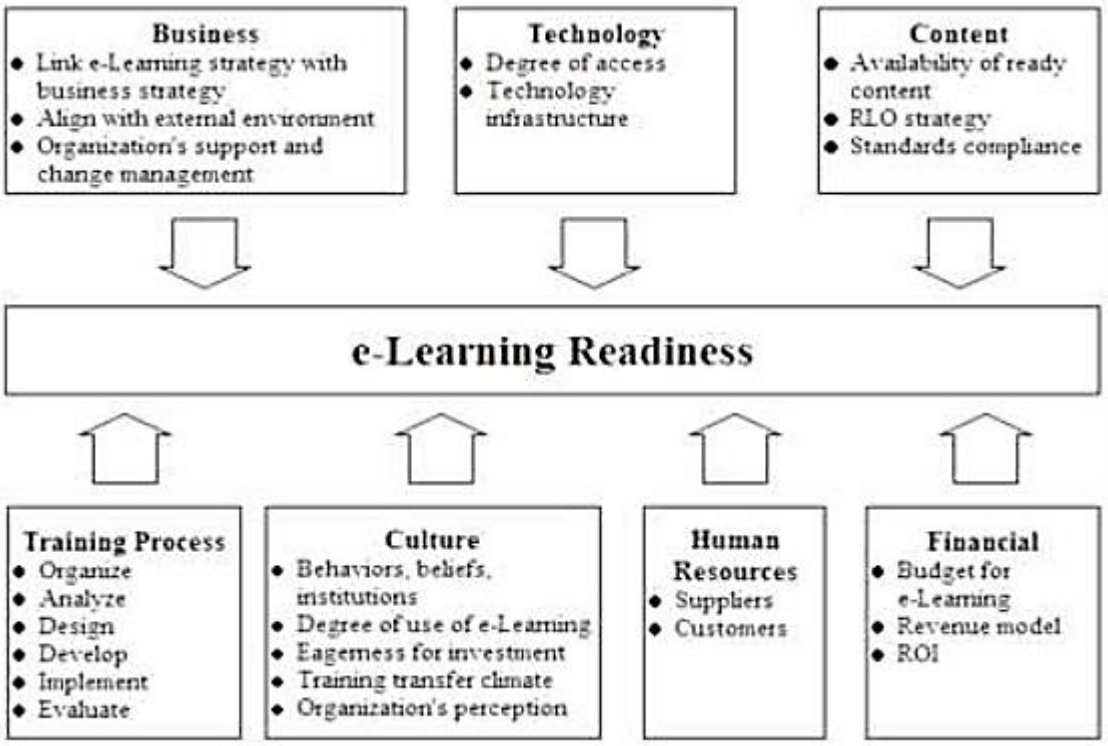


Figure 8.0:ELearning readiness Components,Borotis & Poulymenakou (2004)

Source: Borotis & Poulymenakou (2004)

Psycharis (2005) E-Learning Readiness Model

From the available research, there are a number of variables that keep on recurring and Psycharis (2005) suggests three large categories, resources, education and environment, each of which contains unique criteria. In the category resources, technological readiness, economic readiness and human resources readiness are considered as the main factors. Education means the readiness of content and the educational readiness. Environment includes entrepreneurial readiness, leadership readiness and readiness of culture. Psycharis (2005) proposed a new model built from five e-learning models developed by Rosenberg (2000), Chapnick (2000), Broadbent (2001), Worknowledge (2003) and Borotis and Poulymenakou (2004).It integrated all the five models grouping eight eLearning readiness factors into three categories as shown in Figure 8.0.

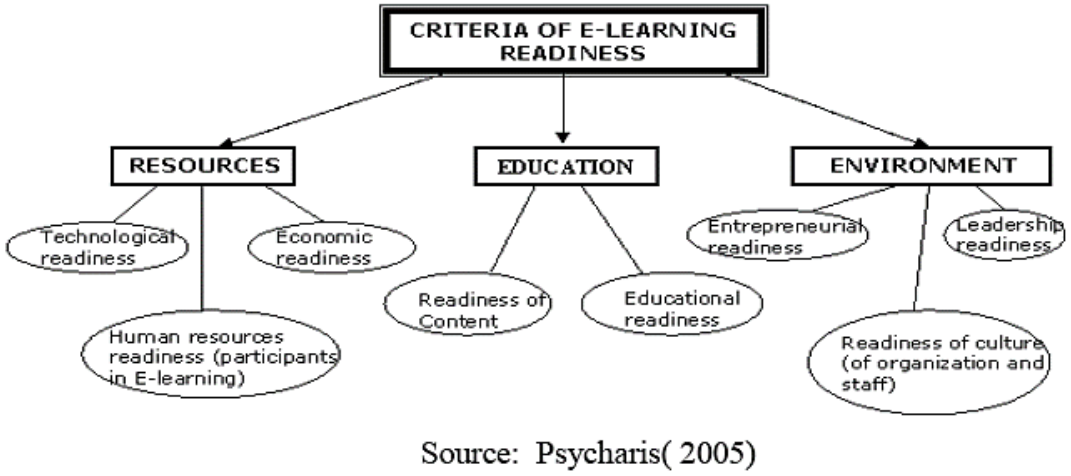


Figure 9.0: Criteria of e-learning readiness (Psycharis, 2005)

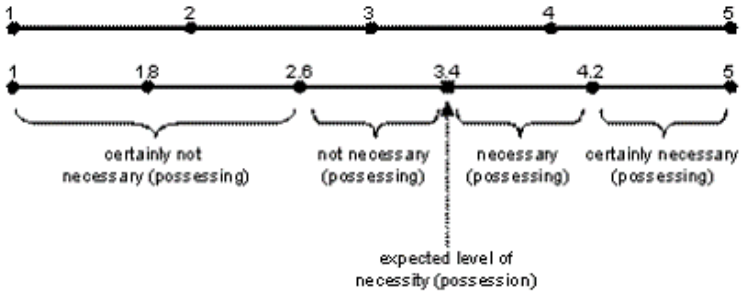
2.6 Aydin and Tasci (Aydin, 2005) Readiness measurement Model

According Aydin and Tasci (2005) and Muharina and Kelana (2017) in their research was using four variable measurements that were technology, innovation, people, and self-development. Technology is one of the factors that can be effectively used to adapt a technological innovation in an organization (Rogers, 2003). According to Rogers, technology has two components: hardware and software. Innovation as a factor mainly involves examination of past experiences (Aydin and Tasci 2005). People factor refers to the availability and set-up of the human support system. In this component some parameters such as receptivity and the prerequisites of humans to learn successfully in the new environment are defined (Saekow and Samson 2011). Self-development factor is an individual and organizational ability to actively seek for information about innovations to improve themselves, and those have higher self-efficacy beliefs for the achievement can adopt innovations earlier than others (Rogers, 2003).

Aydain and Tasci (Aydin, 2005) in their research developed a model with seven (7) categories: human resources, learning management system, learners, content, IT, finance and vendor. They argue that, as most companies purchase eLearning solutions from outside resources, the existence of sufficient numbers of e-learning vendors and/or consultants could be considered another predictor of whether or not e-learning would be adopted rapidly. The model therefore, asks managers about the average educational level of their employees, whether their company has skilled human resources or personnel or training department specialists, a champion (leader) and whether there are enough e-learning vendors and external eLearning experts.

Aydin and Tasci's (2005) developed a model to measure the expected level of readiness and the value of E-learning Readiness Score (ELR), MELR = 3.41 mean score was identified as the expected level of readiness with the item, while the respondent's answers was either having a higher or lower level of readiness. The measurement scale illustrates the point scale:

- 1–2.6 = Not ready needs a lot of work to achieve the successful implementation of e-learning
- 2.7–3.4 = Not ready and requires some work to achieve successful implementation of e-learning
- 3.5 – 4.2 = Ready but need few improvement
- 4.3 – 5 = Ready and go ahead to e-learning implementation.



Source : Aydin and Tasci's (2005)

Figure 7.0: Assessment model adopted from Aydin and Tasci's (2005)

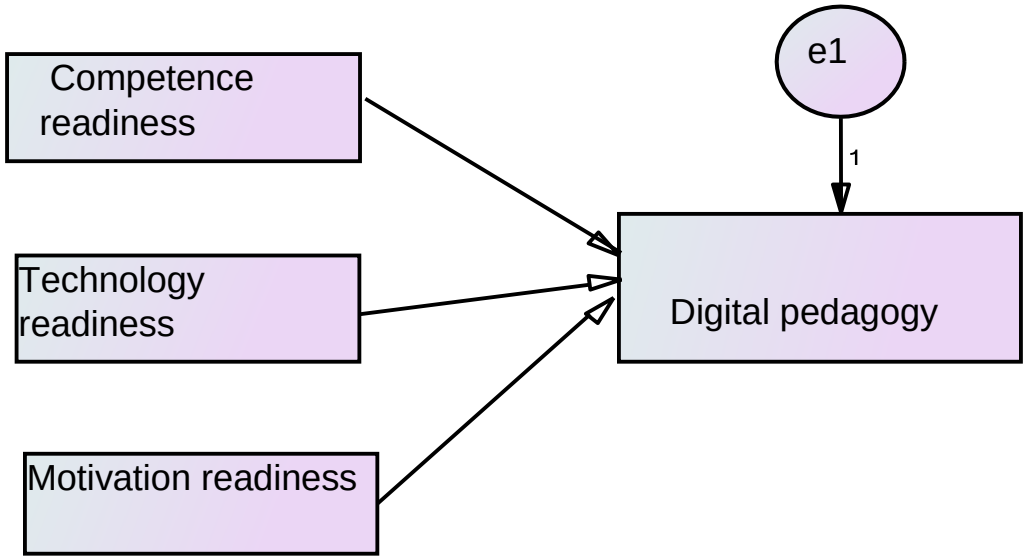
Table 1.0:E-Learning Readiness Assessment Model, Aydin and Tasci (2005)

	Resources	**Skills**	**Attitudes**
Technology	Access to computers and Internet	Ability to use computers and Internet	Positive attitude toward use of technology
Innovation	Barriers	Ability to adopt innovations	Openness to innovations
People	Average education level of employees **Experienced HR specialists. An** eLearning champion Enough vendors and external parties	Ability to learn via/with technology	
Self-development	**Budget**	Ability to manage time	Belief in self-development

Source: Aydin and Tasci (2005)

2.7 Conceptual framework

A conceptual framework is a written or visual representation of expected variables. Variables are simply the characteristics or properties that you want to study. The conceptual framework is generally developed on a literature review of existing studies and theories about the topic. Thus, in our research, we were stating a cause-and-effect relationship. Which was the influence of lecturers' readiness on the implementation of digital pedagogy at the University of Yaounde 1? Our independent variable was lecturers' readiness (competence readiness, technology readiness and motivation readiness) which were the cause used to see which effect it has on our dependent variable that is; digital pedagogy implementation. The flowchart below aims at illustrating the cause-and-effect relationship between the two variables; independent variable (lecturers' readiness) and the dependent variable (digital pedagogy)



Technology readiness

Technology is one of the factors that can be effectively used to adapt a technological innovation in an organization (Rogers, 2003).Without appropriate equipment and easy access, it is quite difficult, if not impossible, to implement any digital pedagogy (Oliver & Towers, 2000). In this research project, the technology readiness has the following sub-factors; institutional emails, IT infrastructure, digital learning platform, library management software, student information management system and assessment software. The sub-factors will assess whether the lectures have access to those software.

Competent Readiness

Competence is also one of the major factors that can effectively influence the implementation of the digital pedagogy. Therefore without the required competence the lecturers will not be able to effectively implement the digital pedagogy in our universities. In this research project, the competence readiness has the following sub-factors; ability to structure lesson plan on line, assessing student online, organising online classes. The sub-factors will assess whether the lectures have the ability to use the computers and the internet to run their classes.

Motivation Readiness

Finally motivation is also one of the factors that contribute greatly to the implementation of the digital pedagogy. Therefore motivation cannot be undermined when talking about digital pedagogy implementation, so it is imperative to assess lecturers' motivation for the implementation of digital pedagogy. In this research project, the motivation readiness has the following sub-factors; enthusiastic nature of lecturers, ready to integrate digital pedagogy, flexibility, willingness. The sub-factors will be used to assess whether the lecturers attitude towards digital pedagogy positive and also evaluate the influence on the implementation of digital pedagogy.

CHAPTER THREE

METHODOLOGY AND DATA COLLECTION

3.0 Methodology

This chapter focused on presenting the various steps of the research methodology that was used to collect data from the participants and the method of analysis. It focused on the model specification, description of the research design, population of the study, sampling procedure, description of the study location, data collection procedure, data management and analysis.

Model specification

Two models were used for this research namely:

a. The model of simple linear regressions which is mainly concerned with the use of single independent or predictor variables and one dependent or criterion variable (Amin, 2005).

The model of multiple regression analysis can be given as:

$Y = a + b1X1 + e$

Y = dependent variable

a = regression constant

b= coefficients to be estimated from the data (b1)

X1= the independent variables (X1)

e = error term

3.1.2 Description of Model Variables

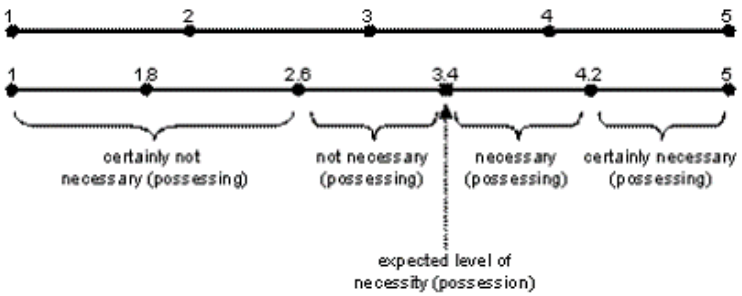
The dependent variable (Y) is modelled as a function of the independent variables (X) with corresponding coefficients (b), along with the constant term (a) and error term (e). This model is illustrated below on the table:

Variables	Code	Measure
Dependent variable	Y	Digital pedagogy readiness
Independent variable 1	X	Competency readiness
Independent variable 2	X	Technology readiness
Independent variable 3	X	Motivation readiness
Coefficient 1	b	Coefficient competency readiness
Coefficient 2	b	Coefficient of technology readiness
Coefficient 3	b	Coefficient of motivational readiness
Regression constant	a	Regression constant
Error term	e	Error term

b. The second model used was Assessment model from Aydin and Tasci's (2005) and it was used to determine the expected level of readiness, so the value of E-learning Readiness Score (ELR), MELR = 3.41 mean score was identified as the expected level of readiness with the item, while the respondent's answers was either having a higher or lower level of readiness.

The measurement scale illustrates the point scale:

- 1–2.6 = Not ready needs a lot of work to achieve the successful implementation of e-learning
- 2.7–3.4 = Not ready and requires some work to achieve successful implementation of e-learning
- 3.5 – 4.2 = Ready but need few improvement
- 4.3 – 5 = Ready and go ahead to e-learning implementation



Source : Aydin and Tasci's (2005)

3.1 Research design

Aaker et al (2002) defines a research design as the detailed blue print used to guide a research study toward its objectives. According to Amin (2005), a research design is a qualitative or quantitative approach used to collect and analyze data. To Creswell (2009:3), research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. In this work, the researcher employed the use of the quantitative approaches. Cross sectional survey design was used during data collection. According to saunders et al., (2004) a cross sectional survey design allows data to be collected at a single point in time without repetition from a sample selected to represent some large population and therefore using minimum time and resources. In this study, the design was favourable because of limited resources such as time and finances.

3.2 Study Area

This study was carried out at the University of Yaounde 1. The university is located in the Centre Region of Cameroon, in the Mfoundi division, in Yaounde III subdivision. The University of Yaoundé I (UYI), Alma Mater, is the mother of Cameroonian universities. In October 1961, following the reunification of the country, higher education was born in Cameroon under the denomination of Institute of University Studies. Thereafter, 26 July 1962 marked the creation of the Federal University of Cameroon which became the University of Yaoundé in 1973. The university of Yaoundé I, together with five other state universities (included the university of Yaoundé II) were created by decree No 93/026 of 19 January 1993 as a result of university reform. The university covers a total surface of 105.37 hectares of land. It is a bilingual institution(French and English) and is made up of four faculties and four specialised schools as presented as follows: Faculty of Arts, Humanities and Social Sciences (FALSH), Faculty of Sciences (FS), Faculty of Medicine and Biomedical Sciences (FMBS), Faculty of science of education (FSE), Higher teachers' training college (ENS), National advanced school of engineering (ENSPY), University Institute of wood Technology at Mbalmayo (IUT) and Higher teachers' training college of Technical Teaching Ebolowa (ENSET). It is made up of two virtual universities and 65 laboratories for research. There are over 42006 students sharing 64 major courses in 54 department and are served by over 1042 lecturers and over 884 administrative and supporting staff.

Teaching, training, and research activities are held in the departments and laboratories of the seven faculties/schools (4 faculties and 3 advanced professional schools). The three-cycle

degree system curriculum, namely bachelor's, master's, and doctorate (LMD/BMD system) has been in force since the academic year 2008/2009.

Specialised centres includes

- University Health Centre (CMS)
- Biotechnology Centre (CBT)
- University Library (BU)
- Information Technologies Centre (CUTI)

Virtual Universities

- The virtual University of Central Africa (UVAC)
- The National Virtual University (UVN)

Students and staff welfare

Many services are offered to the University of Yaoundé I, to the students, to the teaching and administrative staff in mobility. Foreign students have the same facilities as the nationals, namely the access to the University Library as well as to university restaurants, to counselling and back-up facilities. Students admitted to the university are provided with 2 restaurants having an intake capacity of 1 150 and 750 seats. Each of these subsidised restaurants offers approximately 1 000 meals per day, 100 CFA F per meal. Three halls of residence offer approximately 1120 beds, in individual and common rooms. The monthly rental prices range between 3 000 and 4 000 CFA F for the shared rooms, and 5 000 CFA F for the single rooms. In addition to the foregoing, the University Health Centre and the University Teaching Hospital Centre provide social and medical care to students. Financial assistance given annually by the Ministry of Higher Education comprises academic excellence, young science female student, disabled students, and students from poor background - and the Work Study Programme. Infrastructures for shared and individual sports are available in the UYI (Football, Handball, Volleyball, Athletics, Tennis, Handisport, Judo, Wrestling, Basketball etc). The university has 6 student associations, 20 cultural clubs and many scientific circles. Information Technologies Centre (CUTI) provides the access to the Internet through the campus. There are also Wi-Fi hotspots provided by a partner. The Services of the Vice-Rector office in charge of co-operation organize the reception of foreign administrative and teaching staffs by helping them obtain all the facilities necessary for an enjoyable stay. The

University also makes it easier for them, where necessary, to acquire stay visas in Cameroon. Assistance arrangements are also being set up in various faculties and schools.

Administrative organisation: The Administration of the University of Yaoundé I shall be composed of the following:

- Rectorate
- Central administration
- Faculty/School administrations

The organisation chart of central services of the university provides for a Rector, 3 Vice-rectors, a Secretary-general (Registrar), a Technical Adviser, 4 Departments (Academic Affairs and Cooperation (DAAC), Infrastructure, Planning and Development (DIPD), Administration and Finances (DAAF), Students' welfare (DECOU) and the decentralized structures of the Ministry of Finance (one Financial Controller, one Accounting officer, one chief accountant of accounting. The administration of each faculty comprises: a dean, 3 vice deans, a head of division in charge of administration and finances, heads of service and heads of department. Administration in advanced schools includes the following: a director and his deputy, a director of studies or a secretary- general as the case may be, a head of division of administration and finances, a bursar and Services.

The choice of the researcher was done based on the reputation of the university as the mother of the universities in Cameroon, and because as a student there, the researcher experience difficulties in studying during the COVID19 period as all our classes were sent online and it was difficult to interact with lecturers so the researcher though it was a good initiative to find out why it was difficult to interact with the lecturers.

3.3 Population study

The target populations in the study are lecturers from the University of Yaoundé 1, from the four main faculties of the university and two higher institutions. The total number of staff is as presented in the table below.

Table 3.0: presenting the total number of lecturers from the various faculties and schools

Faculties	Number of lecturers
Faculty of Arts, Humanities and Social Sciences (FALSH)	241
Faculty of Sciences (FS)	367
Faculty of Medicine and Biomedical Sciences (FMBS)	222
Faculty of education (FSE)	18
Higher teachers' training college (ENS)	206
National advanced school of engineering (ENSPY)	99
Total	1153

Source: University of Yaoundé 1 (DAAC)

3.4 sample and sampling technique

Sampling is the procedure a researcher uses to gather people, places or things to study. It is a process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group, (Kombo & Tromp, 2006). The participants targeted were sampled through convenience sampling technique. The researcher selected the participants because they were willing and available to participate in the study. The sample size was determined using the formulas as presented in the figure below:

3.4.1 Sample size

The sample size of lecturers was obtained using the formulas below and the sample size was determined to be 285. Due to the challenge of meeting lecturers, the researcher was able to administer only 200 questionnaires.

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Z= is the Z-score

e= is the margin of error

N=is the population size

P= is the population proportion

Sociodemographic description of the participants

2. Distribution of Participants by Gender

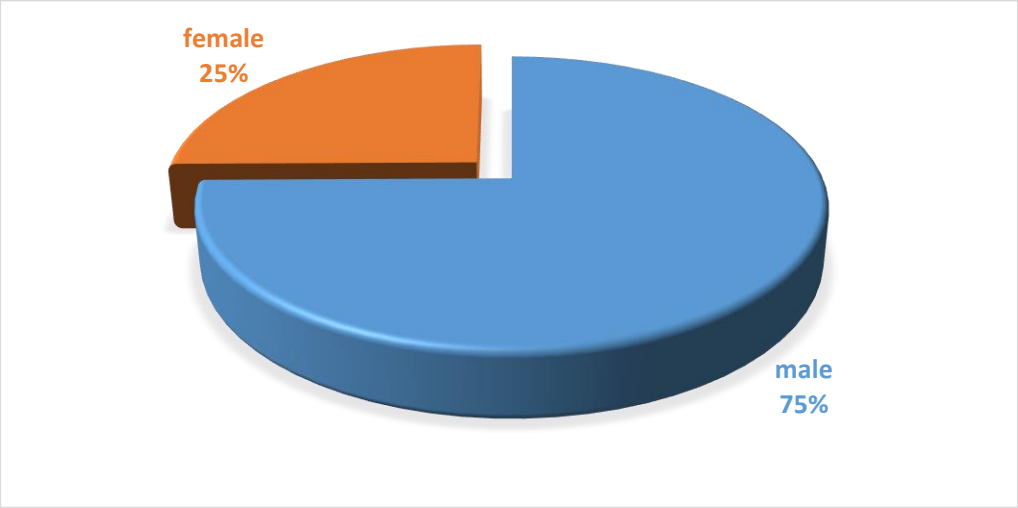


Figure 9.0: presenting the distribution of the participants by gender

The figure above present the frequency distribution of the participants and the results revealed that most participants were male (f= 110, %= 75) while female were weakly represented (f =37, %=25). This indicates that males constitute the majority of the lecturers in the University of Yaoundé 1.

4.1.3. Distribution of Participant by Age group

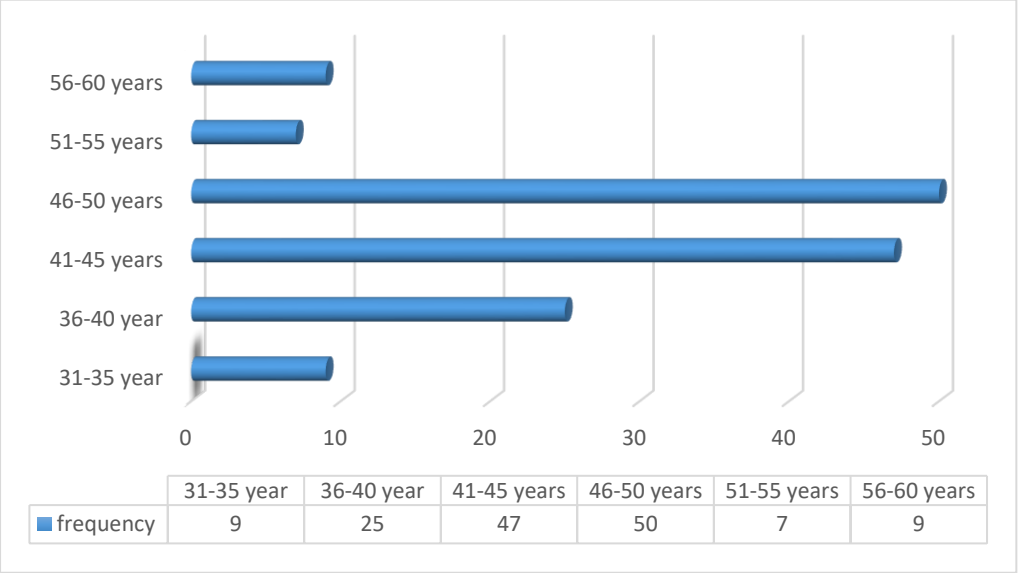


Figure 10.0: presenting the Distribution of Participant by Age group

The respondents were asked to indicate their age group and the findings are as stipulated in the figure above. In this work, it was observed that most respondents were found to be in the

age group 46-50 years (f=50, %=34), followed by the age group 41-45 years (f=47, %=32) and the age group 51-55years had the least number of respondents (f=7, %=5). The findings also reveal that no respondent were found in the age group 61 years and above. This results showed that the majority of the participants were matured and have being teaching for long. Therefore this could explain their attitude toward digital pedagogy. Gerstein (2014) said that "most educators have some common complaints such as: they don't have enough time; they don't have enough resources; they need more training; they need to teach using textbooks; they are afraid of losing control of the class and that they have always successfully thought that way, so he concluded that teacher are suffering from a fixed mind set symptom.

4.1.4 Distribution of Participants by Grade level

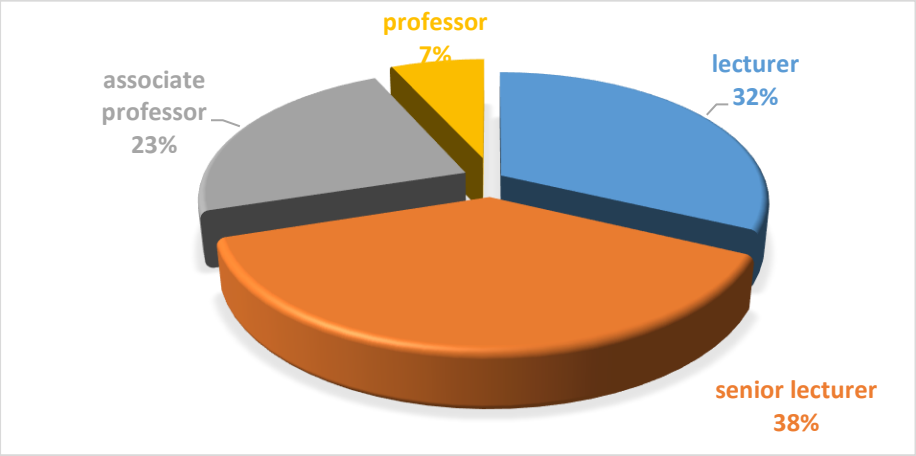


Figure 11.0: presenting Distribution of Participants by Grade level

The participants were asked to indicate their grade level as lecturers at the university and the findings are as stipulated in the figure above. The findings reveal that most participants were senior lecturers (f=56, %=38), followed by the lecturers (f=47, %32). Very few participants were Professors (f=10, %=7). This implies that the participants were highly skilled in their area of specialisation hence more likely to adopt an innovation and used as a predictor of digital pedagogy readiness.

4.1.5 Distribution of participants by faculty

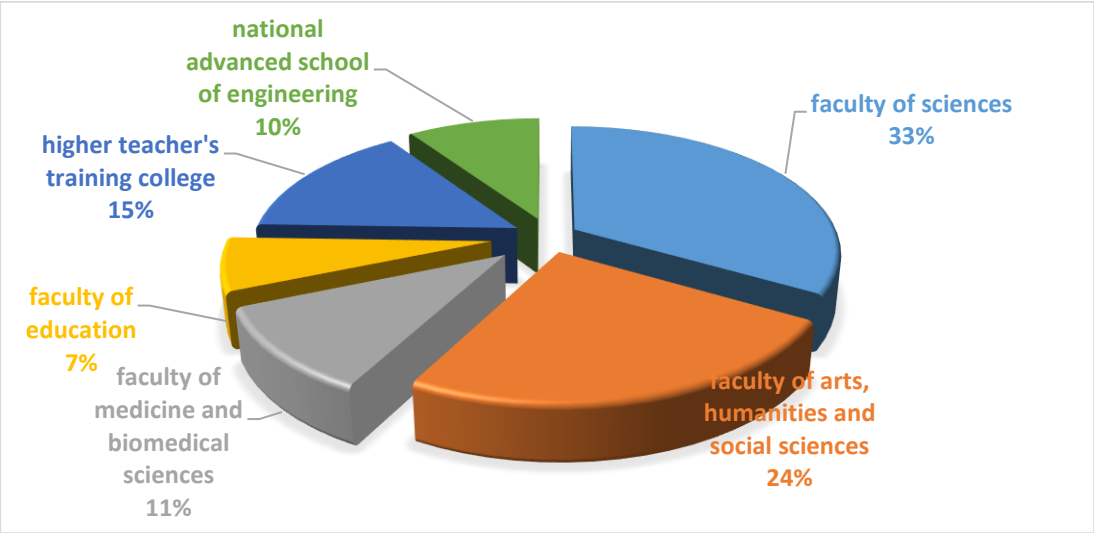


Figure 12.0: presenting Distribution of participants by faculty

The participants were also asked to indicate their faculty were they exercise their duties as lecturers at the university and the findings are as stipulated in the figure above. The finding showed that most of the participants were in the Faculty of Sciences (f=49, %33.3) and the Faculty of Arts, Humanities and Social Sciences was the second with the highest number of participants (f=36, %=24). This findings also reveal that the Faculty of Education had the least number of participants (f=10, %=7).

4.1.6. Distribution of participants by the number working year experience

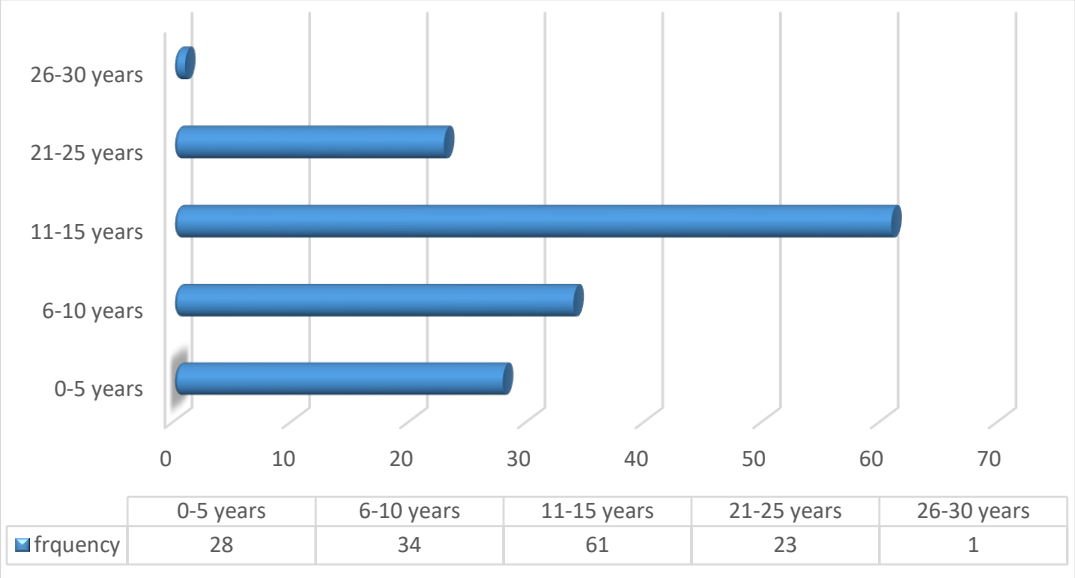


Figure 13.0: presenting Distribution of participants by the number working year experience

Finally concerning the Sociodemographic data the participants were asked to indicate their number of working year experience at the university and the findings are as stipulated in the figure 16.0 above. The findings showed that most participants had the working year experience between 11-15 years (f=61, %=42) and very few were found to have the working year experience between 26-30 years (f=1, %=.7). Finally the findings reveal that no participants had working year experience above 30 years. Therefore the result indicates they have good experience in teaching this could be an advantage for the easy implementation of digital pedagogy.

3.5 Research Instrument

This section describes how the research instrument was designed and how its validity and reliability were tested.

3.5.1 Questionnaire

Questionnaires are good for using to find out how widespread something is (Rugg and Petre, 2006). After considering the nature of data to be collected and nature of target population, the researcher decided to use Questionnaire as the survey instrument. A detailed questionnaire is framed with a brief covering letter (See Appendix) with following kind of questions;

- Closed and structured questions with pre-defined choices,
- Semantic differential scale questions,

To encourage the lecturers to express their opinion freely and without any embarrassment, the researcher mostly used closed-ended questions. Researcher thought they are very important in surveys and will help to establish rapport, gather information and increase understanding of their readiness for digital pedagogy. Questionnaire was framed by strictly following the relevant standards and with explanations of questions where ever necessary. Researcher tried to be specific, short and clear by avoiding open ended questions, assumptions, jargons and irrelevant questions. Questionnaires in print-format were given to lecturers and the responses were collected by hand. The questions were framed by taking care of all ethical facts related to an academic research. Proper confidentiality and security was given to the data collected, and the identities of participants were protected. There are few studies carried out recently in the same topic and they are included in Literature Survey. Researcher tried not to repeat them as it is. However, there are similarities in few questions asked, but the fundamental aim of this survey was to analyse the lecturers' readiness for digital pedagogy at the University of Yaounde 1.

3.6 Validation of the research instrument

This section will focus mostly on the reliability and validity of the research instrument

3.6.1 Validity of the research instrument

Validity has substitute meaning of the truth which indicates the accuracy of score observed and documented to the exact score of the object. Validity is the extent to which a test measures what it claims to measure (Yin, 2003). It is critical for a test to be valid in order for the results to be accurately applied and interpreted. The term validity refers to the quality of empirical data collection and its analysis. The results of research work deeply depend upon the quality of work and accuracy of data collection for analysis. During this research activity the researcher took the following steps to ensure the validity of results. The data collection instruments are obtained from another research activity that has occurred in Kenya (Oketch, 2013) and modified to suit the context of the studied area. The researcher reformulated these questionnaires according to research question and discussed with his supervisor as well as with other academic experts. These questionnaires supported the conceptual framework in order to get the best findings for the study. It is indicated that when a same instrument is used in different studies its validity is tested. The detail of the statistical formula is described in the analysis part. For validity testing, data sampling from lecturers from four faculties and two higher training schools of the university has been conducted in this survey during the same time frame. First the researcher provided introduction to the topic and intentions of survey during data collection. It was very helpful to get valid data from lecturers.

3.6.1.1 Content Validity

The content validities of the instruments were determined by experts (lecturers/ researchers). These experts carefully reviewed all the items of the instruments and judgments concerning how well the items represent the intended content area. Their judgments were based on whether all the variables had items which adequately represent them in the right proportions. The items were meticulously scrutinized by four judges who ticked either Yes/No for each of the items, based on their expert view on whether the items are measuring the intended variables. A tick on (Yes) represented a content valid item while (No) represented an invalid item. The formula below was used in calculating the content validity index (CVI) for each of the items and the whole instrument.

$$\mathbf{CVI} = \frac{\textbf{Number of items declared valid by judges}}{\textbf{Total number of items}}$$

Table 1: Indices of content validity index

S/N	Variable	Nº of items	Nº of Judges	Yes	No	CVI
1	Competence readiness	6	4	4	0	1.00
2	Technology readiness	6	4	4	2	0.50
3	Motivational readiness	6	4	3	1	0.75
	Overall content validity index					0.75

Source: Researcher survey 2021

The content validity index was 0.75 indicating that the content relevant variance of the instrument was 75%.

3.6.2 Reliability of the research instrument

According to Yin (2003), reliability evaluates the quality of research and shows the collision of variation from the measurement of the results. Reliability refers to the consistency of a measure. A test is considered reliable if the same result repeatedly is produced. The purpose of reliability is to minimize the errors and biases in a research work. Reliability presents that the operations of the study, such as the data collection procedures can be repeated with the same result. Reliability of the research can be improved by taking some measurements to reduce the chances of errors that may lead towards inappropriate results. Questionnaires for empirical data collection are done at the same time for the avoiding different results. The questionnaires are distributed only within the domain of interested group such as lecturers instead of the general population. To facilitate responding, the goal and the objective of the study is also included at the start of questionnaires.

The Cronbach's alpha was used to calculate the reliability of the instrument from the data collected from the pre-test with 20 participants and the reliability was obtained as presented below:

Table: Indices of internal consistency

S/N	Variable	N	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
1	Competence readiness	6	0.96	0.99
2	Technology readiness	6	0.88	0.97
3	Motivational readiness	6	0.86	0.97
	Total	18	0.90	0.98

Source: Researcher survey 2021

The internal consistency estimate was 0.90 indicating that the instrument was 90% reliable to collect data repeatedly.

3.7 Ethical Issues

According Blaxter et al., (2006), consideration of possible or actual ethical issues is an essential part of any research project and the researcher took sufficient care about this throughout the research project. Gaining the cooperation and consent from the Institution to survey the lecturers and the use of the facilities, were taken care first. Other common ethical issues during data collection, analysis and writing stages like confidentiality, anonymity, legality, professionalism and participation were also taken care, and was included in the questionnaire as well. Researcher did not come across or practiced any unethical practices during the action of this research.

3.8 Data collection

The data was collected within a period of three months, from the 22nd of May to the 6th of August 2021. To collect primary data, a questionnaire was design and administered to the participants. The questionnaire have five (5) sections, Section one (1) consist of several items to gather data regarding demographic characteristics of the participant such as gender, age, grade level, faculties where they belong and their working year experience. Section two (2) of the questionnaire was designed to assess lecturers competence readiness by assessing their ability to used digital pedagogy resources, technological competencies and motivation towards digital pedagogy. Section three (3) of the questionnaire was designed to assess the technology readiness of the lectures by assessing their accessibility to technological resources. Section four (4) of the questionnaire was designed to assess the motivation readiness of the lectures by assessing; their perception and their attitude towards digital pedagogy. Section five (5) of the questionnaire was designed to assess the digital pedagogy

readiness by assessing; availability of course material in digital pedagogy system, and need for training on digital pedagogy content development.

Therefore the data was collected from the lecturers from the four main faculties and the two higher institution of the University of Yaounde 1. This was possible with the help of the staff from DAAC who permitted me to administered the questionnaire to most lecturers who came there for services and also I went to each faculty administer the questionnaire to the lecturers. To collect data for this study the researcher relied on quantitative manner, because the intention was to use close-ended questionnaire rated by lecturers. Use of questionnaire as the main method for data collection was adopted for a few reasons. First, it was possible to generate more data in shorter time. It was less subjective than qualitative methods because it could be independently analysed. It was clearly known what constructs or issues the researcher should focus on. Lecturers who filled the questionnaire felt more comfortable to fill the questionnaire, because they had very limited time. Information generated from quantitative approach could be easily used for simplification and estimation.

3.9 Data Management

The data obtained from this study was entered into the data collection form. At the end of each day, the data was transcribed into MS. Excel. The MS. Excel files were locked with password to prevent unauthorized access to participant's information. The hard copy data collection forms was put into envelop and then sealed and achieved in a locker expected to be available within 5 years after study. The protected excel files was stored into an 8GB flash drive and Google Drive Cloud Storage.

3.10 Method of data analysis

The data collected was transferred into the Statistical Package for Social Sciences (SPSS version 21) software and the software was used to carry out the analysis of the data. Both descriptive and inferential statistics were used to analyse the data. Descriptive statistics was used to determine the lectures digital pedagogy readiness, while inferential statistics (simple linear regression analysis) was conducted to determine how the independent variables influence the digital pedagogy readiness and test whether the independent variable had the significant influence on the dependent variable. Assessment model from Aydin and Tasci's (2005) was used to determine the expected level of readiness, so the value of E-learning Readiness Score (ELR), MELR = 3.41 mean score was identified as the expected level of readiness with the item, while the respondent's answers was either having a higher or lower level of readiness.

Table 4.0: The summary table for chapter three

Research theme	Research question	Objective of the study	Hypothesis	Variables	Research theory	Methodology	Research instrument
ASSESSING LECTURER'S READINESS FOR DIGITAL PEDAGOGY IN CAMEROON STATES UNIVERSITIES" A CASE STUDY OF UNIVERSITY OF YAOUNDE I.	General research question: to what extent does lecturers' readiness influence digital pedagogy implementation at the University of Yaounde 1?	General objective: to assess Lecturers' readiness for digital pedagogy at the University of Yaounde 1	General hypothesis: Lecturers' readiness does not significantly influence the implementation of digital pedagogy at the University of Yaounde 1	Lecturers' readiness and digital pedagogy	Conscious competence theory of learning a new skill, Technology Acceptance Model, Technology Readiness Index Model (TRI) and Self-determination Theory (SDT)	cross-sectional survey	Questionnaire
	Specific question1: To what extent does competence readiness influences digital pedagogy implemetation?	Specific objective 1: To assess competence readiness of lecturers for digital pedagogy implementation	Hypothesis 1: Lecturer's competences readiness does not significantly influence digital pedagogy implementation.	Competences readiness	Conscious competence theory of learning a new skill	cross-sectional survey	Questionnaire
	Specific question 2: to what extent does technology readiness influences digital pedagogy implementation?	Specific objective 2: To evaluate technology readiness of lecturers for digital pedagogy implementation	Hypothesis 2: Lecturers' technology readiness does not significantly influence digital pedagogy implementation	Technological readiness	Technology Acceptance Model and Technology Readiness Index Model (TRI)	cross-sectional survey	Questionnaire

	Specific question 3: to what extent does motivation readiness influences digital pedagogy readiness implementation?	Specific question 3: To assess motivation readiness of lecturers for digital pedagogy implementation	Hypothesis 3: Lecturer's motivational readiness does not significantly influence digital pedagogy implementation.	motivational readiness	Self-determination Theory (SDT)	cross-sectional survey	Questionnaire

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents and discusses the findings from the field as presented in the research methodology in chapter three. The first part discusses the general information of the respondents; the second part presents the results on the digital pedagogy readiness of the lecturers from the University of Yaoundé 1. As the researcher sought to assess lecturers' readiness for digital pedagogy by evaluating factors like lecturers' competence readiness, technological readiness and motivation readiness.

4.1 General information

This section details the background information of the participants. It gives information on the gender of the participants, age of the participants, the grade level of the participants, the faculty of the participants, and finally the number of working year experience of the participants at the university and is presented in chapter three. The information was purposed at testing the appropriateness of the participants in answering the questions regarding digital pedagogy readiness at the university.

4.1.1 Response rate

A total number of 200 questionnaires were administered to the lecturers at the University of Yaoundé 1. One hundred and forty seven (147) were returned resulting to 73.5% rate. This response rates were quite good and representative in addition

4.2 presentation of results according to the research questions

In This section, descriptive statistics was used to determine lecturers' readiness for digital pedagogy, so the mean and standard deviation (SD) were determined for each question (item). The lecturers' readiness was determined using the Readiness Assessment model from Aydin and Tasci's (2005) with the scale readiness of 3.4 to determine the expected level of readiness.

4.2.1 Finding on research question 1: What are the required competences for digital pedagogy?

Table 5.0: presenting the Findings on competence readiness

Items	Competence	N. of Items	N	Mean	SD
Q1	I am able to structure all my learning objectives, lesson plan and students evaluation online.	6	147	3.50	.696
Q2	I can generate printed documents like student assignment			3.60	.569
Q3	I can organize and hold an online class with my students.			3.39	.708
Q4	I'm able to use technology to gather, organize, and report information about student performance like Excel			3.07	.904
Q5	I develop tools to carry out students' assessment online			3.17	.788
Q6	I use the internet to support professional development like participating on on-line professional development workshops and seminars			3.97	3.492
	Overall mean			3.54	

Table 5.0 display the mean scores and standard deviation for item below related to the respondents competence (technical skills and knowledge) in the use of digital pedagogy. From the result, the respondents mean score for Item Q1 (structuring of learning objectives, lesson plan and student evaluation online) showed to be M_{Q1}=3.50 which is greater than 3.4 indicating that the majority of lecturers were able to structure their lessons online. The second Item Q2 on generating printing document shown to have a greater mean score to that of the expected readiness level [M_{Q2}=3.60> M_{elr}=3.4] which mean that most lecturers were able to generate print document. The findings also revealed that Item Q3,Q4, and Q5 had mean scores less than 3.4 indicating that the majority of lecturers were not able to organise online classes, reporting students' performance using technology and to carry online assessment for students. Item Q6 had a greater mean score of M_{Q6}=3.9 that show that majority of lecturers were able to use technology to support professional development. The overall mean score for the six Items above related to respondents competence is [M_c=3.54>M_{elr}=3.4]. From the result above, there is an indication that the majority of the respondents were ready but needed

few improvement and they had the required competence to implement digital pedagogy in our campuses.

4.2.2. Findings on research question two: What are the required technological resources for digital pedagogy?

The participants were asked to indicate their technological readiness toward digital pedagogy with regards to access to the required technological resources. This is because learning is facilitated by the access to technological resources.

Table 6.0: presenting findings on technology readiness

Items	Technology	N. of Items	N	Mean	SD
Q1	I have an institutional email that permits me to communicate with student.	6	147	2.76	1.089
Q2	I have access to reliable IT infrastructure			2.84	.811
Q3	I have access to a good digital learning platform that permit me to delivers learning experience to students			2.74	.683
Q4	I have access to good library management software to direct student on quality reading materials.			2.30	.744
Q5	I have a good student information system that store and track all student information including grades and attendance records			2.30	.744
Q6	I have a good assessment software that provides students with a portal to take computerized tests and quizzes			2.41	1.025
	Overall mean			2.55	

Table 4.0 display the mean scores and standard deviation for item below related to the participant technology readiness in the use of digital pedagogy. From the findings above, the majority of the participants disagree to a great extent that they have access to the required technological resources to implement digital pedagogy. All the items above had the mean scores below the expected level of readiness $M_{elr}=3.4$. The overall mean score for the six Items related to technology readiness was below the expected readiness level [$M_{tr}=2.55<M_{elr}=3.4$]. From the results there is an indication that the majorities of lecturers

were not technologically ready and requires some work to achieve successful implementation of digital pedagogy.

4.2.3. Findings on research question three: What are the required motivational factors for digital pedagogy?

The participants were asked to indicate their motivational readiness toward digital pedagogy with regards to their personal motivation. This is because the fate learning solely depends on lecturers' motivation.

Table 7.0: presenting the Findings on motivation readiness

Items	Technology	N. of Items	N	Mean	SD
Q1	I am highly motivated and enthusiastic about digital pedagogy	6	147	3.67	.563
Q2	I am ready to integrate digital pedagogy in teaching and I am willing to devote			3.76	.427
Q3	I can recommend digital pedagogy as one of the alternatives for the traditional teaching and learning approach.			3.53	.612
Q4	I find digital pedagogy system flexible to interact with students			3.53	.612
Q5	I find digital pedagogy system flexible to interact with students			3.46	.500
Q6	I believe that digital pedagogy is useful for my research and can increase my productivity			3.59	.493
	Overall mean			3.59	

Table 5.0 display the mean scores and standard deviation for item below related to the participant motivation readiness in the use of digital pedagogy. From the results, the mean scores for all the six items was found to be above the expected level of readiness(3.4) which indicates that the majority of the participants agree to the greater extend that they are highly motivated toward the implementation of digital pedagogy. The overall mean score for the six items above related to motivation readiness was above the expected level of readiness [M_{mr}=3.59>M_{elr}=3.4]. From the results there is an indication that the majorities of lecturers were motivationally ready but needed few improvements to effectively implement digital pedagogy.

4.3 Inferential Analysis

A hypothesis is a predicted answer to a research question or problem. In social science research, there are two types of hypotheses; the Alternative hypothesis (sometimes called secondary hypothesis) denoted Ha which represents the hypothesis that the researcher wants to verify and the statistical or null hypothesis denoted Ho. These hypotheses are generally formulated in terms of independent and dependent variables. During this research project, three research hypotheses were formulated as follows:

- HO1: Lecturer's competences readiness does not significantly influence digital pedagogy implementation.
- HA1: Lecturer's competences readiness significantly influences digital pedagogy implementation.
- HO2: Lecturers' technology readiness does not significantly influence digital pedagogy implementation.
- HA2: Lecturers' technology readiness significantly influences digital pedagogy implementation.
- HO3: Lecturer's motivational readiness does not significantly influence digital pedagogy implementation.
- HA3: Lecturer's motivational readiness does not significantly influence digital pedagogy implementation.

4.3.1 Verification of research hypothesis 1 (RHo1)

- HO1: Lecturer's competences readiness does not significantly influence digital pedagogy implementation.
- HA1: Lecturer's competences readiness significantly influences digital pedagogy implementation.

Table 8.0: model summary table for competence

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.109[a]	.012	.005	2.887

a. Predictors: (Constant), Sum of Competence

The independent variable studied, explain that digital pedagogy readiness of lecturers from the University of Yaoundé 1 is influence by 1% by the independent variable, as represented by the R^2 in the table 7.0 above. This indicated that competence has a very weak influence on digital pedagogy readiness and 99% of digital readiness is influence by other factors.

Table 9.0: ANOVA for competence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.637	1	14.637	1.756	.187[b]
	Residual	1208.384	145	8.334		
	Total	1223.020	146			

a. Dependent Variable: Sum of digital pedagogy readiness

b. Predictors: (Constant), Sum of Competence

The analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as (F(1, 146)=1.756, P >0.05. The P-value obtained indicated that were was no statistical significant influence of competence over digital pedagogy readiness. The result above reveals that the competence of lecturers is not a strong predictor of digital pedagogy readiness because they are weakly linearly related.

Table 10.0: coefficients for competence.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.505	1.093		15.107	.000
	Sum of Competence	.068	.052	.109	1.325	.187

a. Dependent Variable: Sum of digital pedagogy readiness

The simple linear regression model indicates that the independent variable (competence) had a positive β coefficient. According to the regression equation established, competence of lecturers at a constant of zero, digital pedagogy readiness will be 16.505. The findings also reveals that every unit increase in competence will lead to a 0.068 increase in digital pedagogy readiness. At 5% level of significance and 95% level of confidence competence

had a 0.187 level of significance, which means it has no significance influence in digital pedagogy readiness of lecturers.

The interpretation of the results

Table 8-10 above present the Linear Regression Analysis results. In the regression, competence was the independent variable while digital pedagogy was the dependent variable. The results indicate R = 0.109, R^2 = 0.012, (F (1, 146) =1.756, P >0.05. The R value explains how well the model describes the data. In this case, the model describes 1.1% of the data. R^2 explains the extent to which the variability of the dependent variable, digital pedagogy readiness is explained by the independent variable competence. In this case, 1.2% of the variability in digital pedagogy readiness was explained by the independent variable competence. Sometimes R^2 may be overestimated so SPSS gives us the adjusted R^2 which in this case gave 0.5% meaning that 0.5% of digital pedagogy readiness was explained by competence. The analysis of variance (ANOVA) table provides statistics about the overall significance of the model being fit. The significant value which is also P-Value in the model is 0.178 which indicates that the independent variable in the model explains the dependent variable. This value which is greater than 0.05 means that researcher can accept the ANOVA null hypothesis which in this case states that the model has no explanatory power. Researcher therefore accept the null hypothesis by stating that competence is not a predictor of digital pedagogy readiness. Further, in the coefficients table, the P-value for the independent variable is .187 further indicating competence is insignificance at prediction the dependent variable digital pedagogy readiness. The Beta (B) values were used as coefficients to complete the previously formulated regression model $Y= \beta 0+ \beta 1X1+\varepsilon$. The regression model therefore was as follows: Y= 16.505 + .068X1 Where; 16.505 = constant value of digital pedagogy readiness when the value of competence is zero, that is, if lecturers are competent for the implementation of digital pedagogy 0.068= Coefficient of competence. For every unit increase in competence, we expect approximately 6.8% increase in digital pedagogy readiness. Y digital pedagogy readiness X1 = competence.

4.3.2 Verification of Research Hypothesis 2 (RHo2)

- HO2: Lecturers' technology readiness does not significantly influence digital pedagogy implementation.
- HA2: Lecturers' technology readiness significantly influences digital pedagogy implementation.

Table 11.0: Model summary for the Technology readiness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756[a]	.571	.568	1.902

a. Predictors: (Constant), Sum of Technology

The independent variable studied, explain that digital pedagogy readiness of lecturers from the University of Yaoundé 1 is influence by 57.1% by the independent variable, as represented by the R^2 in the table00 above. This indicated that Technology readiness has a significant influence on digital pedagogy readiness and 42.9% of digital readiness is influence by other factors.

Table 12.0: ANOVA table for Technology readiness

ANOVA[a]

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	698.304	1	698.304	192.969	.000[b]
	Residual	524.716	145	3.619		
	Total	1223.020	146			

a. Dependent Variable: Sum of digital pedagogy readiness

b. Predictors: (Constant), Sum of Technology

The analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as ($F(1, 146) = 192.969$, pvalue <0.05. The pvalue obtained indicated that there was statistical significant influence of Technology Readiness over digital pedagogy readiness. The result above reveals that the Technology readiness of lecturers is a strong predictor of digital pedagogy readiness because they are linearly related.

Table 13.0: coefficient table for Technology readiness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.918	.807		8.569	.000
	Sum of Technology	.699	.050	.756	13.891	.000

a. Dependent Variable: Sum of digital pedagogy readiness

The simple linear regression model indicates that the independent variable (technology readiness) had a positive β coefficient. According to the regression equation established, Technology readiness of lecturers at a constant of zero, digital pedagogy readiness will be 6.918. The findings also reveals that every unit increase in Technology readiness will lead to a 0.699 increase in digital pedagogy readiness. At 5% level of significance and 95% level of confidence competence had a 0.000 level of significance, which means it has significance influence in digital pedagogy readiness of lecturers.

The interpretation of the results

Table 11-13 above present the Linear Regression Analysis results. In the regression, technology readiness was the independent variable while digital pedagogy readiness was the dependent variable. The results indicate R = 0.756, R^2 =0.571, F (1, 146) =192.969, P <0.05. The R value explains how well the model describes the data. In this case, the model describes 75.6% of the data. R^2 explains the extent to which the variability of the dependent variable, digital pedagogy readiness is explained by the independent variable Technology Readiness. In this case, 57.1% of the variability in digital pedagogy readiness was explained by the independent variable Technology readiness. Sometimes R^2 may be overestimated so SPSS gives us the adjusted R^2 which in this case gave 56.8% meaning that 56.8% of digital pedagogy readiness was explained by Technology readiness. The analysis of variance (ANOVA) table provides statistics about the overall significance of the model being fit. The significant value which is also P-Value in the model is 0.000 which indicates that the independent variable in the model explains the dependent variable. This value which is less than 0.05 means that researcher can reject the ANOVA null hypothesis which in this case states that the model has no explanatory power. Researcher therefore rejected the null

hypothesis by stating that Technology readiness is a predictor of digital pedagogy readiness. Further, in the coefficients table, the P-value for the independent variable is .000 further indicating Technology readiness' significance at prediction the dependent variable digital pedagogy readiness. The Beta (B) values were used as coefficients to complete the previously formulated regression model $Y= \beta 0+ \beta 1X1+\varepsilon$. The regression model therefore was as follows: Y= 6.918+ 0.699X1 Where; 6.918= constant value of digital pedagogy readiness when the value of Technology Readiness is zero, that is, if lecturers do not have technological resources to implement digital pedagogy .699= Coefficient of technology readiness. For every unit increase in Technology readiness, we expect approximately 69.9% increase in digital pedagogy readiness Y = digital pedagogy readiness X1 = Technology readiness.

4.3.3 Verification of research Hypothesis 3 (RHo3)

- HO3: Lecturer's motivational readiness does not significantly influence digital pedagogy implementation.
- HA3: Lecturer's motivational readiness significantly influences digital pedagogy implementation.

Table 14.0: model summary for motivation readiness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.079[a]	.006	-.001	2.895

a. Predictors: (Constant), Motivation readiness

The independent variable studied, explain that digital pedagogy readiness of lecturers from the University of Yaoundé 1 is influence by 0.6% by the independent variable, as represented by the R^2 in the table 14.0 above. This indicate that motivation readiness has a very weak influence on digital pedagogy readiness and 99.4% of digital readiness is influence by other factors

Table 15.0: ANOVA for motivation readiness

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.622	1	7.622	.909	.342[b]
	Residual	1215.399	145	8.382		
	Total	1223.020	146			

a. Dependent Variable: Sum of digital pedagogy

b. Predictors: (Constant), Sum of Motivation

The analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as (F (1, 146) =7.622, pvalue >0.05. The pvalue obtained indicated that were was no statistical significant influence of motivation readiness over digital pedagogy readiness. The result above reveals that the motivation of lecturers is not a strong predictor of digital pedagogy readiness because they are weakly linearly related.

Table 16.0: coefficients for motivation readiness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.682	2.357		6.653	.000
	Sum of Motivation	.106	.111	.079	.954	.342

a. Dependent Variable: Sum of digital pedagogy

The simple linear regression model indicates that the independent variable (motivation readines) had a positive β coefficient. According to the regression equation established, Motivation of lecturers at a constant of zero, digital pedagogy readiness will be 15.682. The findings also reveals that every unit increase in motivation will lead to a 0.106 increase in digital pedagogy readiness. At 5% level of significance and 95% level of confidence

Motivation had a 0.342 level of significance, which means it has no significance influence in digital pedagogy readiness of lecturers.

The interpretation of the results

Table 14-16 above present the Linear Regression Analysis results. In the regression, motivation readiness was the independent variable while digital pedagogy was the dependent variable. The results indicate R = 0.079, R^2 = 0.006**, F(1, 146)=7.622, P >0.05**. The R value explains how well the model describes the data. In this case, the model describes 7.9% of the data. R^2 explains the extent to which the variability of the dependent variable, digital pedagogy readiness is explained by the independent variable motivation readiness. In this case, 0.6% of the variability in digital pedagogy readiness was explained by the independent variable motivation readiness. Sometimes R^2 may be overestimated so SPSS gives us the adjusted R^2 which in this case gave -0.1% meaning that -0.1% of digital pedagogy readiness was explained by motivation readiness. The analysis of variance (ANOVA) table provides statistics about the overall significance of the model being fit. The significant value which is also P-Value in the model is 0.342 which indicates that the independent variable in the model explains the dependent variable. This value which is greater than 0.05 means that researcher can accept the ANOVA null hypothesis which in this case states that the model has no explanatory power. Researcher therefore accepts the null hypothesis by stating that motivation readiness is not a predictor of digital pedagogy readiness. Further, in the coefficients table, the P-value for the independent variable is .342 further indicating motivation readiness is insignificance at prediction the dependent variable digital pedagogy readiness. The Beta (B) values were used as coefficients to complete the previously formulated regression model $Y= \beta 0+ \beta 1X1+\varepsilon$. The regression model therefore was as follows: Y= 15.682+.106X1 Where; 15.682 = constant value of digital pedagogy readiness when the value of competence is zero, that is, if lecturers are motivated for the implementation of digital pedagogy .106= Coefficient of motivation readiness. For every unit increase in competence, we expect approximately 1.1% increase in digital pedagogy readiness. Y digital pedagogy readiness X1 = motivation readiness.

4.4 Summary of the findings

the following implications were made based on the findings of the study

Table 10: Implementation of findings of all the objectives

Variable	Pearson correlation	R square	Unstandardized Beta values	Significance	Decision
Competence readiness	0.109	0.012	0.68	.187	Competence readiness does not have a significant effect on the digital pedagogy as the p-value was greater than 0.05. Therefore the null hypothesis was maintained
Technology readiness	0.756	0.571	.699	0.000	Technology readiness has a significant effect on the digital pedagogy as the p-value was less than 0.05. Therefore the null hypothesis was rejected
Motivation readiness	0.079	0.006	0.106	0.342	Motivation readiness did not have a significant effect on the digital pedagogy as the p-value was greater than 0.05. Therefore the null hypothesis was maintained

4.5 DISCUSSION

This section presents the Discussion, conclusion and recommendations arrived at according to the researcher's findings based on the data collected through the questionnaires. The findings are based on the Hypothesis of the study which were stated as follows, Lecturer's competences readiness do not significantly influence digital pedagogy implementation, Lecturers' technology readiness do not significantly influence digital pedagogy implementation and Lecturer's motivation readiness do not significantly influence digital pedagogy implementation. The recommendation given on the study will be of great help to institutions of higher learning, specifically University of Yaoundé 1.

Discussion based on the hypothesis

Based on the descriptive statistics which was to assess lecturers competence readiness for digital pedagogy, the results revealed that, the respondents mean score for Item Q1 (structuring of learning objectives, lesson plan and student evaluation online) showed to be M_{Q1}=3.50 which is greater than 3.4 indicating that the majority of lecturers were able to structure their lessons online. The second Item Q2 on generating printing document shown to have a greater mean score to that of the expected readiness level [M_{Q2}=3.60> M_{elr}=3.4] which mean that most lecturers were able to generate print document. The findings also revealed that Item Q3, Q4,and Q5 had mean scores less than 3.4 indicating that the majority of lecturers were not able to organise online classes, reporting students' performance using technology and to carry online assessment for students. Item Q6 had a greater mean score of M_{Q6}=3.9 that shows that majority of lecturers were able to use technology to support professional development. The overall mean score for the six Items related to respondents competence is [M_c=3.54>M_{elr}=3.4]. From the result, there was an indication that the majority of the respondents were very ready and they had the required competence to implement digital pedagogy in our campuses and this in accordant with the work done by Oketch (2013) on E-Learning Readiness Assessment Model In Kenyas' Higher Education Institutions: A Case Study Of University Of Nairobi, who had her overall mean score for the items related to respondents competence to be [Md4.034 > Melr = 3.4] and she concluded that the results were indication that the respondents were very ready and they had the basic skills required to use eLearning. She further said that what needed to be done was to train lecturers on how to use the eLearning tools and system.

Further analysis was done to test the hypothesis for competence readiness, so analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as (F(1, 146)=1.756, pvalue >0.05. The pvalue obtained indicated that were was no statistical significant influence of competence over digital pedagogy readiness. The result above reveals that the competence of lecturers is not a strong predictor of digital pedagogy readiness because they are weakly linearly related.

The secondly we assessed technology readiness of lecturers at the University of Yaounde 1 and the findings showed that the majority of the participants disagree to a great extent that they have access to the required technological resources to implement digital pedagogy. All the items above had the mean scores below the expected level of readiness M_{elr}=3.4. The

overall mean score for the six Items related to technology readiness was below the expected readiness level [M_{tr}=2.55<M_{elr}=3.4]. From the results there was an indication that the majority of lecturers were not technologically ready for digital pedagogy and this findings was contrary to results obtained by Oketch (2013) which had the overall mean score for technology readiness higher than the expected level of readiness [Mt =4.17 > Melr=3.4], but she further explained that the network infrastructure is not reliable enough to support digital pedagogy which is the same case with the university of Yaounde 1. Another comment was made by (Rogers, 2003) who said that technology was one of the factors that can effectively be used to adapt technological innovation in an organization.

Further analysis was done to test the hypothesis and the analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as (F(1, 146)=192.969, pvalue <0.05. The pvalue obtained indicated that were was statistical significant influence of Technology Readiness over digital pedagogy readiness. The result above reveals that the Technology readiness of lecturers is a strong predictor of digital pedagogy readiness because they are linearly related. This is so because findings showed that the overall mean score for digital pedagogy readiness was found to be below the expected level of readiness [M_{dpr}=3.06<M_{elr}=3.4] indicating that the majority of lecturers were not ready for digital pedagogy due to the fact that lecturers did not have necessary technological resources to effectively implement digital pedagogy.

The thirdly we focused on the lecturer's motivation readiness and the results revealed that the mean scores for all the six items was found to be above the expected level of readiness(3.4) which indicates that the majority of the participants agree to the greater extend that they are highly motivated toward the implementation of digital pedagogy. The overall mean score for the six items above related to motivation readiness was above the expected level of readiness [M_{mr}=3.59>M_{elr}=3.4]. From the results there was an indication that the majority of lecturers were motivationally very ready to effectively implement digital pedagogy of which in accord with several studies that have shown that cognitive factors such as motivation contribute effectively to the online learner success (Roblyer, et al., 2008)

Further analysis was done and the analysis of variance (ANOVA) was used to check the significant level. A significant regression equation was obtained as (F(1, 146)=7.622, pvalue >0.05. The pvalue obtained indicated that were was no statistical significant influence of motivation readiness over digital pedagogy readiness. The result above reveals that the

motivation of lecturers is not a strong predictor of digital pedagogy readiness because they are weakly linearly related. This could be explained by the fact that dependent variable (digital pedagogy readiness) showed they lecturers were not ready for digital pedagogy implement because it was great influence by technology while motivation influence was not significant and it can be seen in the model summary

CONCLUSION AND RECOMMENDATION

This section presents the conclusion and the recommendations arrived at according to the researcher's findings based on the data collected through the questionnaires. The findings are based on the objectives of the study which aimed at; to assess competence readiness of lecturers, to evaluate technological readiness of lecturers and to assess motivational readiness of lecturers. The recommendation given on the study will be of great help to institutions of higher learning, specifically University of Yaounde 1.

RECOMMENDATION

Since this study was focused mainly on the digital pedagogy readiness of lecturers, the researcher recommends that; more resources and finances should be directed toward the acquisition of technological equipment for the proper implementation of the digital pedagogy. And also, if the University Of Yaoundé 1 wish to improve the digital pedagogy skills of their teaching staff, they must organize training courses, taking into account the results of this study. Another way for this solution to possible is to attract teachers to these courses by encouraging them with reduced hours, better salaries, or even with prestige through official merits. And also the university should provide the lecturers with a sophisticated technological infrastructure that will facilitate the implementation of the digital pedagogy

Similar study should be done for students and administrative staff who work in institutions of higher learning, also a digital pedagogy model should be developed for the university of Yaoundé 1 to measure digital pedagogy readiness which also include other factors that were not considered in this study and also other research should be carried out across other Universities and assess how ready they are for digital pedagogy. Finally the researcher recommends that the University administration should invest and put more attention on digital pedagogy by improving the IT Infrastructure and also organizing more training on digital pedagogy content development. The administration of the university should put educational software at the disposal of the lecturers for them to be effective in implementation digital pedagogy.

LIMITATION OF THE STUDY

The research findings cannot be applied in other universities; this is due to the fact that each university has different level of technological readiness, competent readiness, and Motivation readiness therefore, the model that has been developed cannot be used across all other Universities. The study only used questionnaire to collect the primary data, it did not use any qualitative data collection method which could have helped in getting more information from the respondents but it was really difficult to interview the lecturers due their tight schedule. The study faced challenges in collecting back the questionnaires and as a result only 147 (73.5%) out of 200 questionnaires were return.

CONCLUSION

This study aimed to assess the lecturers' readiness for digital pedagogy at the University of Yaounde 1. Three specific objectives guided this study which was to assess competency readiness; technological readiness and motivational readiness of the lecturers. The data were collected using a questionnaire and was analysed using SPSS version 21. The results from the data analysis let to the following conclusions as presented below:

The findings reveal that the majority of lecturers were competent and motivated to implement digital pedagogy but their competent and motivation was not enough to contribute significantly to the implementation of the digital pedagogy considering that other factors could greatly contribute for the implementation of the digital pedagogy. On the contrary the findings revealed that the majority of the lecturers were not technologically ready to effectively implement digital pedagogy and it was observed to greatly influence the implementation of the digital pedagogy in the sense that it was one of the main reasons why the lecturers were not able to implement digital pedagogy at the University of Yaounde 1. Conclusively technology readiness had the greatest influence on digital pedagogy readiness as compare to competence and motivation. This clearly explains the reasons why the online classes were not effective during the lock down period.

Table 17: Summary table

Research theme	Research question	Objective of the study	Hypothesis	indicators	Research theory	Methodology	Research instrument	Result
ASSESSING LECTURER'S READINESS FOR DIGITAL PEDAGOGY IN CAMEROON STATES UNIVERSITIES" A CASE STUDY OF UNIVERSITY OF YAOUNDE I.	General research question: Which indicators describe lecturers' readiness for digital pedagogy implementation at the University of Yaounde 1?	General objective: Lecturers' readiness do not significantly influence the implementation of digital pedagogy at the University of Yaounde 1	General hypothesis: Lecturers' readiness do not significantly influence the implementation of digital pedagogy at the University of Yaounde 1	Lecturers' readiness and digital pedagogy	Conscious competence theory of learning a new skill, Technology Acceptance Model, Technology Readiness Index Model (TRI) and Self-determination Theory (SDT)	cross-sectional survey	Questionnaire	The findings reveal that the majority of lecturers were competent and motivated to implement digital pedagogy as the overall mean were greater the expected level of readiness contrarily the majority of the lecturers were not technologically ready to effectively implement digital pedagogy as overall mean was less than the expected level of readiness.
	Specific question1: To what extent does competence readiness of lecturers influence digital pedagogy	Specific objective 1: To assess competence readiness of lecturers for digital pedagogy	Hypothesis 1: Lecturer's competences readiness do not significantly influence digital pedagogy implementation.	Competences readiness	Conscious competence theory of learning a new skill	cross-sectional survey	Questionnaire	The majority of the lecturers had the required competence but their competence did not significantly contribute to the implementation of digital pedagogy due to

	implementation?	implementation						other factors that may have greatly influence the implementation of digital pedagogy.
	Specific question 2: To what extent does technology readiness of lecturers influence digital pedagogy implementation?	Specific objective 2: To evaluate technological readiness of lecturers for digital pedagogy implementation	Hypothesis 2: Lecturers' technology readiness do not significantly influence digital pedagogy implementation.	Technological readiness	Technology Acceptance Model and Technology Readiness Index Model (TRI)	cross-sectional survey	Questionnaire	The lecturers did not have the technological resources to implement the digital pedagogy and this significantly influences the implementation of digital pedagogy.
	Specific question 3: To what extent does motivation readiness of lecturers influence digital pedagogy implementation?	Specific question 3: To assess motivational readiness of lecturers for digital pedagogy implementation	Hypothesis 3: Lecturer's motivational readiness do not significantly influence digital pedagogy implementation.	motivational readiness	Self-determination Theory (SDT)	cross-sectional survey	Questionnaire	The lecturers were motivationally ready for digital pedagogy but their motivation did not significantly contribute to the implementation of digital pedagogy

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APPENDICES

Appendix A

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie
****
UNIVERSITE DE YAOUNDÉ I
****
FACULTE DES SCIENCES DE L'EDUCATION
****
DEPARTEMENT DE CUERRICULAR ET EVALUATION
****

REPUBLIC OF CAMEROON
Peace-Work-Fatherland
****
UNIVERSITY OF YAOUNDE I
****
FACULTY OF EDUCATION
****
DEPARTMENT CURRICULUM AND EVALUATION
****

Serial No:

Invitation to Participate in Research survey to assess Lecturers' Readiness for digital pedagogy from the University of Yaoundé 1

My name is TADOUM TALLA Christian, a Master's student in the faculty of education, at the University of Yaoundé 1. As part of my course requirements, I am undertaking a research project to Asses Lecturers Readiness for Digital Pedagogy at the University of Yaoundé 1

Kindly take a few minutes to fill the questionnaire that will take approximately ten minutes. The questionnaire consists of Five (5) sections and is purposely designed to gather information for academic research only. Your answers will be appreciated and treated with the confidentiality it deserves.

Instructions

Please answer all the questions in the table below by giving your opinion to the statements provided by placing a tick in the box that correspond to your opinion following the judgment below (please be honest with your answer). For section II to IV please give your opinion by placing a tick on the likert scale box as presented below; strongly disagree (SD)=1, disagree(D)=2, agree(A)=3 and strongly agree(SA)=4

SECTION I: Respondents Demographic Details

1. Gender

   ☐ Male

☐ Female

2. Select your age range from the box below

Age range	25-30	31-35	36-40	41-45	46-50	51-55	56-60	61 and above
Tick								

3. Grade level

☐ Assistant lecturer

☐ Lecturer

☐ Maître de conferences

☐ Professor

4. Faculty/Higher institution

☐ Faculty of Sciences (FS)

☐ Faculty of Arts, Humanities and Social Sciences (FALSH)

☐ Faculty of Medicine and Biomedical Sciences (FMBS)

☐ Faculty of science of education (FSE)

☐ Higher National Teachers' Training College

☐ National Advanced school of Engineering

5. Number of Years of experience at the University

Number of years of working experience	0-5	6-10	11-15	16-20	21-25	26-30	31-35	36 and above
Tick here								

SECTION II: COMPETENCE

STATEMENTS		SA	A	D	SD
i	I am able to structure all my learning objectives, lesson plan and students evaluation online.				
ii	I can generate printed documents like student assignments, newsletters, and communication.				
iii	I can organize and hold an online class with my students.				
iv	I'm able to use technology to gather, organize, and report information about student performance like Excel and Access for database management.				
v	I can develop tools to carry out students' assessment online.				
vi	I can use the Internet to support professional development including locating professional organizations, communicating with other teachers electronically, and participating an on-line professional development workshops and seminars.				

SECTION III: TECHNOLOGY

		SA	A	D	SD
i	All the lecturers and students have institutional email for proper communication.				
ii	The IT infrastructure is reliable and can support digital pedagogy				
iii	The university has a good digital learning platform that delivers learning experiences to students such as canvas, Google classroom, and blackboard learn and Moodle.				
iv	The university has a good library management software that keep tract of their documents and manage the subscribe members.				

v	The university has a good student information system that store and track all student information including grades and attendance records				
vi	The university has a good assessment software that provides students with a portal to take computerized tests and quizzes.				

SECTION IV: MOTIVATIONAL

	Lecturers Attitude towards digital pedagogy	SA	A	D	SD
i	I am highly motivated and Enthusiastic about digital pedagogy				
ii	I am ready to integrate digital pedagogy in teaching and I am willing to devote more time to it.				
iii	I can recommend digital pedagogy as one of the alternatives for the traditional teaching and learning approach.				
iv	I find digital pedagogy system flexible to interact with students				
v	Digital pedagogy motivates me to learn and it help me improve the quality of my teaching				
vi	I believe that digital pedagogy is useful for my research and can increase my productivity				

SECTION V: DIGITAL PEDAGOGY READINESS

		SA	A	D	SD
i	I have the basic ICT skills that will enable me to feel at ease with digital pedagogy.				
ii	A good digital pedagogy system has been developed by the University for effective implementation.				
iii	We have all the required technological facilities for the effective				

	implementation of digital pedagogy				
iv	All the students are ready and prepared for the effective use of digital pedagogy.				
v	My teaching materials are available on the digital pedagogy system				
vi	I have attended training on digital pedagogy offered by the University				

Thank you for your kind collaboration

Appendix B

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie
****
UNIVERSITE DE YAOUNDÉ I
****
FACULTE DES SCIENCES DE L'EDUCATION
****
DEPARTEMENT DE CUERRICULAR ET EVALUATION
****

REPUBLIC OF CAMEROON
Peace-Work-Fatherland
****
UNIVERSITY OF YAOUNDE I
****
FACULTY OF EDUCATION
****
DEPARTMENT CURRICULUM AND EVALUATION
****

Numéros de série:

Invitation à Participer à une Enquête de Recherche pour Evaluer la Préparation des Enseignants a la Pédagogie Numérique de l'Université de Yaoundé 1

Je m'appelle TADOUM TALLA Christian, étudiant en master à la faculté des sciences de l'éducation, de l'Université de Yaoundé 1. J'entreprends un projet de recherche pour évaluer la préparation des enseignants à la pédagogie numérique de l'Université de Yaoundé 1

Veuillez prendre quelques minutes et remplissez le questionnaire qui prendra environ dix minutes. Le questionnaire est compose de cinq (5) sections et est spécialement conçu pour recueillir des informations à des fins de recherche universitaire uniquement. Vos réponses seront appréciées et traitées avec confidentialité donc t'il mérite.

Instructions

Veuillez répondre à toutes les questions du tableau ci-dessous en fournissant votre avis dans l'espace prévu qui correspond à votre opinion suite au jugement ci-dessous.

Pour toute question relative à l'enquête, vous pouvez contacter Monsieur TADOUM TALLA Christian par email ou par téléphone comme précisé ci-dessous. steromachris@gmail.com ou 676166480/69651353.

SECTION I: détails démographiques des répondants

2. Sexe

- ☐ Masculine
- ☐ Feminine

4. Sélectionnez votre tranche d'âge dans la case ci-dessous

Intervals Age	25-30	31-35	36-40	41-45	46-50	51-55	56-60	61 ans et plus
Cochez ici								

3. Grade

- ☐ Assistant
- ☐ Charge de cours
- ☐ Maître de conférences
- ☐ Professeur

6. Facultés/établissement supérieur

- ☐ Faculté des Sciences (FS)
- ☐ Faculté des Arts, lettre, des Sciences Humaines and Sociales (FALSH)
- ☐ Faculté de Médicine et des Sciences Biomédicales (FMBS)
- ☐ Faculté de science de l'éducation (FSE)
- ☐ Ecole normale supérieur
- ☐ Ecole nationale supérieure d'ingénieur polyethnique

7. Nombre d'années d'expérience a l'université

Nombre d'années d'expérience professionnelle	0-5	6-10	11-15	16-20	21-25	26-30	31-35	36 et plus
Cochez ici								

SECTION II: COMPETENCE

		Tout à fait d'accord	D'accord	Pas d'accord	Pas du tout d'accord
iii	Je suis capable de structurer tous mes objectifs d'apprentissage, mon plan de cours et l'évaluation des étudiants en ligne.				
iv	Je peux générer des documents imprimés comme les devoirs d'étudiants, des bulletins d'information, des communiqués, etc. en utilisant une variété de logiciels informatique				
v	Je peux organiser et tenir des cours en ligne avec mes étudiants				
vi	Je suis capable d'utiliser la technologie pour collecter, organiser et rapporter des informations sur les performances des étudiants tels qu'Excel et Access pour la gestion de bases de données.				
vii	Je peux développer des outils pour réaliser l'évaluation des étudiants en ligne.				
viii	Je peux utiliser l'Internet pour soutenir le développement professionnel, notamment pour localiser des organisations professionnelles, communiquer avec d'autres enseignants par voie électronique et participer à des ateliers et séminaires de développement professionnel en ligne.				

SECTION III: TECHNOLOGIE

			D'accord	Pas d'accord	Pas du tout d'accord
i	Tous les enseignants et étudiants ont une adresse email institutionnelle pour une bonne diffusion et partage d'information..				
ii	L'infrastructure informatique est fiable et peut prendre en charge la pédagogie numérique				

iii	L'université dispose d'une bonne plate-forme d'apprentissage numérique qui offre des expériences d'apprentissage aux étudiants.				
iv	L'université dispose d'un bon système de gestion de l'apprentissage tel que Canvas, Google Classroom, Blackboard Learn et Moodle.				
v	L'université dispose d'un bon logiciel de gestion de la bibliothèque qui conserve et trace leurs documents et gère les étudiants abonnés.				
vi	L'université dispose d'un bon logiciel d'évaluation qui fournit aux étudiants un portail pour passer des tests et des quiz informatisés.				

SECTION IV: MOTIVATION

	Attitude des Enseignants par rapport à la pédagogie numérique	**Tout à fait d'accord**	**D'accord**	**Pas d'accord**	**Pas du tout d'accord**
i	Je suis très motivé et passionné par la pédagogie numérique				
ii	Je suis prêt à intégrer la pédagogie numérique dans l'enseignement et je suis prêt à y consacrer plus de temps.				
iii	Je peux recommander la pédagogie numérique comme l'une des alternatives à l'approche traditionnelle d'enseignement et d'apprentissage.				
iv	Je trouve le système de pédagogie numérique flexible pour interagir avec les étudiants				
v	La pédagogie numérique me motive à apprendre et à améliorer la qualité de mon enseignement				
vi	Je crois que la pédagogie numérique est utile pour mes recherches et augmenter ma productivité.				

SECTION V : PRÉPARATION À LA PÉDAGOGIE NUMÉRIQUE

		Tout à fait d'accord	**D'accord**	**Pas d'accord**	**Pas du tout d'accord**
i	J'ai les compétences de base en TIC qui me permettront de me sentir à l'aise avec la pédagogie numérique.				
ii	Un bon système de pédagogie numérique a été développé par l'Université pour une mise en œuvre efficace.				
iii	Nous disposons de toutes les installations technologiques nécessaires à la mise en œuvre efficace de la pédagogie numérique.				
iv	Tous les étudiants sont prêts et préparés pour la mise en œuvre effective de la pédagogie numérique.				
v	Mes supports pédagogiques sont disponibles sur le système de pédagogie numérique				
vi	J'ai suivi une formation sur la pédagogie numérique proposée par l'Université				

Appendix C

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie
****
UNIVERSITE DE YAOUNDE I
****
FACULTE DES SCIENCES DE L'EDUCATION
****
DEPARTEMENT DE CURRICULA ET EVALUATION
****

REPUBLIC OF CAMEROON
Peace-Work-Fatherland
****
UNIVERSITY OF YAOUNDE I
****
FACULTY OF EDUCATION
****
DEPARTEMENT OF CURRILUM AND EVALUATION
****

The Dean

N° 349 /21/UY1/FSE/VDSSE

AUTHORISATION FOR RESEARCH

I the undersigned, **Professor MOUPOU Moïse,** Dean of the Faculty of Education, University of Yaoundé I, hereby certify that **TADOUM TALLA Christian,** Matricule **19P3884,** is a Masters II student in the Faculty of Education, Department: **Curriculum and Evaluation**, Specialty: **Curriculum Developer and Evaluator.**

The concerned student is carrying out a research work in view of preparing a Master's Degree, under the supervision of **Dr NGNOULAYE Janvier.** His work is titled: **"ASSESSING LECTURER'S READINESS FOR DIGITAL PEDAGOGY IN CAMEROON STATES UNIVERSITIES: A CASE STUDY OF UNIVERSITY OF YAOUNDE 1".**

I would be grateful if you provide him with every information that can be helpful in the realization of him research work.

This Authorisation is to serve the concerned for whatever purpose it is intended for.

Done in Yaoundé: 29 MARS 2021

For the Dean, by order

Le Vice-Doyen
LONGO Etienne
Professeur

Appendix D

RÉPUBLIQUE DU CAMEROUN
Paix - Travail – Patrie

UNIVERSITÉ DE YAOUNDÉ I
B.P. 337 Tél/Fax : 222 22 13 20
E-Mail : uyi@uycdc.uninet.cm

DIRECTION DES AFFAIRES ACADEMIQUES ET DE LA COOPERATION

Division des Enseignements et du Personnel Enseignant

211348
N°_____/UYI/VREPDTIC/DAAC/DEPE

REPUBLIC OF CAMEROON
Peace-Work-Fatherland

UNIVERSITY OF YAOUNDE I

DEPARTMENT OF ACADEMIC AFFAIRS AND COOPERATION
P.O. Box 337 Tél/Fax : 222 22 13 20
e-mail :

Sub-Department of Teaching and Teaching Staff

Yaoundé, le 03 MAI 2021

LE RECTEUR
A
MONSIEUR TADOUM TALLA CHRISTIAN
ETUDIANT EN MASTER II, MATRICULE 19P3884
FACULTE DES SCIENCES DE L'EDUCATION
DEPARTEMENT DE CURRICULA ET EVALUATION
Tél. 676 16 64 80
E-mail : steromachris@gmail.com

Réf. : V/L du 15 avril 2021
*Objet : **Application for internship.***

Monsieur,

Faisant suite à votre lettre dont la référence et l'objet sont repris en marge,

J'ai l'honneur de vous informer que je marque mon accord pour que vous puissiez effectuer votre stage à la Direction des Affaires Académiques et de la Coopération (DAAC), compte tenu de l'objet de votre recherche à savoir : ***« Assessing Lecturer's readiness for digital pedagogy in Cameroon States Universities : a case study of University of Yaounde I ».***

Veuillez agréer, Monsieur, l'assurance de ma parfaite considération./-

Le Recteur de l'Université de Yaoundé I

Pr. Maurice Aurélien Sosso

Ampliations :
- VREPDTIC
- DAAC
- Chrono/Archives

APPENDIX E

RESEARCH PROPOSAL WORK PLAN

TASKS TO BE PERFORMED	DURATION FROM OCTOBER 2020 TO MAY 2021								Output
	October	November	December	January	February	March	April	May	
1. Presentation of research proposal for approval									Complete research proposal
2. Research approval									Approval
3.Develop and translate research questionnaires									A questionnaire
4. Review article and writing of chapter one, two and three									Completed chapter 1,2 and 3
5.Distribute questionnaire to the respondents and data collection									Ministration and collection of all the questionnaire
6. Process data and make interpretation									Complete data cleaning
7. Data Analysis									Complete data analysis
8. Writing of chapter four and five									Completed chapter 4 and 5
9. Submission of the first draft of the project									Submission of the first draft

Meet with the supervisor before and after the completion of each task.