



ADOPTION OF ELEARNING FOR WORKER IN-SERVICE TRAINING IN THE NIGERIAN  
PUBLIC SERVICE

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## Approval of the Thesis

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PUBLIC SERVICE

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## Abstract

ADOPTION OF ELEARNING FOR WORKER IN-SERVICE TRAINING IN THE  
NIGERIAN PUBLIC SERVICE

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Public institutions in Nigeria are domains defined by political bodies and administrative structures in charge of public affairs. These institutions comprise ministries, departments, and agencies (MDAs) and are responsible for initiating and implementing policies that impact socioeconomic development. Thirty-Six (36) Federating States have their own MDAs and several in-service training strategies. Yearly budget of the Nigerian government includes a capacity development component for public servants.

Constant learning is necessary to ensure that officials saddled with initiating and implementing policies are adequately trained and understand the ever-changing trends in the modern-day global economy. This study investigates the adoption of elearning for worker in-service training in the Nigerian Public Service that focuses on participants' individual needs and grants access to complete information. The research examines previous literature on the forms of training of public servants.

The study adopts a qualitative research method and the research participants recruited include public servants and policymakers. Participants' responses guide the research conclusion on the importance of adopting elearning for worker in-service training. The study recommends future research into the availability of technology infrastructure development that is required for practical elearning in-service training for public servants in Nigeria.

Keywords: Public Institutions, Learning, eLearning, Adoption, Public Servants

## Declaration

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where stated otherwise by reference or acknowledgment, the work presented is entirely my own.

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## **CHAPTER 1: INTRODUCTION**

Education is described as a crucial investment in human capital development (Orji & Job, 2013). Education plays a significant role in the all-round development of a human being (Naziev, 2017). Public officers' capacity is significant to the broader public institutions. A public institution, often referred to as a public entity or organization, is an entity that operates under the ownership, funding, and governance of a government or governmental authority. These institutions are established to fulfil various functions and provide essential services to the general public. They form a critical component of a nation's infrastructure and governance framework, serving as the mechanisms through which governments implement policies, deliver services, and administer public resources.

Critical characteristics of public institutions include government ownership and control, reliance on public funding, a mandate to provide public services or address societal needs, accountability to government authorities and citizens, non-profit status with a primary focus on serving the public interest rather than generating profits, transparency in operations and decision-making, and a commitment to universal access to services. Public institutions encompass various entities, including government agencies, public educational institutions (such as schools and universities), public healthcare systems and hospitals, law enforcement agencies, regulatory bodies overseeing various sectors, and social welfare organizations. These institutions operate based on the principles of accountability and transparency to ensure that public resources are used effectively and that citizens have access to essential services. Public institutions are fundamental pillars of governance and society, existing to serve the greater good and provide essential services that contribute to the well-being and functioning of a nation. Popa (2012) stated that

public organizations were established to provide necessary services that benefit the public's interest. Government policies, leadership, and political issues strongly influence decision-making, while the organizational structure is controlled by law and initiated by decision-makers to establish the administration procedure. In ensuring the general effectiveness of public institutions, public servants are saddled with the responsibilities of developing and implementing policies in significant sections of the economy. As such, managing human resources effectively is an essential part of the public service and the quality of services provided to the general public (Yahiaoui et al., 2015).

In developing the program for the training and retraining of public officers, it is necessary to consider the ever-changing trends in economic models and, as such, ensure that a well-designed and cost-effective in-service training strategy is employed. The success of a capacity development program is measured by defining the desired outcome, strategies to realize the proposed result, and availability of necessary resources (Ojokuku & Adegbite, 2014). Usually, the methods employed by public institutions in the training and retraining of their officials include the engagement of training institutions to design training programs that are delivered in organized overseas activity, training at local institutions, and on-site training at public service institutions. The Ministries, Departments, and Agencies (MDAs) also use the government's established in-service training institutions, such as the Administrative Staff College of Nigeria (ASCON) and the Public Service Institute of Nigeria (PSIN), to train civil servants.

The process of acquiring knowledge is continuous, and the demand, preferences and inclination of an individual learner varies. Hence, different learning approaches and methodologies are used in transferring adequate knowledge to

learners (Singh, 2003). Training, as one of the major approaches, has been considered in appraising, managing, and organizational development (Marion, 1998). The contemporary organizational system demands training as a primary task for any competitive organization (Ojokuku & Adegbite, 2014). As human resources is a valuable asset to any organization, active capacity development creates relevant policy, legal frameworks, and institutional and human resources development that strengthens organizational systems. According to Jones and George (2008), training and development enable personnel to accept new responsibilities and adjust to changing conditions.

By practice, MDAs ensure they include their staff in yearly initiatives as part of the in-service training program of the government. The capacity development of public servants is a priority for the federal government of Nigeria, and it is ensured that public servants are entitled to training programs each year as a catalyst in ensuring organizational performance (Gberevbie, 2010). The design of annual training programs by the MDAs ensures continued capacity development, improves productivity, and enhances job performance. The training program aims to enhance employees' knowledge and competence to carry out assigned tasks effectively. The training outcomes thus impact organizational performance, revenue, and competitiveness (Nwokoye & Nwokoye, 2018).

The lack of efficient and quality service delivery in the Nigerian public service has been linked to poor capacity, hence the need for more effective capacity development strategies. According to Elliot (2020), employees in the public sector are rarely trained like those in the private sector, as statistics have also revealed that the training budget in private organizations is much higher than that of public organizations. Training and capacity development has been identified as a tool to



enhance public servants' capacity and quality service delivery. Training in the public sector is vital because it helps ensure government employees have the skills and knowledge necessary to serve the public effectively. This includes providing services, implementing policies, and making decisions that impact the community. Training can also promote employee professional development and career advancement, improving job satisfaction and retention. Overall, training in the public sector is critical for promoting accountability, transparency, and effectiveness in government as it also improves knowledge and employee performance and enhances individual skills, employee retention and motivation.

Additionally, providing training can help reduce errors and mistakes, saving money and improving the overall effectiveness of government operations. According to Kumari & Kumar (2019, p.131), "any training program aims to provide instruction and experience to new employees to help them reach the required level of performance in their jobs quickly and economically". Conducting in-service training is one medium of training public servants in Nigeria. In-service training is typically designed to help employees develop new skills, knowledge, and abilities relevant to their current job responsibilities and help them perform their duties more effectively. In-service training can include seminars, workshops, online courses, mentoring programs, and on-the-job training. The primary objective of in-service training is to improve the productivity of public servants and to help them stay current with updated trends, technologies, and best practices in their field. To ensure the delivery of practical in-service training, this study focused on adopting eLearning as a strategy for in-service training in the Nigerian public sector.

This research considers the activities of the current educational training system in the public service, which views expenditures in terms of travel and time as some

limitations (Welker & Berardino, 2005). The long-standing approach to training follows a laid down plan that does have much room for new opportunities and different learning content. The methodology concentrates explicitly on the comparative effectiveness of employees at the expense of productive diagnostic evaluation (Leat & JackLovell, 1997). According to Shauna (2001), the most common method of in-service training is holding employee workshops, which is a time-consuming and expensive process that includes scheduling workshop leaders and the provision of travel expenses for those involved. According to Barret (2010), the usual form of organizational training is characterized by a lack of flexibility in learning programs, provision of face-to-face classroom instructions and leadership to learners, and high levels of learner–instructor interaction. The extant form of in-service training is instructor-centred, not cost-efficient, and has constraints in time and location (Conkova, 2013). The management of an organization is charged with the responsibility of ensuring workers are enabled to develop existing skills or acquire new ones to improve service quality, productivity, and profitability.

The use of technology in education further enhanced distance learning through the use of the internet. eLearning is a form of a virtual learning environment and is the latest trend in delivering training with the help of network technology (Welsh et al., 2003). eLearning utilizes internet technologies to intensify knowledge and performance. eLearning is also a form of distance education focused on activities in learning institutions that are compatible with a pedagogy reflecting competency-based outcomes, collaboration in problem-solving, and reflective inquiry (Rudestam, 2004). The need for innovative means of giving and receiving knowledge has led to changes in technology and organizational education (Cervana, 2011). Shahamoradi et al. (2018) considered eLearning a system that encourages learners to learn better by creating a

competitive atmosphere. Research has proved that the eLearning approach leads to improved communication, increased collaboration, cost-effectiveness, and pedagogical improvement without being strained by time and space within the organization (Sife et al., 2007).

This study thus intends to research how adopting the eLearning method as part of the strategies for delivering in-service training in the Nigerian public service can ensure a more robust training strategy that is cost-effective and more time-efficient. The study also investigates whether adopting eLearning in Nigerian public institutions can enhance the delivery of capacity development programs designed for workers to ensure maximum productivity in their job roles. The study focused on analyzing the current situation of eLearning practices in the Nigerian public service as similar policies related to training in the public institution apply to all institutions while targeting some organizations within the Federal Capital Territory as a case study.

### **1.1 Statement of the Problem**

The long-existing method of capacity development of public servants is limited to achieving the objectives of a training program. The problem identified is the need for an active approach to the capacity development of public servants due to the limitations of the existing training approach. The capacity development programs scheduled out of workstations have proven time-consuming, capital-intensive, and associated with travelling risks. The research study by Igbaekemen (2014) stated that there is a need for proactive capacity development as the inability of the organization to manage its human capital leads to organizational failure. According to Reilly (1998), an unprecedented rate of change, availability, and the explosion of information and pervasiveness of systems have made conventional forms of organizational functioning progressively less satisfactory.

In the time frame spanning the past two decades, the impact of technology has significantly changed the modes of education, just like every other sector of the economy. The gradual transition in the modern form of learning that involves technology is referred to as eLearning (Donsong et al., 2004). The study proposed that the adoption of eLearning for worker in-service training was prompted by the organizational hurdles encountered due to unproductive capacity development programs in workers. Workforce development through capacity building is thus of importance in ensuring progress in a corporate setting. The current training approach limits employees' output due to a lack of opportunity to access varied resources that will support the delivery of organizational functions (Ojokuku & Adegbite, 2014). This research project on adopting eLearning for worker in-service training in the Nigerian Public Service addresses why and how they should adopt eLearning for the capacity development of public servants. As such, the issue it aims to address is the effective delivery of capacity development programs to public servants to ensure effective service delivery and enhance productivity with adequate job performance.

## **1.2 Purpose of the Study, Research Aims, and Objectives**

The purpose of the study involves exploring the adoption of the eLearning method as a strategy for in-service training that is effective and efficient while investigating how eLearning in Nigerian public institutions enhances the delivery of best capacity development programs and workers' maximum productivity in their job roles. The study on the adoption of eLearning for worker in-service training in the Nigerian Public Service became a point of interest after detailed observation of the public service regarding its number of employees, quality of service delivery, and levels of employee motivation and confidence in carrying out relevant functions. Some challenges and inadequacies were identified, following which they were

investigated, and findings were presented upon completion of the study. The research aimed to assess the effectiveness and efficiency of eLearning as a strategy for in-service training in Nigerian public institutions and determine its impact on enhancing the delivery of capacity development programs and maximizing workers' productivity in their job roles while addressing identified challenges and inadequacies in the current training methods.

The primary objective of this qualitative research is to examine whether and to what extent the adoption of eLearning for worker in-service training in the Nigerian Public Service can ensure that the capacity development of public servants is improved and that they are provided with adequate education and training required for excellent service delivery.

Other objectives of the study are;

To reflect on the current system of training programs, examine and compare eLearning with existing approaches.

To investigate how the implementation of eLearning in Nigerian public institutions enhances the delivery of capacity development programs

To explore the adoption of eLearning as an effective and efficient strategy for in-service training.

To examine how eLearning affects the cost of training in the public service

To analyze the opinions of policymakers on the adoption of e-learning for in-service training

The study's findings provide adequate information on the importance of adopting eLearning for worker in-service training in Nigeria's public service. eLearning is a novel learning medium as it presents a different learning environment that enables skills such as research, evaluation, and critical thinking to be significantly

improved in learners. Thus, this study points out the importance of eLearning as observed to enhance motivation for learning as learners have access to an increased volume of information from diverse sources.

### **1.3 Nature and Significance of the Study**

The National Population Commission (2018) put Nigeria's current population at 198 million. In Nigeria, education has the great potential to contribute immensely to the nation's development if appropriate training methodologies are deployed. Through the high penetration of internet technology, eLearning in wealthier economies is becoming more popular. Furthermore, considering the need for continuous learning in the workplace, eLearning has gained further acceptance. Employers and employees must be well informed about the conditions and changes in areas of expertise. According to Shailendra (2018), the advent of new technologies, the adoption of the internet, and the need for a trained workforce have resulted in steady growth in online education worldwide. The continued growth of eLearning is on the horizon, with millions of students and organizations enrolling in online courses (Lederman, 2018). Over the years, the once under-explored concept of eLearning has exploded in popularity in educational institutions (Fitzgerald, 2019). The popularity of eLearning may result from the ease of usage and the cost implications of deploying curriculum on eLearning platforms.

According to Msomi et al. (2016), eLearning is the most cost-effective way an organization can provide continuous learning opportunities. As such, eLearning in the public sector can offer employees equal chances to acquire knowledge (Bagarukayo & Kalema, 2015). The consideration of elearning as a medium of acquiring knowledge in the public sector is associated with its learner-focused approach characteristics. As the learning process is adjusted to the individual learner, access to

more comprehensive sources of information and evaluation of learners does not depend solely on instructors' opinions (Coman et al., 2020).

eLearning enables experts to add value by sharing knowledge across borders, developing training materials online, and enjoying the comfort of learning at their convenience (Ellis & Kuznia, 2014). The conventional form of training public servants is expensive, results in absent days, and limits access to information and experts (Msomi et al., 2016). Considering the advancement in technology and the identified advantages of eLearning in the capacity development of public servants by demonstrating cost savings and developing integrated offerings in knowledge acquisition (Baron, 2011), there is a need to incorporate a digital approach to learning strategies to improve the delivery of effective public service.

This study adopts a qualitative research analysis method to generate leads and ideas about human behaviour and opinions that will affect the outcomes of this inquiry. A case study approach is also used to enable the researcher to gain in-depth knowledge and understanding of how eLearning has contributed to capacity development and public servants' opinions on the adoption of eLearning.

The study selects six public institutions within the geographical location of Abuja, the Federal Capital Territory of Nigeria. Sixty participants, including public servants and policymakers, were used to gather data using the interview method. Secondary data from previous journals, articles, books, and government publications are reviewed to enhance existing theories further and develop new ones when necessary.

The study is significant as it is focused on providing strategies for equipping public servants with the relevant skills and capacity required for effective service delivery, influencing the acceptance of eLearning within the public service and

contributing to the importance of developing and implementing eLearning policy within the public service. The study proposes a solution to the challenges associated with public servants' capacity development through eLearning. eLearning will enable public servants to learn, acquire, and develop skills while working. The government may also save on the otherwise hefty budgetary allocation for training and capacity development due to negligible costs on transportation and accommodation for classroom training. Moreover, any effect of the workers' absence from their duties and posts can be avoided, further lessening the impact of their absence on the nation's economy.

Some socio-economic and pedagogical factors are responsible for the advantages of utilizing eLearning in organizational training. For instance, eLearning provides synchronous and asynchronous learning, more exceptional communication via electronic facilities, a convenient time for study, and pedagogical improvement (Sife et al., 2007). Pedagogy is the teaching, learning, and evaluation model among learners and teachers intending to achieve stipulated learning skills. eLearning pedagogy requires "prevalent digital access through various technologically innovative digital tools" (Fernando, 2018, p. 5). According to Pardino et al. (2018), pedagogical practices that produce the best learning outcomes are positive academic discipline and attitude towards eLearning. Clear and consistent teacher-learner communication and interaction can be achieved by ensuring learners understand course content, engage in post-training follow-up, and grow from their evaluation. eLearning has gradually become a part of the global organizational training system, resulting from its time and cost efficiency in course development and delivery (Conkova, 2013). According to Jaashan (2020), eLearning has assisted learners in learning more effectively and enabled instructors to undertake tasks more efficiently.



Public service delivery in Nigeria requires practical and well-equipped employees to function efficiently; hence, the study is significant as it investigates a learning medium whose instructional strategy is fit for enhancing knowledge, skills, and attitudes within the organization. eLearning's effectiveness, potential, and viability benefit organizations depending on their design and delivery (Derouin et al., 2005). The study adds to the body of knowledge and acts as a guide to public institutions in the development of in-service training strategies and policies.

#### **1.4 Research Questions**

Developing general research questions to obtain particular data focused on achieving the aims and objectives of the study is considered a fundamental core of the research. According to Khodabux (2015), developing a research question is essential in a study as it is used to set parameters in the study, such as providing opportunities for different research methodologies and creating a research structure for the researcher. As such, "a good research question forms the backbone of good research, which is vital in unravelling mysteries and giving insight into a problem. It identifies the problem to be studied and guides the methodology" (Ratan et al., 2019, p. 15).

The following research questions focused on how the capacity of public servants could be developed through eLearning. These questions enable the researcher to gather more information about the significance of eLearning in the educational system:

Q1. What methods do public service institutions use for in-service training?

Q2. To what extent do public service organizations use eLearning for the training of their staff?

Q3. How will the use of in-service eLearning programs among public service institutions improve the enhancement of the capacity of civil servants?

Q4. How does the implementation of eLearning impact the training expenses incurred by public institutions when compared to traditional on-site training methods, addressing the issue of high training costs

Q5. What is the contribution of policymakers to ensure the adoption of eLearning in the Nigerian public sector?

The formulated research questions are designed to provide further insights into the problem identified, describe the issue under study, guide the data collection and analysis process, and set the research context.

## **CHAPTER 2: LITERATURE**

This study on the adoption of eLearning for worker in-service training in the Nigerian Public Service reviewed several sources of documents. The following literature review contains a detailed overview of the concepts relating to eLearning, worker in-service training, and public service, with Nigeria as a case study. The research seeks to enhance the delivery and acquisition of knowledge within the public service by exploring the advantages and conveniences of eLearning as a training method. eLearning enables more instruction to be delivered to employees and provides a new resource for interactive sharing of instructional support features. The opinions and views of previous researchers on this subject matter can be gleaned from peer-reviewed journals and other online sources. The literature review concentrated on diverse dimensions within the field to gather ample insights about the researcher. For instance, the review presented several opinions of researchers on adult education.

Adult education is portrayed as one of the broad fields of education that covers all different areas of human learning. The basic tenet of this kind of education is the conviction that knowledge should not be restricted to a once-in-a-lifetime opportunity. Adult education has been a pivotal catalyst in transforming the destinies of diverse communities. Numerous adults have sought alternative avenues for acquiring knowledge and compensating for past educational gaps. Through adult education, they have unearthed their latent talents and competencies, accomplishing feats that previously seemed beyond their grasp. Adult education has a way of changing people's attitudes and perceptions of things. A person interested in adult learning may vary from someone who does not think in an earlier frame of mind.

Adult education is perceived as essential education because of its advantage to society. Sumit (2016) describes adult education as mass, work, primary, and social

education. This opinion also supports adult education as education for life and one for all. It represents every aspect of humankind's endeavour to ensure personal upliftment and help improve involvement in economic, political, and socio-cultural life. It also enables participation at the international level. Adult education is, thus, an essential part of lifelong learning that can add to economic progress and world peace.

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2019) believes that gaps likely to be filled include policies on adult education that have "infrastructure and access, government and capacity building, monitoring and evaluation". New curricula should be developed for adult education with the needs of adult learners in view. These new structures should include the use of technology in all its forms to aid learning as well as the development of basic digital and mathematical skills that will enable adults with lower educational levels to acquire competencies to adapt to the labour market and participate in society actively (EACE A., 2019). Moreover, the current adoption of digital and web technologies represents modern means of learning according to the change required in adult methodology as a traditional method for teaching, learning, thinking, and doing are being challenged due to uncontrollable and constructive factors (Ramdass & Masithulela, 2016; Adedokun, 2018). Therefore, adult educators need to consider these when considering adult learning methodology. Educators should be aware that there is no specific medium, but instead, different approaches ensure adult learners acquire the necessary knowledge.

Second, the concept of public service was reviewed, probing into public service activities, the public service rules, and its regulations. The function of public service is in the sense of a shared utility; this implies the kind of services governments commonly provide: electricity, health care, maintenance of law and order, and urban

and rural infrastructure. The fundamental determinants of success revolve around the availability, affordability, and accessibility of services. Public service delivery refers to the goods and services offered by government institutions to the general public, and it includes the interface between the citizens and the administration.

According to Bozeman and Su (2015), the idea of public service is a peculiar duty certain people are delighted performing, as the idea of service already implies a subject's sense of responsibility to the individual or the group served. The concept of public service has assumed an even more central position in media policy and has become a significant concept in regulating procedures. The Public Service (Ministers, Department and Agencies) is an apparatus used by the Nigerian government to implement development goals and objectives, which are seen as pivotal for the development of African society. As such, its responsibility lies in creating a conducive environment that enables all sectors of the economy to thrive effectively. According to Chen et al. (2021), public administration literature needs more research on training and the study of public service training is seldom conducted.

This current study further reviews active learning, an approach to instruction involving students actively engaging with the course material through discussions, problem-solving, case studies, role-plays, and several other methods. It is a process that focuses on student learning. This focus is not solely on what is to be learnt but on how learners acquire knowledge. Learners are motivated to have in-depth thought rather than just obtaining information from the trainer. As such, active learning refers to the comprehensive teaching strategies that engage learners and their instructors during class. Typically, these models involve learners studying collaboratively while in class and also personal work and reflection. Brame (2016) believes active learning entails activities that allow learners to develop knowledge and understanding.

Learners comprehend individuals' prior expertise and knowledge to accomplish a more profound scale of experience. The constructivist active learning theory highlights that individuals learn by constructing their abilities and interweaving new ideas and skills with their existing knowledge and experiences to form a new or improved understanding. Pappas (2015) proposed some tips that can support educators in blending active learning methodology and learning strategies, such as using a variety of learning approaches, encouraging collaboration, following a mistake-driven learning style, focusing on interactivity, and connecting online learning with actual world activities. The most significant advantage of active learning is the real-time applicability of what students are learning to the immediate environment while creating suitable examples, fitting cases, and applicable problems to examine and solve using real-life scenarios, demonstrations that explicitly present work processes, and eLearning model that urges learners to analyze their problem-solving approaches. Thus, the objective is to ensure learners stay focused, engaged and apply, as retaining information is better when it is applied.

The theories and frameworks for eLearning in Nigeria define it through the theory-based framework related to learning technologies, pedagogical models, constructs, and instructional strategies. These include several facets, such as individual modes of learning (open/flexible way), the learning approach (collaboration, exploration, problem-solving), and technology. This describes pedagogical and cognitive models, theoretical constructs obtained from knowledge acquisition models or opinions regarding cognition and knowledge that form the basis for the learning theory. By way of explanation, they are the mechanisms through which theory is linked to practice.

eLearning can also be described as the use of technology and electronic devices, such as desktop or laptop computers, CD/DVD players, smartphones, and other advanced equipment, to enhance traditional in-person learning approaches. eLearning secures effective pedagogy and curriculum implementation in the technology advancement era. Developed nations are gifted in adopting technology from the get-go while in the classroom, as previous studies focused on the efforts required to enhance eLearning in developing countries (Yakubu & Salihu, 2018). According to Dias et al. (2018), the significance of an eLearning system in education must be considered because it produces a good platform for instructors to pass knowledge across and a chance for learners to understand a traditional classroom. Thus, the contemporary methods of knowledge acquisition and dissemination to others have become necessary. The need to remodel the delivery of the contemporary educational system has become urgent and essential due to the frequent and global change in information and communication technology (ICT). The increasing acceptance of eLearning systems can be influenced by various determinants, such as ease of accessing knowledge, flexibility, convenience, and availability. Therefore, the application of an eLearning model has become an increasing trend recently and has gained unprecedented recognition today, as further discussed in this study.

This research reviewed the effectiveness of eLearning in the public service, which entails online training that provides facilities for civil servants to undergo courses anytime and anywhere, making it a more time and cost-efficient choice. The demand for lifelong learning indirectly increases individuals' need to gain access to knowledge continuously and permanently. It emphasized the importance for civil servants to continuously enrich their knowledge or improve their proficiency to meet required performance standards and to deliver effective service continually.

Electronic-based technology is hugely advancing, with a tendency to positively impact lives. In the public sector, technology has been adopted to solve local and international challenges, such as delivering service at different societal stages to boost the quality of living by empowering employees to enhance productivity. In this field, eLearning is viewed as the cheapest and most highly effective means public sector institutions can efficiently provide employees with the required knowledge that will improve organizational growth. DPSA (2015) and Ellis & Kuznia (2014) described eLearning as training carried out by adopting ICT as an instrument for online learning. Access to new educational platforms is now available as eLearning has opened up opportunities that were initially unavailable because it propagates a new way of reasoning that improves collaboration and interaction between members. The essence of learning is to improve an employee's productivity and enhance their learning ability to meet their goals while maximizing profit and improving service delivery in both the private and public sectors.

Furthermore, the eLearning experience differs during a crisis because exposure to the outside world is still essential, even with online education. Considering the utilization of eLearning in such moments of problems, the COVID-19 pandemic has accelerated the digitalization process of education. Digitalization is a complex process with components such as fast virtual management systems, promptness in manipulating online teaching tools, digital fluency, and dealing with feelings of nervousness and social seclusion (Angoletto & Queiroz, 2020). Despite this, eLearning has become one of the newest trends in education because of the pandemic. COVID-19 boosted the use of mobile applications, a majority of which are eLearning applications that promote virtual learning. It is essential to acknowledge that distance learning entails several difficulties and challenges rather than presuming



it simply as 'home education'. According to Mulenga and Marbán (2020), the pandemic has played an intermediary role in making people understand online resources, digital tools, digital media technology, and eLearning activities more productively. Therefore, adopting eLearning is a significant step towards efficient work under typical situations for specific socio-economic classes and age groups.

This chapter also reviewed the literature on organizational training approaches and methodologies in detail. Training methods relate to employees' training to sharpen their existing skills and learn new skills. The skills they learn can be technical or soft, and some training methods are suggested for all categories of skills. Training is crucial in employee onboarding and retention; new employees are most excited and anxious to learn and be familiar with all information regarding the organization. However, existing staff members also require continuous training to learn and further develop skills and capacity. The training method is essential in achieving the organizational goals in both scenarios. The employee training method implemented or utilized in an organization can be an absolute game changer for increasing employee retention. The proposed training methods help make employees confident, motivated, efficient, and productive, improving overall proficiency. Technological advances have provided employers, employees and human resources officers with the pull of development training methods that ever existed. Moreover, either exploring new training methods or clinging to conventional training mediums, it is essential to be conscious and consider individual learning styles.

## **2.1 Adult Education**

The literature review started by investigating adult education in Nigeria. This investigation notes that eLearning for in-service training and capacity development efforts for public servants in Nigeria requires an adult learning approach. This

methodology, which authors have defined as learner-centred or facilitated learning, was first proposed by Malcolm Knowles in the 1970s. Knowles et al. differentiated it from directed learning as "the art and science of teaching adults" (2005). The authors introduced the term "andragogy", described as the progression of a continuous pedagogy that gives more space for learners' autonomy (El-Amin, 2020). It also indicates the differences that exist between children and adult learners. Andragogy focuses on the individual needs of adult learners with the expectation that learners understand their self-concept, have prior experiences, and are ready and motivated to learn. According to (2001 EL-Amin, 2020), andragogy and self-directed learning are crucial in contemporary conceptualizations and comprehension of adult education.

Adult education is described as a systematic engagement in the learning experience in adulthood. The priority objective of these learning activities is to obtain knowledge. Comprehensively, Liveright and Haygood (1969) think that adult education is a process associated with individuals who no longer attend a regular conventional school on a full-time basis, intentionally undertake sequential and organized programs with the conscious intention of influencing changes in knowledge, skill, information, and understanding, which is applicable in identifying and providing solutions to immediate problems. Adult education is crucial as it enables an adult to contribute to the development of their society. Motivating adults to learn enhances their personal growth, provides adequate guidance, imparts diverse literacy, raises their consciousness, promotes functionality, raises productivity, and develops their skills (Kapur, 2019; Nnazor, 2005).

Generally speaking, such education can be related to a course or type of capacity available for lifelong learners. It can change an adult's psychological state, seriously affecting an individual's cultural, political and social awareness. As a result,

this process can unlock their latent potential and empower them with the capability to navigate the frequent changes in the world. According to Ouane (2009), adult learning and teaching are emerging as empowering tools now more than ever, capable of harnessing opportunities in individual creative forces, the strength of communities, and the wealth of nations in a global crisis.

In 1960, a newly independent Nigeria brought about several national development plans, including the 1977 Nigerian National Policy on Education, modified in 1981. According to Nnazor (2005), the policy ensures lifelong learning, including continued and further education. In 1990, the Nigerian government established the National Commission for Mass Literacy, Adult and Non-Formal Education (NMEC) to monitor and coordinate adult education programs. Although many government programs and activities have been developed to focus on adult education, they have not achieved set objectives due to inadequate funding, lack of instructional facilities, and marginalization of adult education (Aderinoye, 2002).

### ***2.1.1 Importance of Adult Education in Nigeria and Approaches to Implementation***

Nigeria mainly focuses on the improvement of formal education. Nevertheless, there are programs for non-formal education in the country presented by NMEC:

- Basic Literacy – This programme provides opportunities for people to learn how to read and count. This programme lasts for six–nine months, and it is the equivalent of three years. This program has a duration of six to nine months, which is equivalent to completing three years of primary education.

- Post Literacy Program: This program is specifically tailored for graduates of the Basic Literacy program and spans a duration of 12 months.
- Continuing Education Program – This programme is the next step after post-literacy. It is the equivalent of completing a secondary school education.

The individuals in this program can also pursue specialized education in the framework of Continuing Education. These specializations include labour, workers, prison, industrial, remedial, and open education.

- Vocational Education – In this programme, students acquire vocational skills.

### ***The Need to Know***

Adults insist on learning something before taking on the task of learning (Knowles et al., 2005). Ferreira et al. (2018, p. 11) further suggest that the speculation that adults are motivated by a need to know before partaking in a learning program is the crucial basis for differentiating grown-up learners from younger ones. The pedagogical supposition thinks that young learners' '*need to know*' is reinforced by things that need to be studied to achieve a set academic recognition, andragogy presupposes that the adult learners '*need to know*' is driven by a need to implement learning to certain facets of individuals lives. Adult learners thus invest energy into exploring the significance of learning, enabling them to deal with the initial premonition of isolation often linked with distance learning.

### ***Self-Concept of the Learner***

Self-concept can be defined as individuals' perceptions of personal existence or their opinion of their ability to fit into a space (Purkey & Schmidt, 1987). It is assumed that self-concept can be learned through previous interactions with the external environment. The entrance of learners into an educational institution presents different experiences that impact their personal opinions and abilities. (Griffore & Bianchi, 1984; Silvernail, 1987) thought that as learners continue in the learning environment, self-concept becomes more obvious. Some researchers believe that raising academic self-concept requires parents' and teachers' input as they need to

provide the children with specific feedback that focuses on their particular skills and abilities.

Children conceive themselves as dependent persons, but as they grow toward adulthood, they experience a need for others to see them as capable of self-direction. This change from a self-concept of dependency to autonomy is called psychological maturity or adulthood. Because of this self-concept, adults tend to resent being put into situations that violate their feelings of maturity, such as being talked down to, judged, treated with a lack of respect, or otherwise treated like a child.

Self-concept is described as the perception learners have about themselves. When learners know and understand their strengths, struggles, and styles, they can seek help, feel confident, and succeed as thinkers and learners. Self-concept develops gradually over time, so it is different from the sort of thing teachable in a one-off lesson. Generally, self-concept is essential as it influences one's thoughts and feelings and impacts one's daily lifestyle. Therefore, understanding the self-concept of senior executives and managers in the organization is necessary. Knowing one's self-concept enables a proper understanding of why a particular action is taken and how personal behaviours and values affect one's personal life, those around them, and the organization at large, either positively or negatively.

Adults believe they are accountable for their lives and must be understood and approached as capable and self-directed. As such, the desirability to be responsible for an individual's decisions and direction in life is fundamental to self-concept (Knowles et al., 2014). In line with this, self-directed improvement is the cognitive prerequisite for its acknowledgement by others. Adult learner's self-concept is articulated by a longing to be addressed as an individual adept at managing their behaviour, beliefs, and values (Ferreira et al., 2018).

Partaking in training necessitates a certain degree of dependency whereby the adult learner concedes to specified degrees of vulnerability or inability to copeiously self-direct. The learning environment must thus sustain an approach in which adult learners feel appreciated for their performance throughout the learning stages and for the fact that their actions are slightly self-directed. Strategies to develop a strong self-concept include painting self-portraits or carrying out tasks out of passion. In the former activity, learners use small mirrors to look at themselves as they paint or sketch and think about their different physical features, skin colour, and style. At the same time, this process helps them think about seeing themselves in action and not statically. As they paint, they can talk with others about the activity chosen to portray and what they think it says about themselves.

### ***Role of the Learners' Prior Experience***

Learners' prior learning and experience describe learners' ability to identify knowledge previously gained and give room for accreditation of learner's competence. Prior knowledge is expressed as a hierarchical entity that is dynamic, and it consists of different types of knowledge and skills. Several factors have been considered in influencing learning and student achievement, of which prior knowledge is named the most important. Initial knowledge amount and quality in a learner positively impact the acquisition of knowledge and exhibit cognitive problem-solving skills. Creating a learning environment in which knowledge and skills are acquired based on learners' prior knowledge is essential in developing an integrated knowledge framework. Trying to learn something with adequate prior understanding or having misconceptions may result in rote memorization. This type of surface learning can occur if students are unable to relate the new knowledge to their existing knowledge frameworks.

Adults have vast experience that provides a firm foundation for learning. They analyze, rationalize, synthesize, and develop new ideas or rephrase existing ones by assessing individuals' experiences. Instructional designers must consider prior experiences to help learners connect, identify relevance, and derive inspiration. Adult learners come into educational spaces with more diverse backgrounds than younger learners (Knowles et al., 2005; Merriam & Caffarella, 1999). As younger learners have little to no experience, the relevant pedagogical approaches help them create the foundation for future learning.

Distinct differences in learners' orientation, learning style, incentives, desires, opinions, and objectives create the need for individualized teaching and learning approaches (Brookfield, 1986; Silberman & Auerbach, 1998). Svein (2020) is of the opinion that an adult learner's living textbook is experience. As such, the most abounding resource for learning is inherent in adults themselves (Tuli, 2017). Hence, deducing individual experiences through experiential strategies such as group interactions, simulations, problem-solving tasks, or case methods is beneficial (Knowles et al., 2005; McKeachie, 2002; Silberman & Auerbach, 1998). Ferreira et al. (2018) also affirm that the strongest motivation to include adult learning theory recognizes an adult learner's prior experience. According to Knowles et al. (2014), previous experience has significant connotations for designing learning instructions and methodology. The diverse effects of adult experience on instruction include (i) creating a broader range of individual differences, (ii) provision of abundant materials for learning, (iii) creating biases that can hinder new learning, and (iv) providing the basis for adults' self-identity (Knowles et al., 2014, p. 175).

Lindeman (1926), a pioneer of adult education, certified adult experience as a teaching resource that would incorporate prior experience as a central assumption in

andragogy in recent times by stating that "a learner's experience is the highest value in adult education". Adult learners have more complex requirements and expectations than younger learners, regardless of whether their motivation for learning is internal or external (Ferreira & Maclean, 2017).

### ***Readiness to Learn***

Readiness to learn is described as being prepared to acquire skills and knowledge, and it is also the state of being willing to do something. Effective and successful learning outcomes from a learner describe the learner's capacity to acquire knowledge and exhibit behavioural change as evidence of their readiness to learn.

A learner's readiness to learn is exhibited through their ability to accept new information and process it in a way that changes their behaviours or leads to desired academic outcomes. An individual can be engaged in the learning procedures while taking personal responsibility for learned information. Learner readiness can be associated with school readiness and childhood education related to educational policies, implementation, and active learning engagement. Thus, young learners must constantly be willing and ready to learn to the best of their capabilities to ensure they take advantage of academic intrusion at school. According to Ogundele (2018), the following factors are identified as threats to successful learning: malnutrition, weak health conditions, emotional instability, distress, economic, social, physical, and environmental ills such as prenatal exposure to toxic substances, an unsafe home environment, neglect, child abuse, family instability and dysfunction.

The straightforward procedures pertain to learners' ability to deploy their intellectual connection, sensory learning skills, communication and critical thinking skills. In ensuring effective learning strategies, learners are endeavoured to be focused. When it comes to indirect strategies, learners should stay focused and effectively plan



their learning. While showing empathy for others, learners are encouraged to interact and cooperate with others. Zimmerman (1990) explains self-regulated learning strategies as actions to achieve skills or target information. These methods relate to the learner's ability to identify the relevant bodies, objectives, and tools involved in the learning processes, as allowing self-regulation to a higher degree should be part of a learner. Learners' academic motivation and achievement are hinged on self-regulated learning as an essential indicator (Zumbrunn et al., 2011). Specific traits that characterize self-regulated learners include understanding strategic connectivity between regulatory systems or the responses and learning outcomes and their usage to achieve the set academic goals (Zimmerman, 2008).

Readiness to learn is also relevant in the degree to which learners concentrate and display a willingness to acquire knowledge among peers. Thorndike (1989) described the law of readiness as the first primary law of learning. Gandhi (2010) stated that learning occurs when an action trend is aroused through preliminary adjustment, deposit, or attitude. Also, learning readiness implies particular eagerness and excitement to be involved (Hayden, 2008). When an individual is willing and ready to learn, effective learning with greater satisfaction can be achieved. However, when a learner is not willing or prepared to learn, only some of the efforts involved will produce the desired results. Therefore, learners' readiness is important as it indicates the state in which they are mentally, emotionally, and physically ready to learn.

In the same vein, school readiness is defined as the total preparedness of the school (all educators) to create a favourable learning environment (UNESCO, 2007), which contributes to improved learning among their learners. In considering family readiness, Alexander et al. (1994) thought that family readiness is the complete

preparedness of a family (mainly the parents) to send their child to school to learn as well as create a favourable environment at home to help their child gain the best level of learning. These three – learner readiness, school readiness and family readiness – are the primary aspects of learning readiness that influence higher educational achievement among learners.

Furthermore, readiness to learn is essential for the better educational performance of the students in the learning process (Deyo et al., 2011). Students' readiness for learning is necessary to improve quality education. Once a learner is ready to acquire knowledge, they can learn rapidly; if the student is not geared up to learn, they cannot learn successfully (Prakash, 2012). Lack of learning readiness leads to a decrease in learners' educational achievement. It also decreases the capability and effectiveness of classroom teaching and wastes enormous government investment in school education.

Effective learning is one of the most critical attributes in an educational system, as a lack of adequate knowledge will lead to the non-attainment of educational goals and objectives. Therefore, being prepared to learn is a fundamental requirement for students to accomplish their educational goals and objectives (Gandhi, 2010). Learning readiness creates favourable circumstances for the effective teaching–learning process, which enhances students' academic achievement (USDHHS, 2014). Subsequently, without learning readiness, students cannot succeed in school.

According to Ferreira et al. (2018, p. 16), the concept of 'readiness to learn' is described in the academic framework as learners doing the needful to meet the set standards determined by the teacher and the course curriculum. For andragogy learners, eagerness to learn is determined principally; the central principle is

understanding how to acclimate learning to real-world situations effectively. Knowles et al. (2005) assert that adults become eager to learn things they need to know to handle real-life conditions successfully. Therefore, this suggests that training focused on the future or not directly related to current situations would be seen as less valuable.

### ***Learning Orientation***

Knowledge-based resource capability has been identified as a critical process that enhances innovation, thus influencing an organization's success (Casey, 2005). The strategies of learning orientation include vital components that contribute to knowledge production processes, such as information search, assimilation, processes, and services (Verdonschot, 2005). An organization's members must be able to process information efficiently and innovate faster than competitors. The literature revealed that learning orientation is connected to the principal means of achieving strategic renewal in an organization (Crossan & Berdrow, 2003). Therefore, learning orientation is described as one of the foundational sources of competitive advantage that is equated with innovative efficiency in innovation literature (Lopez et al., 2005).

Wang (2008) discovers learning orientation as the firm value that affects the firm's means of information acquisition. Also, the importance of planned procedures is emphasized in accepting firms learning to achieve common organizational goals. As per Fiol and Lyles (1985) and Garvin (1993), taking a strict approach results in significant behavioural change. Sinkula et al. (1997) discovered that learning orientation is connected with commitment to learning, acceptability, shared vision and purpose. The concept of the learning orientation construct is described as follows:

- deliberate commitment to learning from organizations that value understanding and the cause and effects of their actions;

- open-mindedness is associated with 'unlearning', i.e. when organizations are energetic in innovating long-term strategies and opinions on how to carry out business. The shared vision provides an insight into prospects, outcomes, and theories adopted by the organization alongside the capacity to adapt to consistent and shared assumptions, which enhances the potential of focused and positive feedback to changes in the market environment, leading to better organizations (Sinkula et al., 1997)

As an adult's learning orientation is life-centred, rather than segregating learning into subjects, it should be segregated into actual circumstances (Knowles et al., 2014). Adult learners are also keen on learning skills and capabilities that will empower them to carry out roles or deal with daily difficulties and those presented in the backdrop of a real-life application (Knowles et al., 2005; Merriam & Caffarella, 1999).

In line with Vroom's (1995) expectancy theory model, the learning approach is developed from workplace attitudes, re-training, and job satisfaction investigations. This theory revealed that an adult learner orientated towards learning for job-related incentives relies on the following factors of the expectancy model:

- Valence: The value placed on learning outcomes by an individual
- Instrumentality: The possibility that they will receive the value result given that specific outcomes are accomplished
- Expectancy: Believe that effort will produce positive effects.

### ***Transformative Learning***

Jack Mezirow established the transformative adult learning theory in the 1970s. This theory (also called transformational learning) mainly focuses on changing how learners think about their world and their feelings about themselves. Herein, their

assumptions may vary based on what they learn. Sometimes, transformative learning utilizes difficulties and situations that challenge assumptions and known concepts. Learners then use critical analysis and questioning to evaluate their essential beliefs. They also learn from what they realize about themselves in the process.

Mezirow saw transformative learning as a rational process where learners challenge and discuss to expand their understanding. Immersing oneself in circumstances that increase the likelihood of encountering novel experiences—be it through observation, dialogue, active participation, or a blend of these approaches—naturally heightens the probability of challenging a learner's existing worldview. Transformative learning entails self-examining feelings, beliefs, assumptions, and perspectives for personal development and maturing. Someone going through a transformative process must transform their beliefs, assumptions, and experiences into new, meaningful perspectives. As such, transformative learning is when individuals find new ways to learn the world and apply them by changing their behaviour, beliefs, and assumptions through critical reflection (Akpınar, 2010, p. 186).

Given this definition, this form of learning explicitly highlights the reinterpretation and reconstruction of experiences (Sayılan, 2009, p. 169). To achieve a meaningful, transformative learning experience, the learner must consciously and thoughtfully decide to take action based on their reflective insights. The decisions can produce instant action, prolonged action, or reasoned reaffirmation of an existing pattern of activity.

The process adopted in transforming opinions, perspectives, habits of mind, and mindsets into more inclusive, open, non-discriminatory, emotionally capable, and reflective states to generate values and thoughts that then produce justified action is known as transformative learning. According to Mezirow (2012, p. 76),

transformative learning involves participating in constructive discussions, considering the prior experiences of others to assess the reasons for justifying assumptions and making an active decision due to the outcomes derived.

### ***Motivation***

We bring our work experiences, learning, family, and other things that constitute what we have done and who we are. Applying this principle means learning what learners already know before launching to inform them of what we think they should know. We sometimes refer to this as 'topping up' rather than 'tipping in'. This method can be achieved efficiently by encouraging learners to share some of their existing knowledge at the beginning of a session.

Motivation is an essential element based on which an adult develops an activity. However, one's motives are not constant. Generally, there is an aggregated combination of reasons that inform evolving and changing. Learning explanations start with early socialization, and those motives result from knowledge and experience of capacity acquired. The same in-school learning activities discourage some potential adult education participants, considering that individuals from various social statuses have different motivation levels. According to Benes (2008), decisive-making entails that adults do not educate themselves to satisfy their knowledge progress but need to solve their concrete problems. The presence of an individual's motivation can be concluded from the range of activities by which they strive to realize a given goal. After all, an adult decides on their participation in education.

An individual who is learning is continually encouraged to educate and improve themselves. In life's journey, many demands are connected with individuals, families, jobs, society, and the environment; especially nowadays, these life conditions change rapidly. They thus increase the necessity of learning and educating.

A motive always guides education, which may entail a better position in the labour market, a promotion, higher prestige, or a more socially outward manifestation of their personality. Thus, motivation is an essential factor influencing adult education.

For a long time, educational psychology has held that motivation is an indispensable learning component. Nevertheless, motivation theories, until relatively recently, were of little help in understanding and facilitating adult learning, especially in French research (Carré, 1997), albeit with few noticeable exceptions (Nuttin, 1987). There are two aspects to motivation. The first aspect is described as a force that compels individuals to act. The second is that inspiration gives direction; there is a sense of purpose for driving for something in a specific order and reaching a pre-selected destination. Highly motivated students can control and manage these processes and stay focused on achieving their goals without getting distracted or lost. When understanding human behaviour, motivation is one of the primary constructs applied. As such, motivation is a concept used to describe an individual's behaviour in every aspect of life, such as business, education, sports, politics, and any other sector of human endeavours.

Adults respond to some external incentives (better job prospects, improved salaries). Still, the more effective motivators are intrinsic, such as individuals yearning for increased job satisfaction and confidence, alongside internal stimulation, job-related remunerations and social acknowledgements that are secondary to the more powerful driver of motivation (Knowles et al., 2014). However, such reasons can be inhibited by training programs that disregard stipulated adult learning principles.

The learning inference of the expectancy model is that learners are determined to learn due to the perceived aftermath reward. The learning must also be reasonable

for solving real-life challenges, and its utility has to be significant in learners' lives. Kerka (2002) submits that researchers only partially supported the adult learning theory's assumptions in practice. He posits that psychological studies show that adult and child learning variances may not be dichotomies but rather qualitative and quantitative distinctions along a continuum. Thus, adult learning is more about learning in which knowledge and skill-building range from simple to complex, from dependent and passive learning to independent and active involvement. Haggis (2002) observed that while one thread of literature defines adult learning as increasingly tricky and challenging, another thread that is most attentive to public staff development, which is the emphasis of this review, projects adult learning ideas simplistically and uncritically.

According to Seya (2005), adult education is perceived as transferring knowledge, skills, values, and attitudes that are run outside the formal education system. Obasi (2014) informs that adult education is a multidisciplinary field flap with several content capacities, comprising primary and continuing education, vocational and technical education, higher education, and professional development, and is accessed through formal, non-formal, and informal means by a range of actors.

The responsibilities of agencies in Nigeria for adult education programs are essential and should be emphasized. The replication of functions and duties among the federal, state and local government levels has made the structure of Nigeria's adult education delivery system face significant challenges that have resulted in the administrative bottleneck. These challenges rendered the dissemination of adult education programs difficult. The necessity for the involvement of state and local governments in adult education administration is to ensure effectiveness. These



agencies need to move closer to the people so that adult education programs can avoid severe problems.

In the 1980s, state governments initiated adult education agencies to improve the adult literacy status of their citizens. At the federal level, some agencies, such as the Directorate of Food, Road, and Rural Infrastructure (DFRRI) and the Directorate of Social Mobilization, sought to address the adult education needs of Nigerians (Chieke, 2017, p. 74). The National Centre for Adult Education, Kano, was established in 1986 by the Federal Ministry of Education to develop an adult education training curriculum and train adult education personnel throughout the newly established National Commission for Mass Education (NCME) in 1991. Following the National Policy on Education (2004) implementation, adult education is managed by Nigeria's Federal Ministry of Education. The stipulated objectives of adult education reflected in the policy have the following goals:

- (i) To provide functional literacy and continuous education for individuals who did not have the opportunity to go through formal education from primary school (these include nomads, migrant families, people with disabilities, and others)
- (ii) To provide practical and reformatory instruction for young individuals who did not complete high school education;
- (iii) To provide in-service, on-the-job training, vocational and professional capacity for skills improvement and
- (iv) To provide adult citizens with the necessary aesthetic, cultural, and civic education for societal integration and public enlightenment (FRN, 2004, p.45).

Furthermore, each state created a mass literacy agency as part of Nigeria's struggle to eliminate mass illiteracy (FRN, 2004).

Today, adult education is regarded as the work of specific historical organizations, social movements, institutions, or education efforts orientated towards and for adults as students. Common themes in current usage embrace social reform, the educational potential of everyday life, the exclusion of external indications of learning, and highlighting informal rather than formal pedagogical methods. More recently, however, the speed of advancement in ICT is impacting adult learning experiences. Adult education and andragogy conceptions are also progressively appropriated by lifelong learning concepts (Hase & Kenyon, 2000). The goal of adult education within the organization is to improve skills and competencies, hence the introduction and constant application of adult education in the public service to enhance public servants' skills and knowledge in the required position. Also, public service comprises adults carrying out functions saddled by the government.

## **2.2 The Concept of Public Service**

Several attempts at describing or visualizing public service have been challenging due to symbolic misrepresentations. According to Spicker (2009), when the UK Cabinet Office presented its review of public service reform, it did not describe directly what a 'public service' is, but it did profess that,

We have rekindled our country's pride in our public services, firmly embedding them in the tapestry of British national life. While some of our public services have shown significant improvements, we must also acknowledge that there is room for further enhancement, and they have not yet reached their full potential (Spiker, 2009)

Ndema (2022) described public service as a crucial instrument in a successful public administration. Public services typically encompass vital sectors such as education, health, policing, and defence. Additionally, these services often extend to

areas of importance like social housing, income maintenance, and community and family services (HM Government, 2007). Hence, it seems probable that the term 'public services' is characteristically identified with public activities of the government that include public health and security as well as those carried out for its citizens, such as public service broadcasting or rubbish collection, and social services such as medical care, housing, education, and social care.

This definition suggests a description by function, but public services cannot be defined simply in terms of what they do. Services such as energy supply, medical care, or transport can be public services and commercial activities. Spicker (2009) believes that public service has four defining characteristics: it exists for policy reasons, provides services to the public, is distinctive, and acts as a trust. Consequently, public service operates differently from production for profit in its priorities, costs, capacity, and outputs. With specific reference to Nigeria, Okoli and Onah (2002) further stated that "public service discounts the Armed Forces, the quasi-government corporations and statutory bodies" (p. 76). Akhakpe (2019) described the public service as a hub that ensures government policies and objectives are implemented and achieved. The consensus of the federating regions of Nigeria prior to the 1960 independence in Nigeria birthed the public service across the local governments, states and the federating unit of the country. Ndema (2022, p. 2) stated that "the public service is the whole gamut of services and activities that are organized under government which serve the purpose of ensuring effective and efficient public administration in a given state."

Onuoha (1993) opined that "the Public Service is often referred to as the employees of government responsible for the functioning of government through the implementation of government policies" (p. 278). This perspective aligns entirely

with the stipulations outlined in the Constitution of the Federal Republic of Nigeria (CFRN) on the concept of Public Service. According to Chapter VIII, Part IV, Section 318 (1) of the CFRN, 1999, "public service of the Federation" is interpreted to represent carrying out services of the government, which includes;

- (a) the staff of the National Assembly;
- (b) member of a team of all established courts by the National Assembly Act;
- (c) member/staff of commission established by this Constitution or an Act of the National Assembly; public service of a State refers to rendering services of the state government in any capacity in respect of the Government of the State;
- (d) the staff of any area council;
- (e) the staff of any statutory corporation established by an Act of the National Assembly;
- (f) An employee of any educational institution primarily established or funded by the Federal Government;
- (g) the staff of any company/enterprise in which the government has larger shares or interest, and
- (h) members or officers of the armed forces of the Federation, the Nigeria Police Force, or other government security agencies established by law. (CFRN, 1999, p. 87)

The Constitution further defines the Civil Service of the Federation as the service of the Federation in a civil position saddled with the responsibility for any Government business at the federal, state, and local government levels, as per Section 318 (1) (CFRN, 1999). Hence, the Constitution clarifies the concept of a state's public service and civil service to include people in the service of state governments in the same position as those at the Federal level. The difference between civil and public

service is documented by Akhakpe (2019), as public service comprises both civil servants and employees of parastatals, agencies, and corporations. Thus, civil servants staff the civil service while public servants staff the public service. Okonkwo sheds light on this distinction when he asserts that the public service is generic and broader than the civil service, which is limited to personnel of core government ministries. Hence, the difference is clearly shown in the following statement: "All civil servants are public servants, but not all public servants are civil servants" (2014, p. 4).

Provisions of the CFRN in Section 277 (91) of 1979 encompassing the civil service to cover ministerial departments, statutory corporations or parastatals, educational institutions, judiciary, and legislature financially or principally owned by the government at all levels. The Nigerian Police or Armed Forces and other organizations in which the Federal or State governments own controlling shares or interests are also included (Abomaye-Nimenibo, 2020). Public service is an element of democratic inclusion and participation; as such, the service is intentionally situated to manage the nation's resources for service delivery to the people (Dominic, 2016). In Nigeria, the government, at every level, articulates and implements its policies, programs, and projects through public service. Hence, the public services are principally service-oriented (Junaidu & Aminu, 2015). According to Akhakpe (2019), public service is expected to upload democratic values of the citizens, such as political freedom, accountability and effective delivery of services.

According to Oladipo (2007), the functions of the public service in Nigeria are as follows:

- formulation of government policies and programs;
- planning and implementation of government policies and programs on social services provision;

- Preparation of annual budgets and development plans;
- revenue collection such as taxes, fines, and duties;
- creation of bye-laws, regulations, and orders under powers granted by the Parliament and other quasi-judicial functions;
- maintenance of government records and properties; and
- information dissemination and public enlightenment. (p. 363)

The study by Akhakpe (2019) focused on the public service as a stimulant for good governance and the importance of remaining relevant in delivering its objectives by embracing the best practices required in different sectors to achieve the objectives of the public service. Under the New Public Management (NPM) in Nigeria, an action directed at enabling the effectiveness of public sector organizations in the country, Ibietan (2013) thinks that the public service plays a catalytic role in the economic sector by providing efficient and supportive policies for all the sectors of the economy. Some of the factors that reinforce the NPM are decentralized decision-making, cost recovery, performance contracting, commercialization, public reporting, and other forms of service delivery (Dike, 2019). According to Ndema (2022, p. 8), "public service delivery entails the process of meeting the needs of citizens through prompt and efficient procedures."

The public bureaucracy has a dominant role in national governance, and there is a widespread awareness that the conventional model of public administration has been insufficient in promoting the development of post-colonial states. To address this, it is critical to reassess these bureaucracies' original goals and structures.

### ***2.2.1 Understanding the Nigerian Public Service Rules***

All organizations and human enterprises have set out rules and regulations that guide their policies, principles, conduct, and modes for actualizing organizational

goals while considering employee rights, entitlements, and duties. As such, the effectiveness of an organization depends on the rules guiding its activities to a large extent.

An example of an organization of human activity governed by rules and policies is the Nigerian Public Service. The Public Service Rules (PSR) provide detailed information about all public servants' operational concepts, principles, prerogatives, rights, and job descriptions. The PSR also comprehensively details sanctions applicable to erring conduct. It is a handbook that governs the relationship between the employee and the employer, as well as the relationships among employees. It also explicitly outlines the terms and conditions of their employment.

In Nigeria, the document's name has changed several times over the years. The document was first called General Orders from the colonial era until 1974. Its name was changed to Civil Service from 1974 to January 2000. Since then, it has been called the Public Service Rules. Each time the title of the Nigerian PSR changes, contextual and structural changes are introduced in the book as well. These differences reflect significant changes as the public service transitions from one era to another. Overall, Nigeria's public service is characterized by substantial social influences derived from global pressures associated with politics, making the changes in each dispensation inherent.

The PSR is expected to respond to regular changes, primarily when needed, as the rules govern the public service system. A faulty system could translate into defective management, lack of application, or a complex application process. Therefore, there is an apparent linkage between the quality of Nigeria's PSR, its application, and the effectiveness of the systems (Magbadelo, 2020). To a large extent,

the PSR determines the effectiveness of the service delivered by the public service as well as its essence, value, and efficacy.

### ***2.2.2 Sources of the PSR***

The PSR can be likened to how a constitution is an imposed fundamental principle with little or no opinions of the public servants in that it is binding. Despite several years of continuous democratic government after the military rule in 1999, the PSR still has some dictatorial provisions. This could be likened to the fact that the PSR, like the Constitution, primarily portrays the values and principles of the military era, which ought to have been reviewed with the advent of the current governing principles. Recently, there has been an effort to obtain the opinion of public servants through a planned revision of the PSR. This revision is an important decision requiring maximum support from all relevant stakeholders to ensure all inputs are incorporated into the PSR.

### ***2.2.3 Contents of the PSR***

The PSR contains 16 chapters with some additional write-ups on some government institutions and the Nigerian Foreign Service Regulations. Several exemptions associated with the rules on appointment are highlighted with the statutory organization's powers derived as stated in Chapter 1. The rules explicitly explained the concepts and key terms to ensure adequate comprehension of the use of the PSR. In order to ensure efficient performance by public servants on a daily basis, they must study and understand all the provisions of the PSR.

**Rules of Engagement (Appointment, Recruitment, and Transfers into the Service).** Chapter 2 of the PSR states the requirements for the different appointments into the Civil Service.



*Appointment.* According to the PSR, the Federal Civil Service Commission (FCSC) is saddled with processing and supervising appointments of public officers to public offices in the Federal Civil Service. Recruitment of public servants of Grade Level 06 and below carried out by the Ministries, Departments, and Agencies are under the supervision and authorization of the FCSC. The PSR explicitly details the rules that guide these lower-level staff appointments and those in Grade Levels 07–12. These rules highlight the necessary qualifications required by prospective appointees and the processes involved. The PSR states that the process of determining seniority in any government institution includes consideration of officers' appointment date and timing reflected on the duty certificate. Also, the PSR forbids the non-payment of staff salary and allowances while stating the responsibilities of the Permanent Secretary, including keeping workers' personal records.

*Recruitment.* Recruitment in the Nigeria Public Service is described as enlisting people who still need to be in the public service. Transferring already employed public servants from one institution to another must be regarded as something other than recruitment. The PSR lists out the different types of appointments available to a trainee in the Nigerian Public Service, such as probation in a pensionable post, non-pensionable post, and in an acting capacity, with the requirements and procedures involved.

**Rules Regulating Behaviour or Conduct of Personnel.** Chapter 3 of the PSR comprehensively highlights the rules that guide exercising disciplinary action to direct workers in the Federal Public Service. Each public servant is expected to be aware of the disciplinary rules and other regulations in obligation. The rules are available to public servants in a publication by the FCSC titled "Guidelines on Appointments, Promotion, and Discipline". The FCSC is also saddled with the

responsibility and authority to exercise disciplinary control over Nigerian public servants.

The PSR describes general inefficiency as a series of displays of incompetence whose cumulative effect has revealed that public servants cannot discharge their assigned roles effectively. A detailed process of relieving a public servant of duties as a result of inefficiency and related conduct is presented in the PSR. The PSR defines misconduct as a specific act of improper behaviour that is detrimental to the image of the public service once investigated and proved. The following behaviours are regarded as misconduct within the public service: recurring lateness to assuming duties, sleeping on duty, negligence on duty, improper dressing, assault, insubordination, refusal to follow superior's instructions, dishonesty, assault, unauthorized removal of public records, and discourteous behaviour. The PSR includes the detailed process of instituting disciplinary action against a public servant based on the offence of misconduct and other sundry-related crimes in the Public Service.

Severe misconduct is described in the PSR as an act of unacceptable and improper behaviour that negatively impacts the Public Service's image and can lead to a public servant's dismissal if, after proper investigation, such an individual is found guilty. Such acts of misconduct include obstructing delivery of service, records suppression and falsification, criminal charges, disclosure of official information, absence from the job without necessary authorization, involvement in political activities, engagement in bribery and corruption activities, embezzlement of funds, false claims, sexual harassment, and any other action that threatens the security of the state. The PSR indicates the disciplinary procedure for severe misconduct and similar offences considered severe misconduct.

**Rules Detailing Privileges, Rights, and Entitlements (Promotion, Medical, Leave, Allowances).**

*Promotion.* The PSR makes adequate provisions for the promotion of public officers while in service. The conditions and required procedures for promotions are pointed out, stating the roles needed to be played by the FCSC in ensuring a successful promotion exercise. In the Nigerian Public Service, the minimum number of years an officer is entitled to spend in a Grade Level before being considered for promotion is a minimum of two years, and advertisements are based on merit comparisons amongst all eligible public officers.

In all considerations for promotion, a satisfactory general record of conduct for the officer is a significant criterion. For Grade Level 06 and below, the primary ministry is responsible for promoting the public officers. In contrast, for Grade Levels 07–14, a confirmation of the promotion is required from the FCSC, and for Grade Levels 15–17, promotions are subject to the consideration of the Head of Civil Service.

*Medical Rules.* Chapter 7 of the PSR highlights medical rules. This chapter provides adequate information on medical activities and criteria for processes and procedures that benefit from the health insurance scheme. The PSR explicitly states the responsibility of all actors, such as the affected public servants, the health care provider, the Ministry, Department, or Agency in the event of illness.

*Leave.* Chapter 10 of the PSR lists and expands on different types of public service leave available for public servants as the need arises. The authorized absence of a public servant from duty post for some time is known as leave. The different types of leave in the public service include maternity leave, casual or annual leave, and leave of absence study leave with or without pay, among others.

According to the PSR, annual leave is granted based on the grade of the public servant; Grade Level 07 and above are entitled to 30 calendar days, Grade Level 04–06 are entitled to 21 calendar days, while Grade Level 03 and below are entitled to 14 calendar days of leave.

The PSR also makes considerations for maternity leave, which is the approved absence from the duty of a female public servant by her superior officer based on pregnancy. It covers both the prenatal and postnatal periods. A pregnant public officer is qualified for a 16-week maternity leave that starts not less than one month before the proposed delivery date, with the individual also entitled to a total monthly payment. The officer is expected to submit a medical certificate stating the expected leave date not less than two months prior. After delivery and resumption of maternity leave, nursing mothers are granted two hours off duty daily for six months.

*Allowances.* All allowances applicable to public servants are listed in the PSR. In public service, allowance is primarily a monetary benefit given to an officer for a particular purpose and is separate from the salary. Such allowances include hotel accommodation for out-of-station duty, kilometre allowance, duty tour allowance, overtime allowance, and disengagement allowance. These allowances are reviewed periodically following the country's economic situation, and each review is communicated to all public servants by the relevant organizations.

**Rules Associated with the Termination of Appointment, Resignation, Dismissal, Retrenchment, and Retirement.** As with regulations guiding the recruitment and employment into the Public Service, laws also exist that guide exits from the Public Service as per the processes and conditions stated in the PSR.

*Resignation.* According to the PSR, any public servant who resigns from their appointment is liable to the following:

a. loss of all entitlement to vacation leave and any previously approved leave will be revoked

b. a full refund of money owed to the government

*Retirement from Service.* The PSR states two possibilities that can lead to the retirement of public servants. The first is following three consecutive failures in the promotion examination in the same grade with an on-the-job performance assessment below average. The second is redundancy, which results from scrapping an office/organization or re-organization. Other forms of exiting the public service include downsizing and retrenchment. Also, a proven act of misconduct can lead to the retirement of public servants.

*Compulsory Retirement.* Public servants are compulsorily retired at age 60 or after 35 years of service in the Nigerian Public Service, whichever is earlier.

*Dismissal.* Investigated and proven acts of serious misconduct could lead to the dismissal of public servants. According to the public service rule, a dismissed public servant is deprived of all retiring benefits subject to the Pension Reform Act 2004.

***Public Service Rules Areas/Sections in Need of Amendments/Deletion.*** Public Service has existed for years. It is characterized as an institution with resistance to change and innovation, introducing new regulations increasingly challenging. Moreover, actions to review old rules often need to be revised despite becoming irrelevant and outdated. For instance, the PSR still contains provisions reflecting attributes of the military dictatorship era. Some identified defective requirements in the PSR, and reasons they have been considered for removal compared to recent developments are highlighted below.

According to the PSR, all government heads must ensure that all subordinates with access to classified information/documents have signed the Oath of Secrecy appropriately before gaining access to such information. Recently, the Oath of Secrecy has been considered less applicable as its form has drastically disappeared since the introduction of the democratic government.

*Publication and Public Utterances.* No public servant can undertake activities relating to public declarations without the permission of the Permanent Secretary/ Head of the Extra-Ministerial Office. Such activities include acting as an editor or making a financial commitment to any form of publication, addressing any issue related to administrative or political publicly, or granting interviews on matters that affect the country's public policy, administration, defence, and military resources. However, in a democratic society, the above provision is offensive to the 1999 constitution that states that each citizen is entitled to freedom of expression, to hold and receive opinions and to impart knowledge without interference.

#### ***2.2.4 Why the Rules Are Not So Effective***

**Corruption.** According to Magbadelo (2020), corruption has affected all processes in the Nigerian Public Service system and is infiltrated into societal systems. Money exchanging hands for jobs, promotions, confirmations, and participation in programs summarizes the pervasive impact of corruption on the country's Public Service. Due to this situation, the PSR needs to have the necessary power and influence on the operations of the service.

**Nepotism.** Nepotism in public Service is likened to preferential considerations, whereas the application of the PSR differs for different people. This scenario is referred to as the double standards that are prevalent in the system instead of ensuring the rules are applied uniformly or universally.

**Tribalism/Ethnicity.** Nigeria's ethnic diversity and cultural differences seem to stimulate some unscrupulous officials to adopt discriminatory practices based on ethnic sentiments. Favouritism is often observed as individuals from the same ethnic groups are favoured over others, and extant rules are violated.

**Faulty Application.** A deliberate act of misapplication of the PSR on the record of inefficiency and incompetence is borne out of a need for more understanding of the stated rules and their objectives.

**Federal Character Principle.** The aim of the federal character principle is to guarantee equal consideration and representation of all ethnic groups in all appointments in federal agencies or institutions. Instead, this principle is applied to the promotion of personnel, which ought to be based on competitive merit.

**Wrong Rules.** Nigeria has been operating the Public Service since democracy in 1999. As with every other culture in a state of flux, Nigeria has experienced several changes due to changes in the PSR that determine its mode of operations. Also, these changes necessitate the need for the PSR to be well understood and void of any human rights violations.

In conclusion, the PSR is a legal document that has guided the activities and purpose of the public service, helped regulate the operations of all actors in the service, and prevented anarchy due to a lack of rules. As it includes the practices required in managing the Nigerian Public Service, the absence or inappropriate application of the PSR does not reduce its value and importance. The defects or limitations of the PSR and the more significant problems of the society negatively influencing public sector governance and its application of rules are issues that the government and citizens should address to effect reforms and institutionalize the

Nigerian Public Service. A good PSR is essential, but the willingness and ability to implement it will require institutional reform and attitudinal reorientation.

The Public Service in Nigeria is an executive arm of the government responsible for implementing the government's policy. Public service is a readily available tool for the government to achieve its goals and objectives, as "the success of any government initiative is directly dependent on the ability and willingness of the public sector to execute" (Obi-Anike & Ekwe, 2014, p. 69). As such, the legislative branch has to establish public sector organizations. All the employees of these organizations are guided by the PSR and funded by the government. At the same time, leaders such as the executive officers and board of directors are appointed and report directly to the government.

### **2.3 Learning Methodology**

Such methodology refers to a strategic understanding of how information is received to learn best. From the case method to coaching and projects to experiential learning and simulations, teaching approaches involve participants in lively debates about real-world difficulties. Participants are invited to deliberate on these difficulties independently, in groups, or teams and extract insights to apply to their work. Active learning methodologies require that students find opportunities to talk, listen, write, read, and reflect on an academic subject's content, ideas, issues, and concerns (Meyers & Jones, 1993). Active learning is a pedagogy that focuses on the learner's activity and engagement in the learning process (Arruda & Silva, 2021).

The advantages of such active learning approaches include student growth (self-determination) by breaking the traditional educational model's barriers, fostering critical reflection, integrating theory and practice, and the innovative construction of



knowledge. Applying learning methodology can boost learners' happiness, motivation, and accountability in the learning process, critical reasoning, and decision-making. Furthermore, the method is based on the constructivism theory, which proposes that learning can be constructed through team members' interaction and argumentative dialogue that results in critical reasoning. It subsidizes the production of knowledge in different areas that require the active and reflective performance of the learners.

Qualitative research exhibits several distinguishing features, such as utilizing the natural environment as a primary data source, leveraging the researcher as a vital instrument, possessing a descriptive nature, focusing on the meaning attributed to phenomena by individuals, and employing an inductive approach. These enable students to put what they have learned into practice, use the right skills, and be advised on any bad habits. As a result, learners are exposed to a safe, impactful learning environment that allows them to transfer the skills learned in theory to their employment, allowing them to perform their tasks effectively and efficiently. Moreover, there is a concern about working with numbers in quantitative research. In this article, a survey uses qualitative research with complementary quantitative bias obtained through students' performance scores to complement itself (Yin, 2015).

In this method, the students are involved in reading, writing, speaking, drawing, sharing, expressing their skills, and raising questions individually and in groups. Students engage in active learning by engaging in higher-order thinking tasks and reflecting on their experiences. These tasks include analysis, synthesis, and evaluation. The aim of such exercises is that the student develops better knowledge and competencies throughout their studies, such as in Project-Based Learning (PBL). The methods and strategies employed are also based on the type of education (online,

face-to-face, or 'blended'), the student's profile, and the location of the education (online, face-to-face, or "blended" models).

These approaches will lead us to analyze and research (in close connection with the group's fourth line) the adaptation of curricular content through ICTs. These efforts are vital to assessing these approaches' impact on academic performance and the development of maturity and personal growth in students. Finally, to investigate new learning environments such as ubiquitous learning, hyper-personalization, micro-learning, or informal models. Furthermore, a virtual learning community that goes beyond on-campus and online courses by joining together students from campuses across the country.

## **2.4 Active Learning**

According to Henriksen et al. (2017), the adult population's overall transformation can be improved by attaining knowledge, skills, and attitude modification. In today's dynamic and intricate business landscape, organizations must increasingly rely on on-the-job learning and continuous development to enhance and maintain their competitive edge (Salas & Cannon-Bowers, 2001). Nonetheless, similar outcomes driving the improved relevance of on-the-job learning have also presented modern training problems. Conventionally, training has been aimed at developing capacities or providing employees with competencies directly related to the job. In today's constantly evolving work environment, there is a growing emphasis on developing specialized and adaptable knowledge or competencies that can respond to changing circumstances. Although our understanding of developing adaptability is still limited, recent research suggests that training programs that selectively target rational, motivational, and practical self-regulatory processes and promote active

learning methodologies may have the potential to develop adaptive capabilities (Bell et al., 2010).

Therefore, it is imperative to investigate the utilization of active learning in line with adult learners' characteristics. A critical theme that triggers growth in adaptive knowledge, technology-based training, and embedded training is the fundamental change from a traditional, procedural approach to training. This change tends to manage the participants by emphasizing interest, learning by discovery, creative expressions and experiences (Shah, 2020).

According to Adirika (2014, p. 366), action-based learning is a pedagogical approach that emphasizes the meaning and internalization of learning in ways that solidify flow and generate confidence and autonomy in learners. Several other authors agree that a learner-centred approach to education emphasizes learners' active participation in the learning process (Escribano et al., 2013; Mumoz et al., 2013). Escribano et al. (2013) describe it as an instructional approach involving active participation in the learning process through various activities. McGuinness (2011, p. 1) viewed active learning as "a method of educating students which permits them to be involved in a class, takes learner beyond the role of passive listener and note-taker, allows the learner to take direction and initiative during the class".

Within statistics literature, active learning (referred to as 'query learning' or occasionally tagged 'optimal experimental design') is a subfield of machine learning and, more broadly, artificial intelligence. According to Settles (2009, p. 3), the fundamental assumption is that if the learning algorithm chooses the data from which it learns to be 'curious,' it will perform better with less training. The National Survey of Student Engagement (NSSE) submitted that active learning involves "students' efforts to construct their knowledge actively". This description is reinforced by the

variables that the Australasian Survey of Student Engagement (AUSSE) uses to assess active learning, which include collaboration among students in class through the presentation, participating in discussions and asking questions, being part of a community-based project, working in partnership, and interacting with other students outside the learning environment (Carr et al., 2015; Brame, 2016, p. 1)

A general agreement on active learning was reached by more than 300 attendees of dynamic learning seminars. This consensus highlighted the importance of learners utilizing higher-order thinking skills to complete tasks or engage in class discussions (Freeman et al., 2014). Their definition implies that active learning connotes all activities that students partake in to enhance acquired knowledge and understanding. The actions diverge at different points but necessitate students' participation in higher-order thinking. Though only sometimes unequivocally stated, precognition, where learners think about their learning, is vital in active thinking as it connects activity and education.

Active learning is considered a practical technique to promote student learning. Prince (2004) identified two central prerequisites for playful learning: learners' activity and engagement in the learning process. Learners take responsibility and achieve more via "learning by doing". Learners are expected to actively partake in activities related to learning content and think about what they are doing (Gardner & Belland, 2012). As Merriam et al. (2007) posit, active learning meets adult learners' requirements. They are perceived as self-directed learners who aim to control their learning progress and work on something practical that connects their prior experiences and knowledge acquired.

In promoting active learning, Brame (2016) indicates that "approaches that encourage active learning focus more on developing students' proficiency than on

communicating information and also necessitates that learners read, discuss, write, as these require higher-order thinking" (p. 1). The activities of active learning can range from very simple to more complex. A rigid line of definition exists between active learning and formative assessment, as teaching that encourages active learning entails practising what appraises understanding (Handelsman et al., 2007).

Emerging technologies and the associated development have made online education a practical learning approach for adult learners (Allen & Seaman, 2008; Parsad & Lewis, 2008). The online experience shifts active learning for adult learners from classroom to web-based learning using several technologies (Muncy & Eastman, 2012; Shieh et al., 2010). However, Allen et al. (2002) and Brown and Liedholm (2002) insist that there are no remarkable differences between the efficacy of online and face-to-face learning. As such, the active learning approaches functional in a traditional classroom setting can be applied to online learning.

#### ***2.4.1 Theories of Active Learning***

The assertion of constructivism is based on the fact that learning is a process whereby new knowledge connects with learners' pre-existing knowledge (Dennick, 2016). In constructivist opinion, learning is a process of knowledge construction instead of knowledge recording or absorption (Chalufour, 2014). According to Kuo et al. (n.d.), a learner's position is removed from a passive beneficiary to an active constructor of knowledge who creates an internal illustration of expertise and a personal interpretation of experience. Learners primarily depend on learning as they build on existing knowledge to develop new understanding. Additionally, active learners know their cognition's progressions and can manage them based on their requirements or circumstances. As such, constructivism's assumptions align with the core elements of active learning.

According to Piaget et al., as advanced by Brame (2016), the constructivist theory suggests that learners can either integrate new information into their existing mental framework or modify their current structure to accommodate additional information that contradicts prior knowledge. Active learning approaches often require learners to create connections between details and their existing mental frameworks, thereby expanding their understanding. Sometimes, instructors create learning activities that challenge misconceptions, prompting learners to restructure their mental models based on a more accurate experience. In both cases, attitudes that support active learning promote the cognitive effort that constructivist learning theory deems essential for learning.

Through social sharing and interactions, cognitive-based practices can be enhanced through cooperative learning (Dennick, 2016). The sociocultural theory of development, as proposed by Vygotsky (1978), elaborates on the relationship between cognitive processes and social activities. Vygotsky suggests that learning occurs when learners attempt to solve problems beyond their current developmental level with the guidance of their instructors or peers. Therefore, active learning techniques depending on a cooperative learning approach hinge on the constructivist learning theory's sociocultural arm, taking advantage of peer-to-peer collaboration to enhance learners' development of extended and definite mental paradigms.

Central to the Active Learning System (ALS) is an effective process of self-regulation. Within the training framework, the self-regulatory system has three general domains. Practice behaviours are the first domain that describes employee's activities during training. The prime focus is how individuals are motivated while practising to improve skills. However, Cannon-Bowers et al. (1998) warn that one should focus on pre and post-practice activities that include studying, planning, and

reviewing feedback in active learning. The self-monitoring is identified as the second domain, which characterizes the cognitive constituent of the self-regulation method. The focus is on how training participants focus their mental attention and reflect on their progress in achieving stated objectives (Karoly, 1993). Self-evaluation is the third and final component of the self-regulatory element, which focuses on trainees' affective (i.e. emotion-based) responses to the objectives. Kozlowski et al. (2001) further stressed that self-efficacy and causal attributions are the two principal self-reactions critical in learning contexts. As such, self-regulatory activities must be engaged and maintained to ensure high levels of self-efficacy.

In ensuring self-regulatory activities are engaged and maintained, the vitality of high levels of self-efficacy and appropriate attributions are essential for self-regulatory activities to be supported. Rissanen (2014) points out that an ALS encourages students to reflect on the materials, analyze, process, and prepare to discuss all strategies to improve higher-order thinking skills. By incorporating active learning methods into the face-to-face mode of learning. Instructors can foster active learning experiences by designing opportunities for students to engage proactively rather than passively absorbing information delivered by the instructor. Kim et al. (2013) described the benefits of an ALT as including improved critical thinking skills, increased motivation, and enhanced interpersonal communication skills.

Lier (2007) relates action-based teaching to pedagogical scaffolding. According to him, six conditions must be met in conducting active learning appropriately:

- a. 'Continuity', as depicted in task repetitions, connections, and vacations;
- b. 'Contextual support' as in enacting safe and supportive environments;

- c. 'Intersubjectivity' as entrenched in mutual engagements and encouragements;
- d. 'Contingency' in task processes;
- e. 'Handover/takeover', which increases the capacity of the learner's roles, also enabling them to attend to emerging skills and knowledge; and
- f. 'Flow' or when the skills and challenges fall into balance as participants understand each other.

There is first an all-inclusive plan that stakes out a long period of work. The trainer and the learner then target to undertake and finish particular projects or achieve set goals within set time frames.

#### ***2.4.2 Active Learning Techniques Using Andragogy***

With andragogy popularized as a concept by Malcolm Knowles in the early 1800s to differentiate adult education from child education, several authors have since published their opinions on the theory. There have been various impressions that distinguish mature and experienced learners from young learners just starting their careers. Some of them are outlined as follows (Sanger et al., 2016, p. 41):

- Experience learners must identify the appropriateness of their learning in their careers.
- Mature learners have a factual basis in their experience to make the content applicable.
- Experienced learners take responsibility for their education.
- Mature learners focus on the practical application of the skill gained to solve problems.
- Mature learners are privately motivated and determined to learn.



In line with these primary assumptions, according to Sanger et al. (2016), the premises of andragogy must comprise the following: problem-centric, the relevance of the content to daily and previous experiences, emotional connection, self-directed learning, positioning, and entertainment.

In adult learning circumstances, training activities are less formal, and the trainer's responsibility shifts from information provider to that of a mentor and guide, necessitating better approaches and proficiency from the instructor. When adopting the long-standing traditional lecture and workshop strategies, they must offer practical exercises, usually investigatory discussions, case studies, and role-plays that address organizational challenges while expecting adequate adoption of group discussions and group work. The approach thus moves from theoretical knowledge into practical utilization. The instructor performs as "the sage (the wise man) on the stage in the traditional pedagogical model". In the andragogic approach, however, the trainer is referred to as a mentor and facilitator.

According to Vikaraman (2017), andragogy enhances flexibility by allowing beginner mentors to create suitable methods, pace and allocate time. Sanger et al. (2016) outline standard techniques utilized in the andragogic approach, encompassing critical incidents, lectures, case studies, and peer-to-peer discussions. As such, the instructor's responsibility places a high value on experiencing a personal, real-time experience derived from professional practice.

### ***2.4.3 Active Learning Approaches***

Kuo et al. (n.d.), in their paper "Active Learning in Online Learning Environments for Adult Learners", note that active learning techniques entail group discussions, paper presentations, icebreakers, answer pairs, cooperative learning, debates, games, role-playing, and computer-aided instruction. However, the learner's

level and the content being taught must be considered in selecting appropriate active learning methods. Adopting appropriate active learning strategies in education increases learners' motivation (Carroll & Leander, 2001).

Active learning approaches have been advanced as valuable techniques are applied to balance lecture-based classroom learning. Further, increasing student interaction and knowledge retention requires dynamic education in the traditional learning technique. In contrast, research from several authors has shown that, as opposed to passive learning, active learning does not participate in several learning activities. Instead, passive learners have imparted knowledge from the instructor through lecture-based instruction or received information by reading course materials independently (Prince, 2004; Wilson et al., 2007).

Through passive learning, fewer higher-order cognitive learning proficiency, such as analysis and critical thinking, are developed. Instead, lower-level learning, comprising rote memory and reciting, is often the result. When examining various active learning strategies, we found that active learning strategies primarily address adult learning principles (Kuo et al., n.d.). Brame (2016) describes some practical active learning techniques for lectures:

**Pause Procedure.** This is a teaching strategy that involves the instructor pausing for a brief period, typically two minutes every 12-18 minutes, during a lecture. This approach encourages learners to actively engage in learning and review their notes with a partner. By allowing learners to reflect on the lecture content and its organization, the Pause Procedure creates space for questioning and discussion. This approach has proven effective in enhancing learning outcomes over time.

**Retrieval Practice.** One method used to enhance learning is known as Retrieval Practice, where the instructor stops the class for approximately three

minutes every 15 minutes and requires students to recall and write or explain what they remember from the previous segment while also allowing them to ask questions. This technique helps learners retrieve information from memory, improving long-term memory and knowledge transfer to new contexts (Brame & Biel, 2015).

**Demonstrations.** This approach entails learners demonstrating their system comprehension by predicting an outcome. In cases where the forecast is incorrect, learners are prompted to identify their errors, which can facilitate the restructuring of their mental model.

**Think-Pair-Share.** Here, learners are asked specific questions that require higher-order thinking, such as evaluation levels within Bloom's taxonomy, practical application and analysis. Learners are given some minutes to think about the response and then discuss it with peers for about two minutes. Learners clarify and further expatiate initial responses by following up with the instructor's explanations and clarifying with their peers while critically considering feedback. This technique aids in articulating novel mental associations.

**Peer Instruction with ConcepTests.** It is a teaching technique that is similar to the think-pair-share approach, but it involves the use of personal response devices like clickers. This method is particularly useful for classes with large numbers of students and can be facilitated using different tools such as Top Hat, Poll Everywhere, and TurningPoint.

**Minute Papers.** This approach, like think-pair-share, prompts students to examine and articulate their newly formed connections. Handelsman et al. (2007) also note the similarity between these methods in promoting active engagement and reflection among students.

Some other techniques are strip sequences, concept maps, mini maps, categorizing grids, student-generated test questions, content, form and function outlines, decision-making activities, and case-based learning. Other active learning pedagogies, such as having dedicated websites and healthy communities, are highly structured. Some of the several active learning strategies include problem-based learning (PBL), team-based learning (TBL), peer-led team learning, and process-oriented guided inquiry learning (POGIL).

#### ***2.4.4 Principles of Active Learning***

In applying adequate active learning approaches, principles for online learning were identified for good practice. In facilitating the learning process, there is a need to design active learning in online settings. Chickering and Gamson (1987) present a research-based list of seven principles that emerged from education scholars based on their experiences with factors that could improve learning. The principles developed and applied for face-to-face learning are now applicable to online learning as it has proven to enhance learning activities in the learning environment (Bigatel et al., 2012). According to Kuo and Kuo (2015), "the seven principles represent the essential points instructors or instructional designers must consider when developing an online or web-based course with active learning". These principles include the following.

**Encouraging Instructor–Learner Interaction.** The instructor–learner interaction principle encourages a connection between the instructor and the learner. The increased interaction between learner and instructor can help learners view the instructor as a role model, help learners feel an essential part of the learning process, and improve their performance.

**Developing Cooperation Among Learners.** This principle's primary focus is to create effective communication and collaboration among learners. Collaboration

among learners will lead to sharing ideas, group work, and a deep understanding of the subject matter. According to Hathaway (2014), studies revealed that learners learn more when deeply interacting with other learners.

**Active Learning.** Active learning's principle is to ensure an effective teaching process by involving learners in learning activities, which allows for integrating prior experiences to create new situations. Constructivist pedagogy is applicable in active learning.

**Giving Feedback.** Prompt feedback is essential as it encourages learners to be more involved in learning. Feedback is thus perceived as a critical factor for effective teaching and learning.

**Completing Tasks on Time.** Time management is of the utmost essence to adult learners, as other responsibilities such as work and family also require their attention. Online learning encourages learning to focus on learning tasks, and Online courses have the potential to motivate learners to dedicate additional time to the course material, subsequently leading to improved academic performance (Hathaway, 2014).

**Communicating High Expectations.** Instructors are to share high expectations with learners to encourage the latter to devote more commitment to the learning process.

**Diversity of Talents and Ways of Learning.** This principle considers the ability of learners to bring into learning different strategies. To ensure self-regulated learning, learners must choose their learning pathways and instructional activities that align with their preferred learning styles.

#### ***2.4.5 Advantages of Active Learning Strategies***

In line with the positive learning results derived from active learning, scholars have debated the advantages of active learning (Bonwell & Eison, 1991; Phillips, 2005; Watkins et al., 2007). Further to its established benefits, active learning has proven to improve interaction between learners and teachers (AfzalSayed & Md Abdul, 2021). Other identified benefits of active learning include increasing trainees' enthusiasm to learn, self-confidence, and self-reliance, improving their prospects of retrieving previously acquired knowledge, stimulating social interdependence, and enhancing attitudes towards related subject areas. Likewise, improved skills to team up, student retention, communication, or interaction with others are also achieved through such learning (Harris & Bacon, 2019). Besides, active learning has been recognized as a superior method of instruction in the classroom (Deslauriers et al., 2019). The researcher's sociocultural theory establishes the positive impact active learning can have on students' learning outcomes, which can be reflected in learners' achievement, attitudes, and behaviours (Michel et al., 2009; Taraban et al., 2007). Research has predominantly demonstrated that active learning approaches improve learners' higher-order thinking, such as critical thinking, problem-solving skills, evaluation, analysis, and synthesis. Thus, enhancing higher-level thinking became the most paramount intention for active learning (Pundak et al., 2010).

Other positive outcomes include

- Improved content knowledge, critical thinking, problem-solving capabilities, and acquisition of expert attitudes towards learning in contrast to traditional lecture-based delivery (Deslauriers et al., 2019)
- Increased interest in learning for both learners and instructors (Thaman et al., 2013)

- Improvement of critical and creative thinking capacities, problem-solving, adaptability and interpersonal skills (Tang et al., 2020)

- Enhanced student sensitivities and attitudes towards information literacy and increases health literacy in older adults (Uemura et al., 2018)

Substantial evidence supports active learning's role in encouraging higher-order thinking and its enhanced role over conventional learning approaches. The theoretical framework of active learning proposed by Watkins et al. (2007) subtly portrays "the cognitive learning domain of Bloom's taxonomy and offers a basis for measuring learning outcomes for active learning. The three specific dimensions in this framework include behavioural, cognitive, and social components" (Watkins et al., 2007). This substructure depends on two pertinent constructivist theories: cognitive and social constructivism.

#### ***2.4.6 Application of Active Learning Among Online Adult Learners***

The active learning techniques demonstrated for adult learners in a conventional training centre can also be applied to an online course. In its application, several learning styles associated with adult learners are considered (Saunders & Wong, 2020). Individual learning styles, instructional proficiency, and technology have been identified as significant factors that impact an instructor's decision to select an active learning approach. However, even though there are various functional learning approaches, only a few can be appropriately managed in online settings. Several authors agree that instructors must recognize the training and capacity needs of online adult learners while considering the different learning styles and be set to apply active learning techniques to aid individual adult learners and improve their online interaction (Kuo et al., 2014).

Haleem et al. (2021) found that instructors must know all the technology's relevant components to integrate active learning strategies into online learning effectively. For instance, instructors must carefully consider the technological tools' strengths and weaknesses and their main features, potentials, and quality. The selected technological device should also skillfully engage adult learners while improving learning outcomes (Lenhart & Moore, 2011; Haleem et al., 2021). However, while selecting proper technology tools for adult learners, it is essential to note that online programs must incorporate active learning.

#### **2.4.7 *Challenges of Implementing Active Learning***

Despite several advantages of active learning, various training institutions are reluctant to adopt it for their training programs due to some challenges. These impediments include concerns regarding content coverage, instructors' capacity, technology, time, new learning approaches, learners' reactions, and pedagogical issues (Deslauriers et al., 2019). It consumes much time for trainers to prepare for a course integrating active learning strategies, specifically for those who teach a new course or who utilize active learning for the first time. The fear of applying innovations is also identified as an impediment to incorporating active learning (Kim et al., 2019). Additionally, an absence of instructor maturity and colleagues' opinions may impact active learning; besides the challenges that trainers experience, learners may also be confronted with specific barriers in a dynamic setting as a result of its wide variety of techniques and approaches (Bernstein, 2018).

While it is evident that the active learning approach can improve learners' knowledge and performance, it is also imperative to understand that techniques' impacts are only consistent sometimes across different learning outcomes.



Individually, most active learning approaches target improving outcomes after the training program instead of during the training. Keith and Frese (2005) agreed with this assertion when they noted that error training is an example of low training performance levels because learners' activities could be erroneous and arrive at wrong solutions. Eldridge et al. (2022) are of the opinion that errors corrected during training could benefit the learning process by providing positive results during conclusions and reporting. Bell et al. (2010) affirm that it is often only when one examines trainees' transfer performance that mastery training advantage is manifest. Therefore, a vital significance of these indicates that valuations of learners' capacity during or just after training may not provide an exact indication of the efficacy of active learning techniques.

## **2.5 eLearning**

In the current global knowledge economy, learning has become a prerequisite for survival. Social, economic, and technological forces have continually altered the global economy and the culture in organizations and the world. Categorically, these forces continue to revolutionize learning methodologies in institutions and organizations. Technology, the increasing need for knowledge and training, the necessity for on-time training delivery, and the need to provide cost-effective solutions for meeting the learning needs of a geographically dispersed workforce have led to the evolution of the processes that govern the design, development, and delivery of training and education in the workplace (Urdan & Weggen, 2000).

There are diverse views as regards the definition of eLearning from experts in the field. Experts such as Dublin and Cross (2003) and Oblinger and Hawkins (2005) believed that only some researchers accept a single definition. They believe eLearning means different things to different people. Heinze et al. (2004) are of the opinion that

different words and definitions are used by people to describe eLearning, which sometimes have the same meaning (Saleh, 2022).

eLearning is identified as an educational outcome that has erupted from the development of ICT. Generally, "learning which involves the usage of any electronic device, from computers to mobile phones, and which might, or might not, involve the usage of the internet or intranet" (Kenan, 2015, p. 24).

The spread of knowledge through eLearning is not a luxury but an essential consideration for current and future generations. In this view, researchers and practitioners are now very interested in higher education for adult learners in the public sector. Previous studies have shown that learning and access to information and communication can be managed through eLearning wherever and whenever (Chen & Tseng, 2012; Ho & Dzeng, 2010; Islam, 2013; Pena-Ayala et al., 2014). Kratochvíl (2013) and Abachi and Muhammad (2014) posit that all individuals involved in eLearning are keen on utilizing flexible access in terms of time, space, pace, and online collaborative knowledge.

Some other studies offered the following assertions to define and identify the concept of eLearning. The European Commission (2001) defines eLearning as the Utilization of modern multimedia technologies to enhance the quality of both learning and teaching. This is achieved by improving access to educational resources and services, facilitating seamless communication, and fostering collaboration among learners and educators. Similarly, the Joint Information Systems Committee (JISC, 2003) describes eLearning as a learning process that is carried out using ICT.

Academic scholars precluded the synonymous usage of "eLearning" and "online learning". Instead, they endorsed more comprehensive eLearning-developed definitions, like using new ICT in education (Bates, 2001). Ebisin et al. (2017) record

that eLearning is inclusive and similar to other forms of learning, such as computer-based learning (CBL), technology-enhanced learning (TEL), computer-aided instruction (CAI), internet-based training (IBT), web-based training (WBT), learning using virtual learning environments (VLE) – which are also called learning platforms – eLearning, and digital educational collaboration.

In Gotschall's (2000) view, online training is categorized as a broad term that denotes all training carried out using a technological device over a network connection, such as an intranet, local area network, or the internet. Urdan and Weggen (2000) argued that online learning makes up only a single part of eLearning and defines learning via the internet, intranet, and extranet. Online learning can spread from a basic online learning program that includes text and graphics, exercises, testing, and record-keeping, such as test scores and bookmarks, to a sophisticated online learning program. This intricacy encompasses elements such as animations, peer group discussions, simulations, audio and video sequences, expert discussion groups, online mentoring, links to resources on a corporate intranet or the internet, and communication with corporate educational records.

Hall and Snider (2000) support this assertion in their definition of eLearning as the process of learning through computers over intranets and the internet. They further argue that eLearning is referred to as online training, technology for learning, web-based training, or distributed learning. Distance learning was, however, exempted from the eLearning definition. Distance learning is described as a learning process meeting the following three criteria: a geographical distance that separates communication between the trainer and the learner, two-way and interactive communication, and some form of technology facilitating the learning process.

eLearning, according to Ryan et al. (2016), "is in contradistinction to face-to-face (F2F) learning". Its most distinctive attribute is the lack of a physical classroom, which is replaced by the Utilization of web-based technologies that provide opportunities for learning beyond the confines of time, location, and speed. (Bernard et al., 2014; Chigeza & Halbert, 2014; Northey et al., 2015; Israel, 2015; Potter, 2015). In the backdrop of higher education, Ryan et al. (2016) assert that online learning refers to courses offered online.

Characteristically, the online learning framework is assessed through a learning management system (LMS) or virtual learning environment (VLE) such as Moodle or Blackboard (Pellas & Kazanidis, 2015). Docimini and Palumbo (2013) stated that eLearning is a dynamic technological learning environment that enhances collaboration among students and instructors, accesses unlimited learning resources, and improves learning. Accordingly, eLearning enhances the capacity of learners with specific unique capabilities such as interactivity, robust search, physical mobility and situating of educational activities, self-organized and self-directed learning, corporate training, personalized learning, and efficient techniques of delivering classes and acquiring knowledge (Bidin & Ziden, 2013; Docimini & Palumbo, 2013; Jeong & Hong, 2013; Martin & Ertzberger, 2013; Viberg & Gronlung, 2013).

According to Garrison (2011), eLearning represents an asynchronous and synchronous means of communicating and constructing knowledge. Sangrà et al. (2012) suggest that "eLearning can be viewed as a natural advancement of distance learning, which continually takes advantage of the latest tools to emerge in the framework of technologies for structured education".

eLearning connects two key elements: learning and technology. While learning is a cognitive process for attaining knowledge, technology is a facilitator of

learning progression. Therefore, the implication is that technology is utilized just like any other apparatus in the education practice, such as a pencil or a notebook (Aparicio et al., 2016). While this seems quite elementary and logical, a pen is a more technologically transparent tool, and its use may look more ordinary to many. Additionally, technology reinforces other challenging circumstances as it has the capacity to embrace several dimensions.

Examining eLearning systems' adoption and usage shows that the growth rate of online courses stands at 65% (Means et al., 2009). Scholars have recommended that, at a governmental level, policies should be established to facilitate the adoption of eLearning (Kong et al., 2014). Zinn (2000) informs that eLearning systems are an evolving concept rooted in computer-assisted instruction (CAI). Today, the eLearning framework includes learning and methods and is primarily directed at the vast possibilities of content diffusion and connection.

In general, eLearning is described as learning that occurs with the use of a computer. Today, learning with the computer means online knowledge acquisition through the internet or offline through CD-ROM, etc. Online learning requires browsers such as Internet Explorer or Netscape Navigator. Learning modules may be disseminated in the form of audio, visuals, and audio-visuals. In Nigeria, only a few conventional universities presently carry out their academic activities through one ICT form or another. In comparison, the urge to embark on eLearning remains an aspiration as the ICT infrastructure is still growing.

In recent times, technology-enhanced learning and online instruction have been recognized as viable instruments for preparing citizens to participate in the technologically-driven global environment. The context of online learning is so open that the learner can choose what to learn because they are at liberty to learn at their

own pace. Online learning students may not have physical contact with other students or teachers until graduation. However, they attend classes by visiting the class webpages, completing assignments according to the class schedule, and communicating with their instructors and classmates through email and online discussion forums. Also, the online learning class design is very flexible for people with busy programmes; students can plug into their courses any day and night. In addition, interaction online enables students to receive more personalized feedback from fellow students and teachers than they would have likely received in a traditional classroom environment, despite online learning being another alternative with inadequate academic staff/facilitators, laboratory technicians, etc. In addition, online learning allows for self-pacing; unlike more traditional settings that strictly assign all students to do the same number of courses and work at a time each semester, online learning permits each student to study at their own speed.

With the implementation of eLearning, the focus is no longer on the teacher. As such, a student taking advantage of technology can have access to varied learning material besides what a lecturer teaches them. This opportunity offers them the chance to learn on-demand and eliminates the costs of travelling to another institution's physical library to read books. COVID-19 has pushed many educational institutions at all levels to switch to eLearning and all types of technology-based learning for productive teaching and learning delivery. Nigeria must continue to promote high-quality education and efficient skill acquisition in various computing fields. The digital literacy level has improved in Nigeria as computing education is now taught at the primary, secondary, and tertiary levels. eLearning or information technology education was encouraged to accelerate the adoption of technology-based learning in various schools and institutions. Hence, the participants of this study have

already been exposed to productive ways of enhancing eLearning and computing education in Nigeria.

Garrison and Anderson (2003) stated that eLearning supports learners' keen ability to innovate and acquire knowledge. Kajetanowicz and Wierzejewski (2010) perceive eLearning as a dynamic approach that advances self-study, continuous testing and developmental evaluation, which incites honest review of instructive advancement and exceptional performance. Modern achievements in computer and communication technologies have provided tremendous and relevant opportunities for learning by electronics. As Nigerian society continues to support and develop advancements in computing and information technology education for the sustainable development of the nation, learner focus enhanced by technology concordances will empower learners in disseminating and receiving content regularly.

In conclusion, new technologies, such as interactive media, computer networks, the internet, and digital technologies, significantly expand eLearning delivery reach. They enable learners to connect and interact with peers and their instructors at will, thus opening up a universal market. Hence, most institutions are attracted to eLearning systems, and the eLearning community has continually grown (Harun, 2001). In 2003, industry analysts placed the size of the eLearning market at USD 3 billion in the United States, and this value grew to almost USD 15 billion by 2005 and USD 18 billion by 2010. The eLearning market size exceeded USD 200 billion in 2019 and is expected to grow 8% between 2020 and 2026 (Adkins, 2011). The dawn of several new technologies, such as cloud computing and artificial intelligence, coupled with increasing internet penetration across the globe, will drive this market growth. Increased cloud adoption provides flexibility in content storage, sharing, and access to learners and content providers (Wadhwani et al., 2020).

The demand for the development of eLearning is increasingly growing. Nevertheless, the need for research on potential factors that influence eLearning adoption, such as quality, which is the core of education and training in most countries (Ehlers & Hilera, 2012), is felt particularly in developing countries (Masoumi & Lindstrom, 2012). Several authors agree that eLearning is regarded as a new solution to mediate the inequality gap in education in many developing countries, including Pakistan (Iqbal & Ahmad, 2010), Nigeria (Foloruns et al., 2006), and Thailand (Siritongthaworn et al., 2006).

### ***2.5.1 Theories and Frameworks For eLearning***

This section focuses on the theories and frameworks associated with eLearning. A framework "classifies the important factors in information systems development and can imply that these factors are connected with successful systems development" (Gregor et al., 2006, p. 619). A theory is a set of statements, principles, or ideas related to a specific idea; it describes, explains, and predicts phenomena (Picciano, 2017). According to Picciano (2017), a learning theory describes how people learn in several disciplines, such as neuroscience, sociology, psychology, or education. The three basic learning theories are behaviourism, cognitive constructivism, and social constructivism.

These terms, framework and theory, are used interchangeably and referred to as the same concept (Graham et al., 2013). An approach is proposed to provide answers to phenomenal questions, and according to Graham et al. (2013), an idea is projected to explore, explain, and design. The outstanding question determines the category with which answers are sought as follows:

- scientific and technological questions such as "What exists?" are explored by attempting to define, describe and categorize;



- scientific questions such as "Why does this happen?" are explained while looking for a correlation between variables and

- technical questions such as "How do I achieve this outcome?" are designed to describe options for achieving proposed outcomes and operational assumptions that make a design work. (Graham et al., 2013)

The study identified some learning theories for eLearning as discussed below:

**The Community of Inquiry.** The CoI model for online learning environments, which was developed by Garrison et al. (2000), comprises three interrelated elements: cognitive, social, and teaching. This model supports the design of eLearning as an active learning environment that depends on instructors and learners sharing ideas, information, and perspectives. According to Micksy and Foels (2019), fostering the essential elements of social, cognitive, and teaching presence can create a community of inquiry that can promote student learning and engagement. This community is a collaboration among individuals with the purpose of "critical discourse and reflection to construct personal meaning and confirm mutual understanding" (Garrison & Akyol, 2017, p. 3). The CoI has been identified as one of the most popular models for eLearning as it is designed to be very interactive among learners using video conferencing, discussion boards, wikis, and blogs.

**Connectivism.** George Siemens, a prominent advocate of the connectivism learning model, recognizes that the significant shift in how information and knowledge are disseminated, developed, and evolved is due to the widespread use of communication networks. Internet technology has transformed learning from being individual and personal tasks to being more focused on group, community, and societal activities. Siemens (2005) describes connectivism as integrating different

ideas explored by chaos, network, and complexity as well as self-organization theories.

Learning occurs within the environments due to the effects of some essential elements and is not based on individual control. Learning, according to Husaj (2015), "is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing" (p. 228).

Siemens pointed out that the dynamic of information flow drives connectivism as a theory. In the connectivism learning model, learners are expected to understand and be equipped with the skills to navigate and make sense of the constantly evolving and abundant information available to them. This is because prior knowledge and experiences are critical in shaping recent learning experiences under the connectivism model (Bowen, 2012). Aiding this process, technology has enabled learners to gather knowledge to inform decisions from family, friends, and digital devices (Underwood, 2016).

**Online Collaborative Learning.** Online collaborative learning (OCL) focuses on the internet to provide learning environments that engender cooperation and knowledge development. Harasim (2012) defines OCL as "a new theory of learning that focuses on collaborative learning, knowledge building, and internet use as a means to reshape formal, non-formal, and informal education for the knowledge age" (p. 81).

OCL is beneficial as teaching and learning are moving online, enabling more inclusive education. In OCL, there are three phases of knowledge construction, as stated below (Harasim, 2012, p. 82):

i. Idea generating – This is the stage at which different thoughts and opinions are collected

ii. Idea organizing – In this stage, ideas are compared, analyzed, and categorized through deliberations and discussions.

iii. Intellectual convergence – Intellectual synthesis and consensus occur at this stage, including agreeing through an assignment, essay, or another joint academic effort.

OCL stems from social constructivism as learners are stimulated to solve challenges through collaborative debate. The teacher's role includes that of a facilitator as well as a learning community member. Although connectivism may be suitable for massive online courses, OCL is believed to be more effective in smaller learning environments.

Other theories associated with eLearning are Gilly Salmon's five-stage model of online learning activities that creates interaction and participation between participants in eLearning courses (Salmon et al., 2010). According to this model, for eLearning to be successful, it is essential to support participants through a structured developmental process known as the scaffolding model. Here, scaffolding means a gradual process of building on the learners' previous experience. A well-structured learning scaffold puts in place necessary identifiable features that facilitate the internalization of knowledge by learners (West et al., 2019).

According to Naoual et al. (2016), the concept of e-training is still evolving, unsettled, and under constant modification. Technology is enhancing the understanding of eLearning methods, creating variation and various learning prospects. As new technologies continue to emerge and reshape the training landscape, exploring approaches that can effectively leverage these advancements will be crucial.

Additionally, there may be a need for further research to understand how these technologies will impact training methodologies in the near future. Organizations need to figure out how technology will impact and transform the workplace by enabling employees to acquire skills and knowledge to change work (Cascio & Montealegre, 2016). The challenging part will be adequate training appraisal to show the evolving technology and understand its application to meet the different needs and expectations of all the participating learners.

### ***2.5.2 eLearning in Nigeria***

Occupying a land mass of about 923,768 square kilometres and over 274 ethnic groups, Nigeria has over 198 million people (NPC, 2018). The country's culture, commerce, and education have brought an international outlook to it; hence, it is not surprising that Nigeria is recognized as a leading country in ICT infrastructure and training in Africa. Presently, various programs have been undertaken by the government and the private sector to support eLearning in Nigeria. Through the Ministry of Education and other relevant educational agencies, Nigeria's government carries out ICT projects to support eLearning. Some of these include the following:

1. The Nigerian Universities and Polytechnics Network Project;
2. The Teachers Network (TechNet) Project;
3. The School Net Project;
4. The National Virtual Library;
5. The Nigerian Education, Academic and Research Network (ARNet); and
6. National Open University of Nigeria (NOUN). (Odunayo et al., 2013, p. 206)

These initiatives notwithstanding, implementation and management are usually a challenge, leading to the low exploitation rates of eLearning in Nigeria.

Electronic training will be appropriate in the Nigerian Public Service to keep up with the global world in tackling training issues. For these reasons, the Nigerian government has continued to promote the use and adoption of technology by establishing programs like the National Telecommunication Policy, Science and Technology Policy, and National Information Technology Development Agency (Zainab et al., 2015).

Nonetheless, the Nigerian public sector has been sluggish in adopting technology despite its considerable importance (Eze et al., 2013). This medium will raise genuine concerns, as it has been argued that it is easy for large organizations to adopt the required technology as compared to widespread implementation (Ongori, 2009). Despite a myriad of challenges and difficulties, the government has managed to sustain the project of the National Open Universities in Nigeria. The aim was to meet the pressing need for distance learning to manage the country's educational and training needs and ensure equality in access to education for all Nigerians. Winifred Ekanem Oyo-Ita, the Head of Civil Service of the Federation, launched an eLearning platform in 2018 called the Public Service Learning Management System (PSLMS).

This platform is a multi-tenant LMS that allows the simultaneous delivery of online training to over a million users globally. It is the first in the history of the Public Service and will prepare the federal body for efficient service delivery (Adegboro, 2018). This innovation was in line with the Government's 2017–2020 Economic Recovery and Growth Plan (ERGP) and the 2017–2020 Federal Civil Service Strategy and Implementation Plan on capacity building and personnel development of public servants. The system is a simple, direct training method and will further improve public service capacity-building methods.

According to Samuel (2014), Nigeria's private sector significantly impacts the growth and development of eLearning in the country. They have taken the lead in establishing telecentres to support eLearning initiatives. These telecentres are used to train the general public, particularly the underprivileged, on essential skills and knowledge to improve their quality of life. These centres are affordable and easily accessible, particularly for low-income earners. Although some of these telecentres are profit-oriented, their services are not of reduced quality. Some of these telecentres include the following:

1. Community teaching and learning centres;
2. Lagos Digital Village by Junior Achievement Nigeria;
3. Owerri Digital Village by Youth for Technology Foundation and
4. Computer Literacy for Older Persons Programme by Mercy Mission (Mac-Ikemenjima, 2015)

Regardless, the adoption of eLearning to build and develop the capacity of public servants in Nigeria is still at its nascent stage. Nigeria struggles as other developing countries do, needing more essential components vital to implementing eLearning, such as computers and internet access among others (Rhema & Miliszewska, 2011). This problem is compounded by a shortage of technically qualified personnel to carry out necessary installations, inadequate funding to procure essential infrastructure and inadequate planning (Oliver, 2001). These factors increase the possibility of failure of eLearning projects and student access limitation to learning infrastructure (Bhalalusesa et al., 2013).

### ***2.5.3 eLearning Methodologies***

eLearning is considered a significant development resulting from the internet revolution. It relies on web technology as its primary platform for delivering

knowledge (Oye et al., 2012). This medium enables learners to access information through synchronous and asynchronous methods, addressing the need for acquiring updated knowledge quickly, especially within production environments. With its capability to transform how and when employees learn, training becomes increasingly incorporated with work and uses shorter, more integrated, real-time delivery systems providing data through ICTs (Oye et al., 2012).

According to Ajayi (2008), the Utilization of these facilities comprises various techniques, including computer-based operation networks, systematized feedback systems, audio and video conferencing, and internet worldwide websites. These delivery methods increase the opportunities for how, where, and when public servants can participate in lifelong learning. The trend in both academic and industrial settings is to increase the Utilization and acceptance of eLearning, which will result in an increased demand for technical support. Specifically, software tools supporting the critical task of instructional design will need to improve their ability to provide rapid support for analyzing, designing, documenting, implementing, and deploying instructions via the internet.

#### ***2.5.4 Interactions in Learning***

Learner-learner interactions, on the other hand, involve learners working collaboratively on shared tasks or projects. This mode of interaction is facilitated by various computer-mediated communication tools such as discussion forums, wikis, blogs, and social networking sites (Oye et al., 2012). Learner-learner interactions allow for the development of critical thinking skills, self-regulation, and teamwork and can lead to a deeper understanding of the subject matter. However, effective learner-learner interactions require careful planning, facilitation, and monitoring by

instructors to ensure that learners remain focused on the task and maintain an appropriate level of interaction.

In conclusion, learner-tutor and learner-learner interactions are essential for effective online learning. While learner-tutor interactions are more costly to maintain and time-bound, they provide learners with the necessary guidance and support. Learner-learner interactions, on the other hand, are less expensive and enable learners to work collaboratively, learn from one another and develop essential skills. Therefore, combining both modes of interaction is necessary to provide learners with a complete and adequate online learning experience.

The learner-learner form of interaction is asynchronous. Here, learners have the liberty to partake in the interaction in their own time and from wherever they wish. Some of these forms of interaction include interaction using email, bulletin board systems, and discussion forums. Haythornthwaite (1999) reports that more constant communication and closer interpersonal connections among learners can occur by expanding interactions to times outside classes. Asynchronous interaction in CSCL involves learners communicating with each other and the instructor at different times, using tools like discussion forums, email, blogs, and wikis. This approach permits learners to communicate effectively, irrespective of their geographic location and time constraints. According to Oye et al. (2012), asynchronous interaction can build a "dialogue through documents" by utilizing shared documents, providing ample time for contemplation, revision, and reflective thinking. This can lead to more extensive and meaningful discussions and collaboration. Additionally, asynchronous interaction offers learners greater flexibility and control over their learning experiences. However, the absence of immediate feedback can lead to a loss of momentum and motivation, and there may be delays in problem-solving and decision-making.



### ***2.5.5 Categories of eLearning***

According to Siemens (2004), eLearning is categorized into six areas, which are blended learning, courses, communities, informal learning, knowledge management, and learning networks.

**Courses.** The majority of eLearning discussions tend to centre on educational practices, with a focus on the development and modification, of course, materials that incorporate diverse multimedia content, which is then made accessible online through networked environments. Nowadays, many training institutions use various Learning Management Systems (LMS), such as WebCT and Blackboard platforms. "Courseware designers have begun to include innovative presentations such as simulations, storytelling, and various unique traits into the materials to motivate learners (Siemens, 2004, p. 1)" eLearning has different correlations with the classroom setting, in which both the learners and the instructors are familiar with the typical learning procedure and pattern.

**Informal Learning.** Informal learning is identified as the most adaptable and compelling learning feature least acclaimed. According to Siemens (2004), the drive for information search is driven by the hunger for information and the intention of its application. Information storage tools (such as Furl) and, search engines (such as Google), knowledge management tools such as wikis and blogs form a competent toolset in the knowledge workers' portfolio. Cross (2003) thinks that more knowledge can be obtained during informal hours, such as game and break time, than during formal learning settings in the workplace. Thus, we advance better in our job roles through informal learning.

**Blended Learning.** Blended learning (BL) is referred to as the combination of both classroom and eLearning. Blended learning is the integration of face-to-face and

online instruction (Graham, 2013) that is widely adopted across higher education, with some scholars referring to it as the "new traditional model" (Ross & Gage, 2006, p. 167) or the "new normal" in learning delivery (Norberg et al., 2011, p. 207). It offers a decent transition from classroom face-to-face learning to eLearning (Siemens, 2004). The usefulness of the blended learning technique must be balanced; it enhances educational and information analysis beyond the classroom environment. It also brings together several delivery methods, such as web-based courses, collaboration software, and computer communication practices with face-to-face instruction (Kaplan-Leierson, 2006). Blended learning exploits the best of classrooms and digital learning.

**Communities.** Learning is a social process, and managing complex and unpredictable business environments often requires collaboration and communication. With the rise of globalization, the approaches to solving challenges evolve rapidly. To address these challenges, individuals engage in dialogues with colleagues within their organization or network, as well as with individuals from other organizations globally. Communities, therefore, play a significant role in the exchange of tacit knowledge.

**Knowledge Management.** The enhancement of globalization is also made possible by eLearning because eLearning technology can bring better learning opportunities to a broader population that could never have been achieved before the advent of eLearning. Bayne et al. (2006) suggest that the possibility of a country becoming a thriving knowledge economy depends on its readiness to become a learning civilization. Knowledge Management is a vital process concerned with creating a framework for knowledge sharing, distribution, adoption, and information exchange behaviours in an organization (Capozzi, 2007). The fraction of Knowledge

Management and the ideology of eLearning uncovers a compelling relationship that causes disagreement between both concepts.

**Learning Networks.** According to Hiltz et al. (2002), using traditional methods such as pen and paper in education creates inefficiencies and obstacles in the rapidly changing global environment where knowledge and information constantly evolve. In contrast, a learning network facilitates developing and maintaining relationships with people, information, and communication to advance each other's learning. This concept is enhanced by allowing members to connect online and share their knowledge and expertise. Applying personal learning networks in the capacity development of public servants will build connections and improve knowledge for employees to perform best in their various fields.

#### ***2.5.6 Effectiveness of eLearning in the Public Service***

Research studies investigating the effectiveness of eLearning have intensified in recent years. Primarily, they are associated with the increased potential for ICT and learning and improved political and organizational attention to what works in learning. eLearning supports introverted learners by empowering them to interact freely, gain self-confidence, take responsibility for their learning, become autonomous, provide diversification of activities, foster genuine motivation, and enable learners to acquire valuable study time while developing time management skills.

The need for alternative learning methods is growing exponentially. The Utilization of corporate electronic learning is increasing as various organizations have adopted eLearning for employee capacity building to establish collaborative learning environments (Kuznia, 2014). Considering the global nature of business, several organizations depend on eLearning as an ultimate and effective means of learning due to its ability to reach a wider audience irrespective of time and location, reduce costs

and the environmental impact of regular corporate trips while ensuring efficient dissemination of information.

As such, eLearning gradually became the choice learning methodology for many individuals due to its broad reach and accessibility. However, Nigeria's adoption and usage of technologies could be faster due to the low rates of eLearning implementation (Salawudeen, 2010). This staggering growth is unfortunate as Nigeria, the largest economy in Africa, needs more financial resources to successfully design and deliver eLearning programs.

Despite this wealth, the country still needs more financial policies and higher technological development and engineering (Salawudeen, 2010). However, within the Nigerian Public Service, the Public Service Institute of Nigeria (PSIN), NIGCOMSAT, and Sawtell Technologies have signed a tripartite agreement to implement and deploy a multi-tenant LMS in the Institute ("PSIN to Digitalize Training", 2018). PSIN is mandated to provide transformational training to public servants and the delivery of training to participants who must comply with global best practices. With the e-LMS, the cost implications for training will be reduced, and public servants can easily undertake training and re-training for efficiency and productivity. According to Eze et al. (2018), the eLearning mode of learning is learner-focused, facilitated by technology that allows learners to share and receive content regularly.

Barron (2001) agrees with the observation that learning technology providers have been increasingly able to demonstrate cost-savings and broader benefits, develop integrated offerings, and propose innovative ways of applying eLearning. In the public sector, effective eLearning is anticipated to expand participant knowledge, affect how learned materials are applied in practice and aid in developing newly

acquired abilities. eLearning improves access to new knowledge and makes timely learning more accessible, eradicating physical and time obstacles (Wang et al., 2011).

Another benefit specific to organizations is a reduction in organizational training expenses when eLearning is embraced and a further reduction when the effectiveness of eLearning and implementation are improved (OECD, 2005; Burgess & Russell, 2003). This benefit indicates that the effectiveness of eLearning is essential not only for organizations and educational settings that plan to adopt it but also for organizations already applying it. Understanding what makes eLearning effective can aid in future eLearning development, as learning allows for the simultaneous transfer of knowledge accessible by a wide range of individuals and organizations (Hussein, 2018; Martins et al., 2019; Zareie & Navimipour, 2016). This transfer occurs more swiftly than allows employees' capacity and knowledge to be updated promptly.

Because eLearning is a sort of information system (IS), and success is a multi-dimensional notion, it must be evaluated using multiple parameters. Organizations that invest in an IS expect its application to solve problems and take advantage of opportunities. As a result, evaluating an IS's success in assisting an organization in meeting its objectives is critical (DeLone & McLean, 2016). Governments are putting forth significant effort to adapt to the changing learning environment to improve competitiveness. Many governments are substituting eLearning for traditional vocational training as information technology and the internet advance, making it possible to construct constantly improving eLearning systems.

The goal of an eLearning system is to increase the efficiency of human resources. On-the-job-related content has a direct impact on trainee learning performance. Therefore, if a government wants to improve work efficiency by implementing eLearning, eLearning must be incorporated into its daily operations.

For example, eLearning should assist public servants who need more practice in performing their duties. eLearning should also help other employees who work with data, documents, and information management, among other things, to learn how to do their jobs more efficiently. As such, in the civil service, job training using eLearning is gaining popularity as a tool for innovating on-the-job training for civil servants, developing education systems, encouraging social cohesion, comprehending educational welfare, and promoting international cooperation.

The public sector employs technology to address the numerous challenges on a local and global scale; such challenges include the provision of service at different stages within service to improve the quality of life and productivity by equipping employees with the necessary skills. eLearning is thus regarded as the most cost-effective and efficient method for public-sector organizations to provide continuous learning opportunities to their employees to improve overall organizational outcomes (Langford & Seaborne, 2003). This view is partly because of the rapid increase in organizations using eLearning to educate and develop their employees in educational and corporate settings. This phenomenon is also a relatively recent one as organizations placing greater focus on the knowledge of employees necessitates more training (Gudanescu, 2010). Moreover, eLearning can incorporate various instructional approaches that differ significantly. It is thus critical to research the effectiveness of eLearning methods to arrange an extensive eLearning offering based on its efficacy.

The growing popularity of eLearning is reflected not only in the number of users and the amount of money spent on it but also in the ever-increasing amount of research undertaken on its use and efficacy in educational settings and businesses.

Finally, such research has identified that a learning process's effectiveness is achieved when its results are lasting and transferable to other situations.

### ***2.5.7 Utilization of eLearning in Times of Crises***

As the world contends with the COVID-19 pandemic that started in 2019, the educational sector is one of the hardest-hit areas (Huang et al., 2020). The United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2020) estimates that about 1.6 billion students are out of school and 63 million teachers are affected, as a total of 188 countries have implemented nationwide or localized lockdowns. As many physical schools have closed, many have transitioned into online or distance learning. Some, unfortunately, have stopped offering classes altogether (Polo, 2020).

In times of disaster, governments direct schools, universities, and private and government organizations to shut down. The virus spread throughout most of the world and constituted such a disaster, disrupting work and social lives. The governments of most countries ordered lockdown to ensure that people stayed at home to limit the spread of the virus due to its contagious nature. In such circumstances, the Utilization of eLearning for work, study, and various aspects of human life becomes vital. Through technology, some schools were able to transition online, with an increasing number of students accessing lessons through different eLearning platforms (Khan, 2020). Moreover, in this era, new demands have come about as online platforms require stable internet connections, accessibility of learning materials on mobile devices, instant feedback, and lots more (Basilaia et al., 2020).

The COVID-19 pandemic has forced public and private organizations to go from offline to online modes of pedagogy. Through the online medium, public sectors can mitigate the risk of crisis spread through effective risk communication (Harvey,

2020). This crisis has thus ensured that public organizations, which were earlier reluctant to technological change, accept modern technology. This pandemic further reveals the rewarding side of online teaching, learning, and carrying out organizational duties.

With the aid of online learning methods, many students and employees can be taught regardless of time or space. As a result of the crisis, institution's public and private sector employees had to devise new ways and contexts to carry out government procedures and processes (OECD, 2020). All organizations had to move quickly through the different options of online pedagogical techniques and employ technology more appropriately. For instance, the Chartered Institute of Public Finance and Accounting (CIPA, 2020), as a response to the COVID-19 pandemic in Nigeria, adopted the eLearning mode of training public servants as a vital component of good governance and risk management.

Most learning institutions worldwide have digitalized their entire operations, understanding the dire need of the situation (Dhawan, 2020). Consequently, the quality enhancement of online learning is crucial at this stage. During this trying time, the priority is not on the capacity of online teaching–learning methods to deliver quality education; but on how institutions will implement online learning at such a large scale (Carey, 2020).

In an instance of a government quickly adopting online resources following the imposed lockdown, the Queensland government encouraged all Queensland public sector leaders to continue their leadership development using online platforms by accessing free online courses and resources (2020). Various apps such as VooV, Superstar, and Zoom cloud meetings are now being utilized in eLearning. Google Classroom is used for uploading study materials in some other parts of Asia. This



platform helps learners find the material related to their areas of interest and study at their convenience. In most of Nigeria, applications such as Microsoft Teams and Zoom have been utilized widely (Khan, 2020). According to Aggarwal et al. (2020), the COVID-19 crisis presented unique challenges to all levels of learning, including skills development within the organization. eLearning provides opportunities for public and private sectors to adopt the idea of lifelong learning through teaching and learning that is self-paced.

## ***2.6 Training Approaches and Methodologies in Organizations***

The current era is characterized by disruptive change, as organizations are challenged to provide greater value through a distinct blend of innovation, quality, efficiency, and customization (Christensen & Overdorf, 2000). Simply doing more of the same or making minor adjustments to current practices will not be sufficient to achieve these new benchmarks of success. Instead, obsolete operating models and thought patterns must be substituted with fresh and novel ones.

To achieve this, organizational leaders must stimulate new thought processes and actions among employees (Bontis et al., 2002). In our disruptive world, an organization's capacity to learn, acquire, apply, and spread new insights has been framed as an essential strategic capability (Fiol & Lyles, 1985) and a maximum competitive advantage. It is also important to consider the three primary learning styles that organizations may adopt:

- Visual or learning by seeing
- Auditory or learning by hearing
- Kinesthetic or learning through action and doing

The most effective training methods target all three learning styles, but it is also essential to choose a learning style that best suits the learner. The best employee

training methods include technology-based learning, instructor-led training, coaching/mentoring, simulators, on-the-job training, role-playing, films and videos, and case studies. Other training techniques that might be useful in an organization are classroom training, experiential training, eLearning courses, gamification, social learning, and in-app guidance.

### ***2.6.1 Organizational Learning***

Most learning in an organization happens at the individual level. Schofield (2004) asserts that "for learning to occur, there must be an alteration in behavioural intentions as a result of experience from trying to attain the policy objectives" (p. 288). Regardless of the application of organizational learning approaches, learning can take place. However, this does not imply that the strategies lead to the high effectiveness of organizational processes. Inadequate learning methods may result in deceitful consequences. Organizations consequently rely on systematic approaches to gain the capability for organized learning. Such methodologies can be found in the organizational learning (OL) discipline (Schneider et al., 2002).

OL is "the process through which organizations change or modify their mental models, rules, processes or knowledge, maintaining or improving their performance" (Chiva et al., 2014, p. 689). It intends to help learners become familiarized with organizational processes through targeted activities (Templeton et al., 2002). OL facilitates reflections on the consequences of individual and organizational behaviour, an improved understanding of corporate environments, and enhanced decision-making (Yang, 2007). According to Real et al. (2014), it is a central element that "represents the essence of organizations' competitive advantage" (p. 201). OL is vital for organizations operating in unpredictable environments to respond to unexpected circumstances more rapidly than their competition (Garvin et al., 2008).

Owing to its nature as a procedure for developing new perceptions, OL forms a basis for advancing new organizational knowledge (Cheng et al., 2014; Chiva et al., 2014). This ability has been gaining importance due to the complexities and dynamic changes in business environments (Loermans, 2002). Despite its significance in bettering performance, organizations still need to work on implementing OL due to its highly conceptual nature with little practical guidance (Taylor et al., 2010) and misconceptions regarding its concept (Wu & Chen, 2014).

The learning organizations versus organizational learning argument is centred around whether organizational learning is just the sum of what employees within an organization learn. The learning organization has to learn as an ongoing process rather than offer an instance of a simple intervention to solve an actual problem. McNabb (2007) describes a learning organization as fundamentally agile, quick to recognize, digest, and apply the lessons learned in its exchanges with its environment. This includes developing innovative solutions to the public sector's continually fluid legal, political, economic, and social framework.

In the same vein, Common (2004) argues that OL can be regarded in the public sector as the potential of an institution "to demonstrate that it can learn jointly by applying new knowledge to the policy procedures or innovation in policy implementation" (p.38). This implementation involves learning via steering innovative activities and systems. It is also contended that OL can enhance the policy-making capacity of the government. In contrast, policy learning helps to explain what is learned beyond the confines of government and how its learning was acquired.

Organizations that approach learning from this standpoint will harbour people who will advance with good performance, significantly improve what they do, and train others (Vinesh, 2014). OL can be measured in different approaches, such as

collaboration, teamwork, performance management, autonomy, freedom, reward, recognition, and achievement orientation (Jain & Moreno, 2015). When training gaps are identified, a training program is developed, and an appropriate training approach is used to achieve training objectives (Martin et al., 2014).

## **2.7 Approaches to Training**

According to Olaosebikan et al. (2019), training can be carried out at three levels:

1. Individual training, which includes performance coaching, on-the-job training, and career counselling;
2. Organizational development, including team building, inter-group meetings, and brainstorming; and
3. Management and administration, which entails identifying, developing and managing trainers; identifying external resources; keeping records; managing training functions; conducting research; and ensuring personal development.

Training as a comprehensive learning experience to enhance both short-term and long-term job performance among employees. In this regard, training is considered an integral component of an ongoing developmental process, representing an investment decision that warrants thorough consideration. Beyond this, another perspective on evaluating training activities pertains to their potential to exert a substantial influence on individual job performance, contrasting them with isolated experiences that may or may not significantly contribute to the broader organizational growth and development.

In recent years, the focus on employee development and training has intensified, driven by the recognition that a well-trained workforce is a crucial asset for organizations. Effective training programs not only impart essential skills and

knowledge to employees but also enhance their overall job performance, which, in turn, contributes to the growth and prosperity of the organization (Bartlett & Ghoshal, 2002). As such, the strategic integration of training and development initiatives has become a fundamental aspect of organizational success.

Moreover, organizations increasingly perceive training as an investment rather than an expense (Noe, 2016). When meticulously designed and implemented, training initiatives result in enhanced employee performance, heightened job satisfaction, and heightened productivity. This, in turn, leads to organizational benefits such as reduced turnover rates and a more skilled and adaptable workforce.

It is also essential to recognize that the relationship between training and job performance is complex and multifaceted. Efficient training programs not only impart job-specific skills but also cultivate a culture of perpetual learning and adaptability within the organization. By nurturing a learning environment, employees are more likely to embrace new challenges, be open to change, and exhibit higher job satisfaction and engagement.

In this context, organizations are encouraged to take a holistic approach to training, ensuring that it aligns with their strategic goals and objectives and focuses on developing the skills, competencies, and behaviors that drive individual and collective success. By considering training as an investment that enriches the human capital of the organization, businesses can better adapt to a rapidly changing and competitive environment, fostering long-term growth and development (Hamadamin & Atan, 2019). Thus, training not only becomes an investment in the present but also a safeguard for the organization's future.

Noor et al. (2019) proposed a tripartite approach for identifying the suitable training and development activities to be instituted within an organization. They include organizational, task, and personal analyses. Organizational analyses primarily focus on the organization's ability to facilitate training, whereas task analyses zero in on the competencies, skills, attributes, and other individual traits necessary to execute the agency's duties. Person analyses focus solely on the needs of the individual, identifying their unique features.

In designing training and development programs, various instructional media are available to trainers and managers (Olaosebikan et al., 2019). Different instructional techniques can be used, such as lectures, case studies, role-play exercises, simulations, and small-group discussions. Moreover, Kulkarni (2013) categorizes training into two broad areas: on-the-job training and off-the-job training. The following activities are associated with on-the-job training: job instruction, apprenticeship and coaching, job rotations, committee assignments, and internship training. In comparison, the following activities are related to off-the-job training: programmed instruction, classroom lectures, simulation exercises, case studies, audio-visual content, experiential exercises, behavioural modelling, role-playing, conferences/discussions, workshops, and seminars.

## **2.8 Training Methodologies**

Martin et al. (2014) provide an exhaustive compilation of training approaches and enumerate several fundamental methods, including lectures, simulation, case studies, role-play, mentoring and apprenticeship, programmed instruction, team training, internship, job rotation and shadowing, games-based training, stimulus-based training, role modelling, and feedback. They contend that these methods encompass

all of the typical training approaches and propose that additional or variant training methods are merely extensions or subcategories of these fundamental methods.

### *Case Study*

The case study is a training strategy categorized under on-the-job training. It offers descriptive situations stimulating trainees to make decisions (Shivakumar, 2012). As a problem-solving and problem-identification activity, case studies allow trainees to apply their knowledge and innovative ideas to manage issues and resolve problems. This study laid more emphasis on the approach the trainee adopted rather than on the solution. The applied nature of this method can enhance trainee interest and, consequently, affect the learner's motivation to acquire knowledge effectively. However, if the availability of the required resources seems to be challenging for the learners, it could negatively affect their motivation and learning (Johnson & Helms, 2008).

Case studies assist learners in acquiring the willingness to take chances in the face of unclear results by allowing them to analyze the scenario. Individuals can use the case study approach to address various issues, including teamwork development, difficulties, interpersonal interactions, waste control, cash shortage, role ambiguity, customer service, and interpersonal relationships. This aids trainees in developing analytical and problem-solving skills. It is an excellent way to allow participants to face challenging scenarios before being personally exposed to perplexing real-life situations. Case studies extend the employee's perspective and boost their capacity to think outside the box for answers to difficulties or challenges encountered while performing duties. Thus, employees are taught how to recognize problem triggers in the workplace and find solutions through case studies.

Case studies assist workers in honing their critical thinking and reasoning abilities. When these abilities are strengthened, the worker becomes more productive and beneficial to their organization because they can circumvent difficulties and challenges at work. The goal of the case study exercise is not to provide participants with training in participatory approaches but rather to engage them actively in the learning process to become aware of some of the challenges of designing and implementing public participation in practice. Shivakumar (2012) infers the development of decision-making skills, enhanced communication and interpersonal skills, and improved analytical skills as benefits of the case study method. This method is thus a low-risk, low-cost training approach that can be used to train a vast number of learners simultaneously.

#### *Games-Based Training*

In this training method, learners are involved in several decision-making activities that permit them to discover various strategic alternatives and experience the significance that affects others without losing individual or organizational risks (Brown, 2004). As a training method, it offers a low-cost but effective alternative to training, hence its growing popularity over the past decade (Wilson et al., 2009). The games-based training method, much like the case study method, is an applied and competitive approach that can motivate many learners.

Faria (2001) conducted a review of studies that examined the effectiveness of business games and found that factors such as player temperament, academic aptitude, and team attributes, such as motivation and cohesion, can have an impact on performance in business games. It is vital to note that business is, by its nature, a competitive turf. As such, it is expected to attract individuals that thrive in a competitive environment. Accordingly, games-based training would be recommended



for military, sports and business professionals as they tend to be driven by a competitive environment.

### *Internship*

The internship method is one of the oldest forms of training. A benefit of this method is that the training could be at no cost to the employee. According to Martin et al. (2014), internship training can allow employees to work in their desired job roles, making the training content and approach more relevant. However, there are also potential downsides to this training method. For instance, the training experience for learners can be inconsistent and high-pressure. A study by Löwe et al. (2008) found that practising physicians gave unfavourable feedback several years after completing medical internships. More specifically, it reported that the experience was too variable and disjointed, while further support in acquiring skills was not accessible.

### *Job Rotation*

Job rotation is a unique method of combining on-the-job training for both employees and unemployed people. It involves the movement of employees from one job role to another to enhance their understanding of the diverse functions and processes of the organization. Job rotation is a position design strategy commonly utilized by many firms at various hierarchical levels. It involves training the learner by transferring them from one role to the next. Job rotation results from effort and determination in combining the organization's human structure with technical operations. The method requires training employees through a sequence of linked occupations, allowing them to become familiar with various vocations and helping to avoid monotony.

A significant benefit of this method is that it offers employees opportunities for development and promotion, motivation, career advancement, job satisfaction and

interdepartmental cooperation (Geet & Deshpande, 2008). Job rotation can also be seen as a training concept in which the unemployed are regularly educated and trained to replace current employees as they pursue further education and training. Businesses and their training needs stemming from introducing new technology, organizational changes, or internationalization procedures are the beginning points for job rotation. As such, job rotation programs are designed to help provide new skills and qualifications to individuals, groups of employees, a company's department, or a specific industrial area.

According to Saiyadain, job rotation is of immense benefit to organizations as it "aids in the development of a common culture due to wide and common exposure". Concurrently, it infuses new innovative ideas into tasks, giving employees "a fresh challenge and opportunity to prove themselves" (2009, p. 409). Despite the view that job rotation is inexpensive by way of extra pay, costs accompany the learning curve on new jobs, training costs, time exhaustion, and mistakes that employees make while learning on the job. A job rotation plan provides individuals with well-rounded training and experience; it streamlines the organization by introducing new managerial viewpoints regularly, stimulates the development of the individual due to the element of competition introduced, eliminates the assumption by an individual of any 'vested right' in a particular job, tests the individual, and minimizes friction caused by personality clashes or personal feuds.

In a job rotation, the trainee learns by doing. The employee is responsible for each task and is expected to be a regular member. As a result, job rotation training is not a perfect substitute for other training methods. After a thorough study, employers can assess an employee's skills, competencies, strengths, and weaknesses and then give them a task or role that best fits their strengths and avoid their shortcomings.

Only a suitable employee will assist the company in reaching its aims and objectives. As a diverse skill set is required to perform various jobs, an employee who works on different work schedules acquires more knowledge due to job rotation. However, job rotation analyses based on individual data are more uncommon since they frequently demand access to personnel records, which companies rarely offer.

### *Job Shadowing*

Job shadowing is described as a workplace learning strategy involving gaining experience on the job, formal or informal. Job shadowing is a valuable approach to generating employee interest and engagement. Rony (2019) defined job shadowing as "an educational program where college students or other adults can learn about a particular occupation or profession to see if it might be suitable for them" (p. 391). Job shadowing is an example of on-the-job employee training in which a new employee or one who wants to learn about a different job role observes and follows an experienced colleague. Job shadowing is an excellent training strategy for specific work sectors, as it gives the learner insight into the field and allows them to work alongside a more experienced colleague. Allowing a new hire to shadow or work alongside a seasoned employee for an approved period provides them with a thorough understanding of the position, and the firm gives them a detailed, hands-on look at how things are done in the company on a daily basis. Job shadowing is thus a more subtle form of on-the-job training that focuses on recognizing minute issues that come into play in daily work and how to manage them. As Kathryn Tyler (2008) suggests, it is an ideal way for employees to gain new perspectives on an organization and even 'shop' for diverse roles within the organization.

Usually, business organizations partner with educational institutions to provide on-the-job experience for learners. There are three primary benefits of job

shadowing as part of the hiring process. For starters, it allows the job seeker to get a feel for what life would be like in the office regularly if they accept the position. Second, it will enable the firm to see the candidate in the workplace, better assessing their capability to perform the job if recruited. Thirdly, job shadowing provides an opportunity for both the candidate and the organization to assess their compatibility in terms of personality. While the primary aim of job shadowing is equipping learners with essential capacities to perform a particular job, Tyler (2008) suggests that it also provides learners with a unique perspective on the organization. Martin et al. (2014) recommend job shadowing in situations where an organization is training existing employees for a new position or giving them a chance to "test out" a new role without the risk and cost associated with job rotation. However, job shadowing can also have drawbacks, such as inconsistent training experiences and high-pressure situations (Löwe et al., 2008).

### *Lecture*

The lecture technique is often considered the most widely employed teaching method in educational institutions. In simple terms, this is how instructors convey information to students via lesson plans and academic concepts in the classroom. Various teaching and learning resources and instructional methodologies were employed. This strategy is used by instructors at all educational institutions and is founded on the idealism philosophy.

Thiagarajan (2005) asserts that "lectures are probably the most ridiculed training technique" (p. 1). Regardless, it is widely used as a training method mainly because it can accommodate a wide range of audience sizes, offers ease in revising the content, takes less time to design, and assures the trainer that the trainees can complete the training. These trainers employ modern, scientific, technical, and

pioneering instructional methods to apply this method. Aside from these approaches, there is also the use of technology. Computers and projectors are often used in classrooms to provide information to pupils about lesson plans and academic ideas. The lecture method is thus the most basic procedure as it is cost-effective, saves time, and can be used with a large group of pupils.

On the other hand, instructors must be well-prepared for the themes as learners may raise questions during the teaching of the lesson plans. Instructors must ensure that they deliver accurate information and answer inquiries to address all concerns and obstacles. The lecture method is thus a teaching method in which the trainer presents their planned facts to the learners. The learners then pay attention and take notes. The effectiveness of this approach relies heavily on the instructor's capacity to convey information clearly, using proper diction and a compelling style. This is a fundamental reason why this method has endured as one of the most ancient and enduring teaching techniques.

Thiagarajan (2005) has criticized the lecture method for its lack of interaction and support for learners, as it promotes one-way communication and doesn't provide the necessary assistance to overcome learning difficulties or participate in group learning. As advocated by Webster-Wright (2009), learning is continuous, active, experiential, social, and relevant to practice. In contrast, the lecture technique could be more varied, receptive, social, and detached from actual practice, producing less effective learning. Subsequently, the lecture method ought to be applied in training methodology with straightforward training content, anticipated quality knowledge acquisition, and low stakes if the learners still need to obtain the target knowledge or skill.

### *Mentoring*

Mentoring is informal communication between a person who is thought to have more appropriate familiarity, wisdom, or experience (the mentor) and a person who is perceived to have less experience (the protégé). The mentoring process provides two primary benefits to the mentee: psychosocial support (such as acceptance, confidence, and protection against burnout) and career guidance (as highlighted by Zerzan et al., 2009). The one-on-one learning environment offered by the mentoring method is a notable benefit. Unless there is a breakdown in communication between the mentor and mentee, it is difficult to imagine a scenario in which the mentee would not gain the required knowledge through this learning approach.

Mentoring is also utilized to help new employees enhance their existing skills and talents to align with the organization's goals and prepare them for future upper-level roles. Research submits that those mentored are keener on becoming mentors themselves (Vincent & Seymour, 1994). As such, consideration is given that the mentorship training technique can create long-term rewards, making the approach best suited for grooming employees for growth within the organization.

Job mentoring assigns an experienced coach to supervise an employee's learning process. The mentor or coach offers guidance and instruction but does not execute the job with the trainee, unlike on-the-job training. The trainee employee learns the profession first-hand and can seek assistance from the mentor or coach anytime. Mentoring, which is similar to counselling in particular ways, is a system intended to support an employee's professional development by pairing them with a mentor who will focus on the protégé's overall development. Although mentoring

correlation exists in management literature, it is not frequently used in many Nigerian businesses, either public or private. This lack of implementation is surprising as it is a training and learning program that is either free or very inexpensive. And so, it should be tested by organizations that introduce mentoring programs and considered a project that requires proper resources in terms of people, time, and money.

Mentoring is a relationship-based activity involving communication, so its detailed description is elusive. It is thus a practice of passing on knowledge, common resources, and societal sustenance through heredity as suited to a profession and competence growth. Mentors and trainees are prudently prepared to counter any adverse effects that can arise from interpersonal conflict within the organization by completing questionnaires and, according to Andrews and Chilton (2000), allowing trainees to be part of the selection process. Mentoring is designed to be transformative and requires the acquisition of a specific skill or expertise. Therefore, mentoring is about building a relationship between a professional and a novice.

### *Apprenticeship*

Apprenticeship training combines on-the-job and classroom training, where workers earn while learning the skills needed to perform a specialized job. Apprenticeship training is given to technical staff such as mechanics, electricians, artisans, welders, and others who work for a more extended period of training under experts in the field. An apprenticeship often lasts 4–5 years till the worker achieves expert status in his speciality. It is a hybrid of on-the-job and classroom training, in which people learn about their jobs in the classroom and then do them in workshops. This training program is more oriented toward education than vocational training.

Apprenticeship training is a method of developing skilled workers involving formal education and long-term on-the-job training. Before entering the profession,

students participate in apprenticeship programs combining on-the-job training and classroom instruction. Because apprentices receive training at work and school, they are sometimes known as dual-training programs. Such programs are particularly effective at transferring school-related skills to practical workplace use. Prior to entering their chosen profession, students have the opportunity to engage in apprenticeship programs. These programs offer a blend of on-the-job training and classroom instruction to provide them with the necessary knowledge and practical experience.

An apprenticeship is also a method of allowing pupils to learn via doing. It is frequently connected with vocational training, in which a more experienced artisan or journeyman models behaviour, the apprentice tries to emulate the model, and the journeyman provides feedback. Apprenticeship programs are particularly effective at transferring classroom skills to the workplace. According to Amesti and Claro (2021), apprenticeships increase employment opportunities compared to other school-based vocational training. However, because apprenticeships are the most prevalent way to teach post-secondary education instructors (at least implicitly), an apprenticeship approach to teaching has a wide range of applications.

Therefore, apprenticeship is a flexible training method that can be customized to meet the specific needs of any organization. It can be incorporated into existing training and development plans. Moreover, Gessler (2019) is of the opinion that apprenticeship expands learning productivity as learning becomes more explicit.

#### *Programmed Instruction*

Programmed instruction relates to a student-focused, self-teaching method of learning invented by behaviourist B. F. Skinner. In this approach, content is subdivided into smaller units in hierarchical order, whereby the learner must



successfully complete one unit before proceeding to the next unit (Skinner, 1958). Programmed instruction is based on Skinner's theory of verbal behaviour centred on strategies to increase and accelerate conventional teaching. It mainly involves personal teaching using a specialized textbook or teaching machine that presents and structures materials in logical and empirically developed progression. Individualizing self-study resources that are centred on the learners is a primary instructional focus of programmed instruction, one of the most well-known learning processes (Zendler & Reile, 2018).

Program instruction can also be described as autocratic teaching and employing an individualized strategy. The principle on which it functions is the psychological principle of operant conditioning. Herein, the programmer has strict control over the response of the learner. The primary focus of programmed instruction or teaching is to bring desirable change in the cognitive domain of the learner's behaviour. The structure and mode of teaching are based on the premise that the selected content is analyzed and reduced into more minor elements. This method entails several stages that are frequently set up as guides in the performance of a desired action or series of operations through the central panel of an electronic computer. This strategy entails breaking down material into meaningful parts and organizing them logically and sequentially to create a similar learning experience. In an instruction program, the subject matter is broken down into tiny bits of information and rearranged into simple statements. The statements build on each other so that even complex data may be programmed. Various studies show that programmed instruction materials stand as a good alternative for average and below-average learners who need to respond more effectively to conventional approaches to instruction (Wangila et al., 2015). "The programmed instruction helps each student

gain knowledge at different times or sequences, depending on available knowledge, ability, and learning speed" (Tran-Duong, 2021, p.259).

This method also entails presenting trainees with questions, facts, or issues to help them make the most use of the material they have been given and provide immediate feedback on the accuracy of their replies. Because of the active engagement of students, incremental stages, instant feedback, and reinforcement, programmed instruction has proven to be quite effective. Teachers may also deliver pre-programmed teaching made possible by the core objective of programmed instruction to present and represent the teaching materials in tiny increments or units (Emurian, 2007). The method of programmed instruction is more dominant in learning resources in the current era of digital learning (Cui et al., 2019)

The usage of pre-programmed educational material is one strategy to achieve the most effective and efficient learning method. However, the use of pre-programmed instruction is a concept that has been introduced previously. Teachers have employed it in traditional educational systems in various ways, including modules, worksheets, and work texts. Learners are receiving programmed content work at their own pace, testing their understanding at each level by responding correctly to examination questions. They are then presented with the correct response or given other information right away. The content is frequently presented using computers and other teaching devices, while books may also be used. Studies revealed that learners, according to Cui et al. (2019), exposed to programmed instruction recorded higher and more favourable attitudes towards mathematics than those who did not. The study is in agreement with Giannakos et al. (2014) study, which further reports more positive learners' behaviours after exposing them to self-learning strategies.

The adoption of programmed instruction as a training technique has several advantages. For instance, it is easily modified and makes for continuous practice; its consistent delivery means learners receive a standardized learning experience. It can offer multi-sensory features (sound, colour text, graphics, animation with special effects). Conversely, learner motivation can be negatively affected if the learners are unfamiliar with the technology or are generally unsettled by technology (Zhang et al., 2004).

Despite controversy regarding the merits of programmed instruction as the sole teaching method, educators believe that it can further contribute efficiently to classroom procedures and support conventional teaching methods. Therefore, programmed instruction is considered to provide a viable and feasible means of enhancing learners' performance and results in examinations while keeping them developing a positive character and interest in the learning, instruction, and subject.

### *Role Modelling*

Like its counterpart, the lecture method, role modelling is a standard training method, and it enables organizations to control trainee completion of the training program readily. Much like the lecture method, there is no prospect of interaction, indicating a lack of opportunities for learners to combat challenges collaboratively. Assaf et al. (1985) reported favourable skill performance outcomes for the role-modelling training method where participants witnessed a demonstration and were allowed to practice on a life-like model. They proceeded to draw a comparison between three methods of instructing women on how to conduct breast self-examinations. While it is still being determined whether the chance to practice on the model provided for successful outcomes, role modelling, combined with the opportunity for the trainee to practice what was modelled, can be an impactful blend.

Consequently, role modelling ought to be employed in cases where learners can have the chance to practice the skill immediately after a demonstration (Martin et al., 2014).

### *Role-play*

Role-play requires learners to take up a personality and act out the role in a real and convincing scene or storyline. Learning in role-playing happens through reflection on the play (Sheets, 1998). The primary advantage of the role-play approach is that it offers trainees the opportunity to apply the content to a simulated condition, thereby giving them a chance to practice without the possibility of failing on the job. However, as there is no consequence, there is the risk that the content will be taken lightly. Furthermore, performance stress may deter some learners and ultimately inhibit their learning. The opportunity for learners to mentally prepare themselves and demonstrate the theoretical knowledge acquired is provided by role-play (Dorri et al., 2019). Barone et al. (2005) suggest that the role-play training method is well-suited for allowing trainees to practice and reflect on how to manage their job roles' essential duties, as well as for sensitivity training and other settings that involve attitudinal and behavioural training.

### *Simulation*

Simulation training is a modern method of employee learning that involves the use of simulators. This technique improves specific skills through repeated practice in a multi-sensory environment that simulates real-life conditions. The simulation method is well suited for training that would otherwise be extremely dangerous or expensive if conducted in a real-life setting. As such, this method offers "safe, structured, engaging, and effective practice opportunities" (Rosen et al., 2012, p. 243). According to studies conducted all over the world, this type of training allows for a more comprehensive, all-encompassing experience, which boosts the training

exercise's effectiveness. Organizations can now profit from a lower-risk activity carried out during training by developing online simulations while providing a real- world learning experience.

As the name implies, simulation training is a type of training designed to mimic real-world scenarios. In these situations, employees can put their skills to the test in circumstances that may arise in the workplace. This endeavour, however, is executed within the safe confines of a simulation, allowing them to experiment, learn, and grow. This method is beneficial as employees who undergo hands-on training and gain experience and knowledge of equipment and tools, even those in a simulation, have better confidence and mastery of required job abilities and fewer errors than those without experience. Companies can save money on total training costs by incorporating simulation training into their learning and development programs.

In most set-ups, new programs, methods, or tools are introduced in a virtual environment that mirrors real-life use. Simulator training is frequently done digitally in a virtual environment, including background noise, effects, and simulated workplaces to mimic real-world settings. Working with a simulator allows learners to observe themselves in action. Moreover, the simulator's many situations and data items, especially simulation-based training, allow for the conceptualization and integration of ideas and models discussed throughout the learning process.

Such techno-developed simulators have proven to be successful in various educational institutions and businesses (Iluz et al., 2015). Furthermore, the simulator provides a stable and dynamic environment for active experimentation, allowing it to quickly become a significant factor in determining learning transfer. The scheduled job time is updated to the actual task time while simulating Project Team Builder. Due to uncertainty, the exact duration of the project may change from what was

intended during execution. In order to meet project deadlines, the student might manually adjust the assignment start time.

Simulations have been shown to promote learning and provide a positive learning environment that fosters experimentation and accepts failure, which is critical in the learning process. Quizzes, coaching sessions, in-class training, and other learning activities and methodologies are frequently used in conjunction with simulation.

As it is a risk-free setting, it can be utilized in a plethora of applications, such as flight training, military training, medical training, technical training, and nuclear power generation. Depending on the type of equipment required, simulation can be cost-effective. Salas et al. (2009) point out that while some simulations are freely available and accessible for business training, others, such as flight simulators, may require specialized equipment, which can be costly. Therefore, the cost of specific simulation training systems may be considered a disadvantage of this method (Noe, 2010). The possibility of loss as a result of unavoidable technical difficulties and the effect of simulation training, such as dehumanization, is also worth considering. Moreover, Noe (2010) argued that for this training method to be active and increase the likelihood of transfer of learning, trainees must be provided with immediate feedback while simulations are realistic.

### ***Stimulus-based***

To promote learning, stimulus-based methods employ various stimuli such as music, narratives, or artworks. These methods aim to create a specific state in learners, such as relaxation or awareness, to facilitate learning (Lam et al., 2011). This method of training can be extensively applied. However, its unusual nature may discourage some learners or result in the content being taken frivolously. As such, this technique

can be more appropriate for situations where the training content elicits stress or adverse reactions in trainees. Some studies revealed that stimulus-based training allows learners to acquire more knowledge systematically and promptly.

### *Team Training*

The team training method is designed for participants to engage in interactive behaviour to enhance mutual knowledge or develop the team's specific skills. Its goal is to build a team collectively rather than focusing on individual learners, thereby promoting the development of social skills within a team (Moreland & Myaskovsky, 2000; Wheelan, 2005). Moreland and Myaskovsky (2000) presented investigations revealing that groups achieve better results when team members are trained collectively and carry out activities throughout the learning process rather than being trained apart. It is common for group members to reside and work in diverse locations, making virtual team training crucial in some organizations. Virtual team training may include video conferences, chat rooms, blogs, or Webex sessions, an internet-based two-way audio/visual system by Cisco (Holtbrugge et al., 2011).

In other developing and developed countries, the responsibilities and functions of public servants are the same and building efficient capacity within the public service has proven to enhance service delivery. According to Guan (2021), training and capacity development in Singapore through the Civil Service College (CSC) has helped to transform and positively position the public service to ensure it is in time for the future. Training of public servants has enhanced the capabilities and increased the strategic contributions of the public service to the government of Singapore. In implementing training in Singapore, emphasis is placed on the learner playing an active role in the learning process through personal exercises, group discussions, and experimental learning.

The study by Birhanu et al. (2022) on Ethiopian public service identified a research gap focusing on the learning environment and the employee readiness to learn as a significant challenge to implementing effective training methodologies. In order to maintain economic growth through the delivery of public services, some countries, such as the United States of America and Malaysia, prioritize the training of public servants, recognizing the impact it has on the quality of service provided and the way public servants interact with citizens (Isa, 2013). The eLearning framework has, over the years, revolutionized the training approaches, making it essential to understand how different eLearning frameworks align with theoretical lenses to enhance training methodologies. Behaviourism with a focus on observable behaviours can be connected with e-learning through the use of reinforcement and feedback mechanisms. E-learning platforms have the capacity to incorporate engaging features such as gamification, badges, and quizzes to provide learners with immediate feedback. The integration of cognitivism in eLearning aligns with the pedagogical approach of designing courses that encourage active engagement and stimulate cognitive processing, ensuring that learners not only acquire knowledge but also effectively apply and retain it. This dynamic approach enhances the overall learning experience, making it more impactful and enjoyable for participants.

Integrating e-learning frameworks with theoretical lenses enriches teaching methodologies by allowing educators to design more effective, engaging, and personalized learning experiences. By understanding the theoretical underpinnings of each framework, educators can select and adapt e-learning tools and strategies that align with their instructional goals. The dynamic nature of e-learning also enables continuous refinement and improvement of teaching methodologies based on ongoing feedback and research.



### ***2.8.1 Conventional Manpower Training Methods***

According to Cornnet (2017), the conventional training method has been used for decades and has proven to be consistent and dependable as a training method. Such traditional training methods are familiar and often affordable, making it easier to gain the executives' and participants' attention during the training program. Once the curriculum is developed, the conventional training method is relatively economical and painless. Cornnet (2017) agrees that traditional training approaches are most effective at utilizing multiple exercises and activities to mimic workplace situations.

Conventional workforce training involves skill acquisition as the experts work with learners to transfer knowledge (Nwankwo & Abumchukwu, 2010). While traditional training has advantages, the technique only resonates with trainees on a deeper level of understanding. For instance, in role-playing activities, participants pretend to be in situations or employ skills they may need more time to practice and become familiar with. Similarly, Broughton et al. (2002) claim that the conventional learning method relies heavily on the trainers' instruction and needs to offer adequate opportunities to the students for participation. Whetten and Cameron (2002) conclude that "exposure to a traditional, cognitive-based manpower curriculum without exposure to management skills and development does not correlate with improvements of emotional intelligence, the management or career success" (p. 11). According to Olaniyan and Ojo (2008), the method of workforce development training includes apprenticeship, formal vestibule training, on-the-job coaching, and demonstration. Other methods are under study: self-development, learning from experience, simulation, and counselling.

Conventional training is essential for imparting critical work-related skills, techniques, and knowledge, and many aspects of this method embrace a constructive

and forward-thinking approach to conventional training. Training and development guides are oriented mainly around what is suitable for people rather than what is profitable for organizations. Regarding training and development, what is ideal for an employee is suitable for their job roles. As such, what is suitable for employee development is favourable for organizational performance, management, customer satisfaction, quality control, and profits—organizations that approach training and development from a similar understanding inevitably foster employees who perform well and progress. More importantly, employees are committed and stay around for long enough to become great at what they do and help others.

Training is a commonly used word that traditionally belongs to the trainer or the organization. Instead, it should be about individual development rather than just transferring skills. The traditional interpretation of training at work is corporate attitudes and being realistic; it is nearly impossible to change expectations about training overnight. Most organizations see it as limited to work skills, classrooms, and PowerPoint presentations. However, you can develop people beyond traditional skills training when you imagine, think, and talk about progressive attitudes. As organizations have always leveraged objectivity and continuous learning processes in training and development, it has become an overarching trend to emphasize that organizations must inculcate learning culture as a social responsibility. It has also been proved by studies in the past that there are strong links between various training and improved practices and different measures of organizational performance. According to training, it serves as an essential motivator for employees, which benefits the organization Al-Khaled & Chung (2021). Effective training of employees encompasses improved work practices and positive changes in organizational

situations (Shamim, 2017). Marcel (2019, p. 133) in his study stated that "training is a basic factor in the success of quality organizational improvement."

**Conventional Training Involves the Direct Flow of Information from Teachers to Learners.** Typically, teachers determine success in learning based on learning materials, assessments or tasks, and criteria. However, offline training requires both the instructor and the employees. Therefore, direct human interaction is the most significant advantage of this more conventional form of learning. One can build training cohesiveness by having face-to-face interactions and completing an enjoyable learning experience.

Moreover, the training might require physical interaction, such as role-playing, to properly understand and learn from the duty or task for a specific position. Interpersonal communication is sometimes essential to keep individuals concerned and happy with their education; such learning is an excellent opportunity for learners to pose sudden questions, clarify any complications, or use different analogies to understand a particular concept. Thus, being in the same class with the trainer daily makes it easier for learners to stay motivated and put in the extra effort.

**Conventional Training Creates Awareness of the Community and Collective Learning.** Apart from an improving learning experience, traditional classes help build teacher–student and student–student bonds. This development is essential to improve interpersonal skills, as group projects improve creativity, encourage teamwork, and allow participants to learn from each other. When a facilitator is physically present in front of the participants, they are urged to pay attention to the class and remain a part of it. Moreover, the facilitator can determine the class's response through visual hints and body language. They can then change their approach according to how it captures the class's attention.

The human aspect of learning is present in conventional training methods as a person can teach employees and interact freely. This human aspect of education should be addressed. Classroom training also teaches the skills required to be efficient, professional, productive, and cooperative. Moreover, one main factor that encourages formal education is the shared learning experience among learners. Students learn and understand better in an environment where they can socialize and learn from fellow students. This aspect cannot be changed by any online teaching method. The reality is that, despite the cost-saving, time-saving, and consistency benefits provided by eLearning solutions, there are situations where they cannot and should not replace a well-structured, traditional training program delivered by a skilled and capable instructor.

In conventional training programmes, trainees face time and location constraints as they usually adhere to a schedule. Despite this, today's organizations have a variety of strategies to choose from when training their employees. There has also been much technological improvement in the training industry. However, most employers prefer to employ traditional methods due to the viability and effectiveness of these training formats. The most used conventional training methods are instructor-led, hands-on, and interactive. There are many types of instructor-led training, such as those employing PowerPoint presentations, a blackboard or whiteboard, an overhead projector, video, and storytelling.

Storytelling is the most productive technique because trainees can communicate openly and feel less intimidated by their responses, for there is no wrong or correct answer. The advantages of the storytelling method include 1) instructor-led classroom training - a productive method suitable for introducing a large body of material to large or small groups of employees or participants; 2) it is a

more personal, face-to-face type of training as opposed to computer-based training; 3) it ensures that everyone gets the same information and reaches the same level of understanding at the same time; 4) it is cost-effective, especially when not outsourced to guest speakers; and 5) storytelling quickly grabs people's attention.

The interactive method enables trainee involvement, holds their attention, and keeps them engaged in learning the information. Activities associated with the interactive approach include quizzes, group discussions, question cards, case studies, and role-playing to influence trainees to participate actively. The advantages of this method are trainee involvement and success in retaining new information, fun and enjoyable training, experience and knowledge sharing by veteran employees to newer employees, and in-session feedback on recent employee performance.

There is an argument that conventional learning is the best way to control a learning process, while proponents of other learning methods consider it less effective. For instance, universities have a proud tradition of combining learning, teaching, research, and specialized development (Cheese, 2003). This combination is because conventional learning is considered more efficient than learning in some aspects. Hence, students are eager to discuss their problems with the teachers. Such conventional training setups also provide access to university infrastructure, including libraries, labs, newsrooms, studios, and more. Here, as online courses cannot offer these, traditional learning gains a distinctive advantage.

The three main categories of conventional training methods are presentation, hands-on training, and group building. Employees are often the permanent receivers of information in presentation training methods, and the reports generated encompass facts, processes, and problem-solving strategies. The presentation methods include lectures and audio-visual techniques, as the trainer uses spoken words to communicate.

Lecture methods are also less expensive, not time-consuming, and very effective when handling a large number of participants. Lectures can be in the form of presentations, panel discussions, guest speakers, and conferences.

The hands-on training method encourages learners to participate in the learning process. The essential hands-on strategies are on-the-job training, behaviour modelling, simulations, games and case studies. For instance, employees can learn by observing others perform similar tasks during on-the-job training. Hands-on methods are vital in training new employees and teaching experienced employees new ways. These techniques can also assist in carrying out departmental cross-training and initiating promoted or transferred employees.

The third concept of traditional training methods is group building methods. This strategy improves a team's success, as it entails employees sharing experiences and ideas, understanding interpersonal dynamics, learning personal weaknesses, building a group identity, and identifying strengths, among others. These include risk-taking, conflict management, problem-solving, and growing self-awareness. Employees learn by observing or carrying out actual duties, which allows them to acquire relevant experience for performing the task. This method employs progress reports, training manuals, procedure manuals, checklists, and lesson plans. The trainers who prescribe these tasks are always available to respond to any questions from the participants, ensuring this training is practical in meeting training outcomes and relevant in developing a productive workforce.

Finally, conventional learning demands in-person monitoring throughout the entirety of an activity. This attention to detail is required as participants have a broad range of aptitudes and experiences. Because trainers must get all learners through the material simultaneously, the course must be designed to give enough time to train

those with the least experience or understanding of the material. Therefore, traditional training necessitates a well-informed, enthusiastic instructor with firsthand expertise in the subject matter. The instructor provides precise, validated, standardized, and pertinent learning materials to a limited group of enthusiastic learners in a conducive learning environment. This approach also includes assessing the learners based on the course's ultimate learning objectives. Participants learn and interact with this skilled facilitator, forging essential and lasting relationships as they understand how to work in teams and transfer the knowledge gained back to the workplace.

### ***2.8.2 Contemporary Manpower Training Methods***

Currently, the world has become a global community where almost everything has become digitized. Training and development are not an exemption in this digital race. Naoual et al. (2016) opine that the rapid development of information and communication technologies in all spheres has emerged as a critical element in the success of any institution. It is also considered an essential prerequisite for achieving competitive advantage and surviving in an environment of rapid change; hence, the need to invest in ICT for e-training to attain a sustainable workforce. Increasingly, more companies are actively engaging in modern training delivery methods for maximum content and training retention by incorporating online courses into their training regimen.

#### ***eLearning as a Contemporary Training Method***

In response to the demanding change in the workplace, most organizations depend on traditional and contemporary forms of training (Rozar et al., 2013). As the latest form of ICT usage to improve and expedite teaching and learning, eLearning has become a popular and significant subset of education technology (Pathak et al.,

2019). It offers online learning and teaching platforms for specific knowledge through the help of internet technology worldwide (Brahma, 2017).

According to Pathak et al. (2019), eLearning consists of the following rudiments:

- 1) A content delivery technique that uses three methods: video on demand, live broadcasting, and interactive communication;
- 2) Software products used to create content, such as authoring tools; and
- 3) LMSs that allow learners to check and evaluate individual improvement, performance, and progress.

Therefore, modern technology like the internet and usage across electronic devices inform educational alternatives available to enhance and advance the quality of training in organizations. According to Czarnecka and Daroczi (2017), "modern technologies also enable direct contact in real-time, between the learner and the instructor utilizing audio or video conference". Thus, the application of technology affects the learning environment and learning process. It can be adopted as a single teaching mode or as a complementary means of training with the traditional model.

## **2.9 Challenges Associated with eLearning in Nigeria's Public Service**

Several reasons have been provided for the global emergence of eLearning, which include the desire to reach many persons within the same time frame, increase the population of educated individuals, and share knowledge across boards (Odunayo et al., 2013). eLearning in Nigeria has emerged as a response to the global challenge of providing accessible and affordable education to all those seeking to learn, as well as to align with global trends in the field of education. A key asset to Nigeria is its vast population, a fundamental human resource. The staff and members of the Nigerian Public Service make up a good number of this population. As a result,



Nigeria must first adequately train its national workforce to have dependable and productive human capital (Zainab et al., 2015).

eLearning in Nigeria has recently gained wider attention and acceptance within and outside the public service system. eLearning in the Public Service has continued to advance, albeit with its challenges. Salawudeen (2010) observes that the advance in ICT has led to the augmentation and near phase-out of conventional education delivery methods. These modern technologies increased flexibility in education and ensured that they reached more people in many countries worldwide. Still, in doing so, they also posed a new challenge for stakeholders in education. Therefore, as technology-based education cannot substitute formal learning, it must complement it.

According to Odunayo et al. (2013, p. 207), electronic learning has redefined the dawn of understanding, changed educators' functions, and offered more formal training and continuing education prospects. The tremendous boom in ICT usage and development in Nigeria has led many organizations to consider using eLearning abilities to promote lifelong learning and distance education (Ume, 2016).

Mobile learning has recently been practised in most developed nations (Ayodele, 2010). However, Nigerian training institutions need to catch up in adopting these modern technologies as there is a meagre diffusion rate to online learning. The effectiveness of an eLearning process depends on several factors, including a suitable medium for properly disseminating information, availability of technological devices, reliability of the process, and learners' acceptability. A proficient eLearning process cultivates novel approaches to thinking and enhances collaboration and interaction among learners. (Pamfilie et al., 2014, p. 374). As such, the Nigerian public sector is

faced with various challenges that might hinder the delivery of effective service delivery.

According to Zainab et al. (2015), the key challenge within the public service is infrastructure. This challenge is common for most developing countries that still need help to adopt eLearning. Organizations in these countries face a situation where employees need to be more readily equipped technologically, making it challenging to implement eLearning fully (Ellis & Kuznia, 2014). To build an enabling environment for the adoption of eLearning, infrastructure, information, and communications technology literacy are requisite combinations and are further essential in the creation, management, evaluation, and integration of knowledge. With this in mind, the 2013 conference of the Nigeria Computer Society supported the development of a robust infrastructure for Nigeria (Zainab, 2019). The conference proceedings agreed that infrastructural development must be prioritized to create, manage, and execute eLearning within the polity.

Salawudeen (2010) stated that Nigeria needs more technological development and engineering besides a poorly instituted education finance policy. However, learner commitment towards learning is more important here, as the process is driven entirely by the learner (Odunayo et al., 2013). As such, factors mitigating successful eLearning are lack of peer support, organizational culture, time allocation, technical delivery, and learner's discipline towards learning (Montgomerie et al., 2016). Acquiring technological devices and internet subscriptions for employees in the Nigerian Public Sector has also been a challenge. As stated by the National Communication Commission (NCC) in a study conducted in 2013, over 50 million persons within the country have access to a mobile phone. Regrettably, a meagre 5% of the population could afford to gain access to the internet (Odunayo et al., 2013).

Therefore, Nigerian learners' financial and social status determines the effective distribution of eLearning in the country.

Despite the benefits associated with eLearning, adopting eLearning has constituted a challenge in developing countries like Nigeria due to the nature of their people, resources, environment and the ease of use of technology. Al-Hujran et al. (2013) identified the following issues from the learner's perspective: the need for more awareness about the advantages of eLearning, vague understanding of eLearning, resistance to changing traditional learning methods, and organization's role in determining learners' use of eLearning tools. Furthermore, Judith (2004) considers the challenges of learners in adopting eLearning to be learners' lack of self-confidence and limited exposure to computer gadgets, capacity deficiencies in using Microsoft Office applications, poor time management skills, and lack of self-motivation. Salawudeen (2010) focuses on the significant challenges that hinder the effective adoption of eLearning in Nigerian institutions and identifies low IT literacy levels among learners, high cost of internet connectivity, slow network connectivity in many areas within the country, and lackadaisical attitude of learners to be barriers. Olutola (2015) also identified four challenges associated with the successful adoption of online learning: poor or inadequate internet connectivity, lack of suitable and appropriate technological gadgets, unavailability of required software, and lack of strategic planning in determining training needs.

Although eLearning allows for autonomous learning, some learners need guidance from a trainer and a constant power supply to possess the discipline and commitment to focus on learning. The power challenge in developing countries is a primary impediment to an enhanced and technologically developed system. Learners in cities, towns, and rural communities throughout the country suffer from constant

power failures. Nwabufo et al. (2013) state that this situation is worse for residents in the countryside as they are not even connected to the national power grid; hence, they may need more electricity.

Bhalalusesa et al. (2013) categorize challenges associated with the adoption of eLearning into four categories:

- Individual-related;
- Technology-related;
- Curriculum-related (instructions, activities, and diverse supports); and
- Contextual factors that involve the training institution and its administrative and operational efficiency.

In the authors' review, it was concluded that factors pertinent to the individual learners' characteristics are yet to be effectively managed in developing countries. In contrast, the hierarchical educational approaches in many developing countries may have to be advanced into an instructional technique that is more familiar to the individual learners' activities, self-learning, and enthusiasm (Bhalalusesa et al., 2013). This transformation is imperative as it hopes to alter both the student and facilitators' conventional function gradually. Kenan (2015) agrees that this transformation will necessitate due emphasis on the individual's activities and perceptions and how to trigger these changes to ensure eLearning is effective.

The identified challenges can provoke training institutions to develop an improved educational curriculum and learning techniques for an efficient online learning experience, providing measurable results and involvement for all learners and educators (Odunayo et al., 2013).

### ***Limitations of eLearning Adoption in the Nigerian Public Sector***

While eLearning has been viewed as an essential component of the modern teaching and learning process with thriving advantages, it comes with its shortfalls that challenge organizations to redefine their training approaches (Castillo-Merino & Serradell-Lopez, 2014). Several factors have hindered the implementation of eLearning in the Public Service. The limiting factors identified affect the learners, trainers, and the organization. Some vital limiting factors include organizational readiness, employee readiness, lack of infrastructure and skills, crisis management, technical issues, and time effort.

### ***Organizational Readiness***

In an organizational setting, adopting and implementing eLearning is more than just development and information for individual employees. Ellis and Kuznia (2014) stated that organizations might oppose a condition where their workers must be more technologically equipped, making it challenging to introduce and implement eLearning. However, what can we do to alleviate the suffering of organizations paying for eLearning, several departments monitoring and overseeing, and the individuals complying and utilizing it? According to Aldrich and Ross (2000), Bonk (2001), and Colbrunn and Van Tiem (2000), the most convenient starting point would be to examine the organization's readiness by defining goals, needs, motivators, resources, and restrictions. All organizations must establish an enthusiasm for all stakeholders, including employees, human resources, training and professional development, information technology, leadership and management processes. Such assessments are frequently undertaken by specialized eLearning vendors or consulting firms that support organizations embarking on an eLearning effort.

Possible challenges associated with this strategy include a need for more objectivity, a bias against the organization's knowledge, and, most crucially, an

agenda heavily slanted toward identifying the organization's willingness and ability to take on the effort. Nonetheless, an organization would benefit greatly from knowing, even partially, about its existing infrastructural situation and mindset regarding eLearning before inviting an external evaluation specialist. This assessment can also benefit organizations in various stages of eLearning deployment and those with a system already in place. Thus, this process can serve as a formative evaluation of the system, highlighting challenging areas and improving the system.

Technological advancements within organizations have undoubtedly created possibilities for easy administration and created lots of dynamism in organizational culture. According to Dasgupta and Gupta (2010), the growth of technology in recent years has impacted how governments at all levels work, and the use of information electronically in the government is frequently on the rise. Recent technological advancements have created opportunities to formulate and execute strategies and policies conducive to integrating eLearning within the organization. However, a significant limitation identified is a lack of organizational willingness to accept change and consideration of additional administrative expenses.

Organizations are often faced with situations of needing more time to be fully ready to introduce and implement eLearning (Msomi et al., 2016). According to Haney and Hara (2000), several organizations and individuals have already acquired the skill of assessing organizational readiness for an initiative. To effectively assess readiness for eLearning, the skills required include change management, identifying political problems, understanding different perspectives on a situation, and generating cost-benefit analyses for different solutions. In a well-designed and well-functioning system, the employee is blissfully oblivious of any potential stumbling blocks and continues their business learning.

### ***Employee Readiness***

Another identified area for improvement is employee readiness to accept eLearning as organizational training. Some employees must change traditional knowledge acquisition methods (AlHujran & Aloudat, 2013). Before introducing eLearning, which improves workers' skills, the organization's capacity is tested and updated if necessary. Sulcic et al. (2002) posit that employees' interest in partaking in an eLearning program generates a positive outcome on the success of the learning process. However, learners are expected to self-manage their learning experiences and strategies with little guidance and supervision from the instructors, as with other types of distance and multimedia learning, which might affect their communication skills. According to Akorful and Abaidoo (2014), eLearning "makes the learners undergo contemplation, remoteness, and lack of interaction or relation" (p. 403). Therefore, learners require a strong determination and willingness to go through the learning course until completion. The success of an eLearning system largely depends on the employees' readiness and acceptance to use the system (Almaiah & Jalil, 2014; Almaiah & Alismaiel, 2019; Shawai & Almaiah, 2018); therefore, lack of eLearning system usage can hinder the realization of its benefits (Almaiah et al., 2019a; Almaiah et al., 2019b; Almaiah & Al-Khasawneh, 2020).

### ***Lack of Technological Infrastructure and Skills***

Government organizations face a funding challenge, which will limit their adoption of eLearning. Technology is one of the most vital factors in formatting the informative scenery in today's business world, and eLearning requires technological gadgets with internet connectivity to ensure the beneficial acquisition of knowledge. As such, the needed technical infrastructure to aid the learning process, like a computer and internet connection, must be accessible to the learner to optimize their

eLearning experiences. Lack of proper and adequate technology (computers, mobile devices, internet connectivity) negatively impacts the adoption and implementation of eLearning (Tarus et al., 2015). Developing local eLearning content will also be challenging as it requires many resources. Lack of adequate technical skills is also a challenge in the public sector, as most organizations need funds to train technology officers in the skills necessary (Msomi et al., 2016)—such a lack of technological skills limits organizations from taking advantage of opportunities presented by eLearning.

Thus, meeting costs is a multi-faceted essential for the incumbent organization. Bartley and Golek (2004) considered cost factors by constructing matrices for multimedia and distance learning costs. It was established that cost factors could be capital and recurrent, production and delivery, and fixed and variable. Capital costs are expenses incurred for the purchase of equipment or materials. Recurrent costs occur on an ongoing basis (for example, the cost of computer support). Production costs are those associated with developing a course curriculum/content, while delivery costs are related to teaching learning content. After relevant consideration of the advantages and disadvantages of online learning, Bartley and Golek (2004) concluded that it can be affirmed that the advantages of online learning are substantial, and any additional costs incurred can be rationalized by considering the significant benefits that organizations can reap from this approach.

Organizations expect enormous effective and efficient employee productivity levels, especially after adopting an eLearning system. As a result of an analysis in Nigeria, it was concluded that deploying eLearning systems in organizations is highly cost-effective when considering the purpose of initiation in the general scheme of the learning system (Olugbenga et al., 2006). Distance education programmes are initially



costly and gradually become more affordable due to economies of scale. More favourably, online learning can provide synchronous audio and video interaction among learners and accommodate scheduling needs without erecting new facilities (Bartley & Golek, 2004).

### ***Crisis Management***

The benefit of face-to-face interactions in speedy conflict resolution, as seen in a conventional classroom setting, is a challenge for the online learning technique. Gary et al. (2000) argue that incomplete and partial feedback and the challenge of categorizing information further obscures the "assessment and referral process in online learning". Hence, managing sensitive matters successfully within the online framework poses a significant challenge.

### ***Technical Issues***

Taylor (2002) affirms that the foremost challenge to online learning is time zone variations, as with any real-time event, particularly synchronous learning spaces. This issue poses a more significant concern as learners are drawn out over broader demographics, creating extra technical glitches, especially in virtual meetings enabled through videoconferencing. Considering poor internet connectivity in Nigeria, technical issues relating to quality visuals and audio also pose limitations. As such, learners are often confronted with expected technical glitches while using technology, posing an additional strain on the eLearning experience.

### ***Team Effort***

A primary impediment to designing eLearning programs is the capacity and experience of the trainer. Hence, in the case of insufficient expertise on the trainer's part to efficiently organize the online course curriculum, Taylor (2002) affirms that team collaboration is required. Unlike the conventional pedagogy that solely relies on

the instructor to develop the lesson notes, eLearning involves a plethora of skill mastery, such as website design and development and manipulating relevant software, all to aid in creating appropriate content for the online course. According to Knight and Bermant (2002), eLearning trainers possess varying ingenuity and technical experience. They are not expected to be "web gurus"; instead, they are expected to understand the "instructional pedagogies that go into creating a beneficial online learning experience".

### ***Synchronous or Asynchronous Classrooms***

The asynchronous learning space allows students to access the designed online content conveniently. However, a drawback to the asynchronous learning space is its inability to enable quick and interactive feedback. Sometimes, trainees may require instantaneous responses during an interaction, which is not feasible in the asynchronous classroom. Training within this space is also always for a limited time, say 60–90 minutes. The late entry of participants to a class can diminish the lesson's impact on them, and they must recap everything.

Appana (2008) notes that because online learning can seem to be "an impersonal exercise" (p. 15), there is a tendency for learners to feel isolated from the instructors and their peers. As argued previously, virtual learning does not have the gestural features that are vital components in conventional face-to-face interaction, leading to a diminution in communication. Odunayo et al. (2013) believe that certain situations cannot substitute physical learning with online interchange. Specific learning contents are only partially appropriate for teaching on the web due to their nature, relative value, or importance.

To a high degree, online learning happens asynchronously with the resultant lag in feedback and limited dialogue, which naturally benefit certain levels of learners

and challenge others. Manner (2003), however, argues that a deficiency in spontaneity in an asynchronous learning environment can be neutralized by allowing learners ample time for self-examination and to provide planned responses. However, since online learning is self-paced and self-directed, managing learners' participation in active learning can pose a challenge. Some individual learners may need more self-worth and enthusiasm to perform credibly in an online program when left alone. Learners may become easily distracted when taking an eLearning course online, as they often engage in everyday activities like web surfing, watching unrelated content, playing games, or listening to music.

Hence, online learning institutes must design systems that inspect the learning process, ensuring learners participate in the program. Adequate training guidelines that prevent learners from indulging in non-e-Learning-related activities during the study duration can aid in dealing with distractions in a learning environment.

## **2.10 Advantages of eLearning**

There are many advantages of eLearning for organizations. However, Sitnikov et al. (2010), Balasubramanian et al. (2014), and Ellis and Kuznia (2014) have narrowed down the advantages of eLearning to organizations to the following:

- Professionals recognized by educators can contribute significantly by disseminating their expertise throughout the learning process, transcending geographical boundaries.
- Organizations do not need to hire workers to develop learning material.
- Workers do not have to attend classes in one location physically; they can study and learn wherever they are comfortable.

Adopting these strategies allows organizations to save and minimize training costs.

The opinion Levy has further encouraged the expansion and acceptability of eLearning in a growing society. According to Levy (1998), people can not only exchange information through the virtual worlds but reason together in real time to bring ideas and produce a cooperative brain. Based on this assumption, education becomes mediated by individuals who, using machines, distribute and receive content through technological networks, being virtually together (synchronous model) or without interaction in real-time (asynchronous model). This ability of individuals to interact with each other in their own time is one of the main features of the learning methodology. As such, its popularity in distance learning results from technological advances, especially with the growth of the internet generating profound effects such as informing the distribution method of educational content (Welsh et al., 2003).

#### ***2.10.1 eLearning Systems as Job-Training Tools***

Today, governments are making a considerable effort to adjust adequately to the changes in the learning environment to promote competitiveness. As a result of the rapid advancement of technology and the internet, many governments have replaced traditional face-to-face training with eLearning. The internet has opened up several opportunities for the development of eLearning systems. Thus, introducing a training program must increase task ability by advancing trainees' knowledge, technical aptitude, and attitude. In ensuring the eLearning system is adopted as a job-training tool, it is of essence to reform the training policy in the public sector for the following reasons.

**Consideration of Work Efficiency.** The primary objective of the eLearning system is to improve the efficiency of human resources. Task-related content directly affects trainees' learning. The effort of the government to enhance job efficiency by using eLearning must thus incorporate online programs and activities into daily tasks.

For employees who require more skills, eLearning should support them in practising the job skillfully. For document and information management by other servants who work on data, eLearning should help them deal with such work efficiently. Of course, all these above efforts need a complete eLearning plan.

**Improvement of Training Methods.** The problem of time must be well-handled when addressing allocations for work and training. Civil servants' mode of learning should shift from traditional education methods to modern education methods. Scientific and technological strategies must be developed in which learners can combine web technology, virtual conferencing, and print materials. Likewise, eLearning can choose a flexible timetable, such as long-term learning, short-term learning, and a work-study program.

**Evaluation of Training.** Reaction and learning are studied as significant pointers of training outcomes; however, the identified are not the appropriate indicators of the desired development of training programs—the transference of learning to one's job. A proper evaluation of training outcomes is made by measuring changes in job performance post-training and relating it to the achievement of learning goals. Furthermore, of course, the program evaluation process can improve instruction significantly and provide a rationalization for the continued effort or support in civil servants' lifelong learning. Evaluation is necessary because the assessment outcomes can be used to improve modules for more up-to-date, effective, and efficient instruction in the future.

**eLearning System is Web-based.** Thus, it can be plugged into web browsers when civil servants use it as a learning-assisted tool. The primary functions of the eLearning system include multimedia instructional content, group discussions, blackboards, tutor monitoring, and an eLearning system. There are several benefits to

eLearning systems over conventional ones. First, the eLearning system supports nonlinear networks to access information, while instructional formats need to be better structured and networked. Secondly, it provides a multimedia environment that drives instructional content. Thirdly, it enhances interactive communication and a random-access network, which allows activities to be performed cooperatively and collaboratively. Fourthly, based on the system, it provides a cross-platform environment. The fifth benefit is that it supports interactive communication and cross-platform environments that accommodate learning tasks. The advantages of a web-based system will become more tangible in the future as updates in web courses are easier and faster to implement than with traditional education.

To ensure the effective progression of learners' skills, an eLearning environment should be developed and maintained as follows:

- Use technology to incorporate active and collaborative resource-centred learning into general programs.
- The government should create better online programs to ensure its public servants have access to high-quality course content and interact among small groups of their colleagues. Actual content can then be efficiently distributed among governments, departments, and civil servants from various sections in a single learning community.
- Learners should be enabled within a unit to share online learning content efficiently across individual courses while ensuring consistent quality in the presentation of content at all locations
- Learners should be able to store, access, and re-use online learning course contents.
- All public servants are to incorporate online learning into their programs.

- Public servants should be allowed to participate as active producers, not just consumers of online learning.

eLearning in the public servants' job training attracts interest not only as an innovation tool for the public service but also for developing the education system, promoting social cohesion, encouraging international cooperation and actualizing anticipated educational welfare. With these benefits, many governments will be inspired to use eLearning to meet their public servants' needs, especially non-traditional servants with full-time jobs.

### **2.11 Benefits of Adopting eLearning in the Nigerian Public Service**

eLearning has been defined as a system of delivering skills and knowledge through technology through the internet from an instructor to the employee (Mohsin & Sulaiman, 2013). According to Ungureanu et al. (2013), eLearning is an essential, efficient, and innovative instructional strategy for providing teaching and learning to employees. eLearning provides a convenient and efficient way of gaining knowledge and information with fewer obstacles to learning. Bersin (2002) believes that "the ultimate purpose of eLearning is not to reduce the cost of training but to improve the way your organization does business" (p. 26).

eLearning, according to Kasraie et al. (2010), refers to a method of electronic facilitation of learning. It has become increasingly popular in the teaching-learning process due to the advancement of internet technologies such as web-based training (WBT), which enables learners to interact with both their peers and instructors (Sasikumar, 2013). The learner-centred approach of eLearning has revolutionized education, allowing learners to drive the process. In organizational settings, eLearning as a training method offers benefits such as control of learning for learners, consistency, reduced costs, and employee absenteeism (Brown & Charlier, 2012).

With growing interest in electronic training adoption practices in developed and developing countries, eLearning has transformed into a revolutionary way of learning in most organizations (Ramayah et al., 2012). This is associated with its access flexibility, cost-effectiveness, and timely content dissemination. eLearning has played a significant role in employee skill training and knowledge acquisition in developed countries. Understanding the adoption and use of online learning by employees in organizations has been linked to some influencing factors. For example, factors such as availability of resources, perceived cost, individual technological capacity, and perceived support have been identified to influence online learning adoption in organizations (Rym et al., 2013). This study also considers these factors as they relate to the Nigerian environment.

The Nigerian Public Service was developed from the organizations the British established pre-independence. Since its inception, the Public Service has witnessed several reforms (Anazodo et al., 2012). However, despite all these reforms, its significant human resources strength and massive budget allocation, it still needs better infrastructure and a redundant, ageing, and untrained workforce (El-Rufia, 2011). The above listed are some of the factors that have made the Nigerian Public Service insufficiently efficient.

Langford and Seaborne (2003) stated that eLearning is acknowledged as a more economical and cost-efficient method for the public sector to furnish their workforce with uniform learning experiences, thereby equipping them with the necessary skills for productivity and enhancing public sector service delivery outcomes. The public service has encountered the challenge of offering both formal and informal learning opportunities. As such, a solution to the training and learning challenges faced by the public sector is for it to adopt and practice eLearning.



According to Giovanis (2015), well-established eLearning programs can assist organizations in reducing travel and other employee costs associated with training. eLearning also boosts the organization's efficiency. As the government is involved in several engagements domestically and internationally, the demand for the use of ICT has increased to ensure efficacy and limit human error. As the ownership of personal devices and computers increases within the Public Service, eLearning is becoming more accessible to individuals; it is clear that learning is here to stay. Additionally, the rise in internet connectivity speeds has opened avenues for more multimedia training approaches. Organizations and educational institutions have implemented eLearning instead of traditional methods for several reasons. While traditional learning has seen some achievements, the emergence of technological advancements has brought about additional challenges in formal education.

Consequently, adopting eLearning has become imperative to address these evolving challenges. Kasraie & Kasraie (2010) classified the benefits of eLearning in organizations into two categories: hard benefits and soft benefits. Hard benefits are objective and can be easily measured, such as increased productivity, while soft benefits are more difficult to measure, such as improved organizational communication. According to Zainab et al. (2015), adopting e-training in the Nigerian Public Service has increased awareness of the use of technology in the workplace, expanded the learning culture, integrated eLearning in work activities, and allowed for a better understanding of communication tools. eLearning in the public organization thus enables the delivery of knowledge to build a skilled workforce and improves organizational performance.

Further, with the adoption of eLearning in the Nigerian public sector, essential facilities required to project a positive image of the service will be put in place and

transform the organization into an updated and operational Public Service. Likewise, eLearning adoption in Nigeria's Public Service will reduce training costs, and more funds can be diverted to more critical developmental projects. Thus, eLearning benefits include time savings, reduced training costs, and employee induction support (Ly, 2012). Adopting eLearning can also improve the organizational workforce, contribute to economic growth, and enable policymakers to seek the government's support in providing the necessary infrastructure and finance required for a seamless eLearning process within the Public Service (Zainab et al., 2015). The adoption of eLearning by public organizations in Nigeria will lead to cost savings in training and contribute to the growth of the eLearning market (Kasraie, 2010)

eLearning is considered a critical form of learning in the educational system as it imposed an innovative shift in the learning environment (Nagarajan & Jiji, 2010). The creative change and effective implementation of eLearning in the Public Service lead to flexibility in training programs, completion of learning activities at learners' pace, accessibility of learning materials from any location, delivery of consistent content to a higher number of trainees, reduction in time of teaching, and improved ICT competency in learners. Thus, eLearning is now widely used as a strategic element among educational institutions and corporate organizations to enhance learners' skills, performance, and academic outcomes (Jabli & Qahmash, 2013).

The majority of organizations are aware that elearning increases organizational flexibility in presenting training at the right time. It also allows flexibility in the design and delivery of materials to suit the trainees' pace, choice of location, and instructors' capacity to train several persons simultaneously (Smedley, 2010). Subramanian (2016) further affirms the following as advantages of adopting eLearning in the educational systems:

- i. Flexibility in dealing with the challenges of time and place of learning
- ii. Extensive access to information as it becomes more challenging to gain access to information using traditional means (Indereica, 2014)
- iii. Elimination of the discussion barrier and encouragement of communication by providing platforms (online classrooms, discussion forums, and assignment forums) for learners and instructors to interact among themselves
- iv. Reduction in the cost of travel and risk associated with travelling for learners
- v. eLearning increases satisfaction in learning and decreases stress associated with learning as it is self-paced (Algahtani, 2011)

eLearning also breaks barriers of cultural diversity between learners from different locations as they can interact and learn with each other asynchronously. Despite the variety, all learners also have equal access to information. Therefore, an eLearning environment accommodates all and enables instructors and learners to complete tasks more quickly than traditional classroom learning. Moreover, Quinn (2012) stated that instructors could also quickly develop learning content by appropriately re-using existing library content.

At the world stage, eLearning aids in the preparation of societies to communicate and dialogue with others, improving communication and allowing instantaneous feedback (Akorful & Abaidoo, 2014; Zeitoun, 2008).

### ***2.11.1 Online Learning as an Alternative to Traditional Face-to-Face Education***

With the launch of the PSLMS, the federal government of Nigeria aims to strengthen further its resolve to develop capacity and build the integrity of records keeping, information sharing and management in the public sector. This initiative is part of the provisions of the 2017–2020 Federal Civil Service Strategy reforms, which

seek to eliminate the paper filing system and replace it with a computerized database to address all forms of corrupt practices in government business.

Speaking about the eLearning platform of the Public Service Institute of Nigeria (PSIN), Abuja, Nigeria's Head of Civil Service of the Federation, Winifred Oyo-Ita, stated that the platform is to support the federal government in the provision of training, examination, data management and other services relevant to the Nigerian Public Service. She added that the eLearning platform would enhance revenue generation for the federal government, reduce the cost of training public servants, increase the efficiency of the Public Service, track staff development, and provide a platform for Nigerians to access information about the Public Service notwithstanding the time or location. Thus, PSIN has demonstrated that the dream of transforming the Public Service from a cost to a revenue generation centre is realizable through a singular innovation arising from the platform launched at no financial implication to the federal government.

In his submission, the administrator and chief executive officer of PSIN, Abdul-Ganiyu Obatoyinbo, said, "The platform is populated with over 1,000 courses and can take as many users entry as required at any given time; in the context of education and public service use". The Institute has developed an eLearning passport to record the courses completed by any officer. This move will also help monitor the capacity-building sessions conducted by each officer to ascertain performance levels.

In this era of technology, many companies are turning to eLearning to increase their business productivity and efficiency. In our constantly evolving world, all employees must have access to current knowledge to excel in their job roles and acquire additional skills. Platforms like Coursera, Udemy, and lots more are now accessible to employers at affordable cost. Hence, eLearning offers several

advantages in the workplace that contribute to enhanced business productivity. These benefits include the ability to access training from any location at any time, accelerated knowledge transfer, shortened training durations, higher information retention rates, and cost savings from reduced travel expenses, among others.

### ***2.11.2 eLearning for Improving Productivity in the Workplace***

Research revealed that many organizations' productivity could be higher because they use antiquated business practices and procedures. As such, programs focusing on future career development or improved work skills effectively retain employees and increase their creativity and productivity. According to Smith (2013), in a study of 3,100 US workplaces, the National Center on the Education Quality of the Workforce discovered that a 10% increase in workforce education level resulted in an 8.6% increase in total productivity. The study also revealed that companies with the highest productivity levels invested nearly twice as much in training for each employee compared to companies with lower performance levels (Smith, 2013).

Thus, eLearning has been predicted to boost productivity. Employees can learn faster without disrupting other team members if they have a source they can access anytime. eLearning also improves productivity at the workplace through the following.

**Improving Memory Recall.** Because the human brain analyses visual data more quickly than other forms, eLearning makes it easier for employees to recall material. On eLearning platforms, the use of video and animation encourages 'microlearning', which has been shown to boost engagement and knowledge retention. Trainers can use eLearning systems to incorporate content that helps employees retain information. Memory recall has improved with interactive components, gamification, and quizzes. Participating and committing to a training program increases employee

retention and productivity versus rehiring and retraining people. Both indicate a more extended period of stability with the trained employee. If people are invested in a training program, they will likely stay longer because they feel obligated to repay the organization for the training support.

**Allowing for Flexible Learning.** Part-time employees or mothers who need to leave work early to pick up their children from school can benefit from the flexibility of eLearning platforms. Moreover, employees, supervisors, and trainers may find traditional training sessions inconvenient, as managers must adjust targets to accommodate missing hours, employees must reorganize their schedules, and trainers must acquire an on-site or off-site classroom. Employee training can also drain resources due to the logistics and costs of arranging for it. Because training materials may be accessible at any time, eLearning platforms circumvent all of these problems.

**Increasing Employee Engagement.** Employee productivity levels could be low when employees are easily distracted and bored. Likewise, a lack of interest in a subject leads to poor learning, as seen in traditional training environments, which have proven ineffective in improving skill sets. People want to avoid being there, which is one reason for failed training programs. Furthermore, employees rarely revise their training because it feels like they are wasting time reviewing a file of papers, generating anxiety. It is much easier to ask their colleague, but it is ultimately less productive for the business. With eLearning, employees are compelled to find the information they require independently. Literature reviews noted that training increases organizational productivity and employee resourcefulness, allowing them to learn and perform their jobs more effectively. It also improves their decision-making, teamwork, problem-solving, and interpersonal skills, all of which contribute to the growth of the organizations for which they work.

In the work environment, eLearning can improve employees' productivity, making it an excellent way to learn. While carrying out jobs, employees can simultaneously learn as eLearning provides more content than the traditional learning system. It is also more accessible to participate online instead of outside the workplace. eLearning is cost-effective as the employer does not incur expenses on huge trainers fees, transportation and accommodation for out-of-station training. In addition, time is saved as employees do not waste time travelling and attending meetings. The employee also understands what they need for their job faster with the help of eLearning, which saves them more time in completing tasks at work. In a nutshell, eLearning bridges the knowledge and skill gaps employees have when they lack the necessary knowledge and abilities to meet productivity targets.

## **2.12 Research Gaps**

The research on eLearning is marked by significant gaps, particularly at the institutional and system levels. There are currently several scattered studies at the micro level of teaching and learning in classroom environments, whether virtual or real. These academic works yield contradictory results, suffer from various biases, and most do not yield robust conclusions that enable policymakers to apply them in an intelligible way (Guri-Rosenblit, 2011).

As a research field, eLearning is complex and multi-dimensional. It encapsulates a vast range of research topics, from those focusing on technological infrastructures to those with broad socio-cultural implications. Andrews and Haythornthwaite (2009) provided a comprehensive framework for investigating various eLearning applications, describing four principal areas of research associated with eLearning: technological infrastructures, pedagogy, social context, and administration and management. Changes in any of these areas also affect other sites.

For instance, when analyzing the implementation of a particular technology in an institution or framework, the managers of the relevant institution have to decide how to support the adoption of this technology and sustain it continually. From the standpoint of pedagogy, the adoption of technology necessitates the changing roles of instructors and learners utilizing the new technology, the provision of suitable support systems, and the reorganization of the study environment. Adopting advanced technology also has long-range implications for the relevant community involved in the institution or the broader community entity.

While it is vital to have a comprehensive conceptual model to reveal the complexity of eLearning adoptions, most eLearning research often yields contradictory findings. Gaps associated with eLearning research result from the small sample size, failure to report retention rates for students in the environments being examined, and, in several cases, the bias of the research authors due to their double roles as experimenters and instructors (Means et al., 2009).

In implementing electronic technologies at all levels, it has been revealed that ICT is crucial in campus-based and distance learning. However, there are no policies on implementing electronic technologies, and there needs to be a planned view for advanced technologies in learning institutions. Another clear research gap identified is that relatively few studies have been done on eLearning adoption in the Nigerian Public Service. Instead, the scope of studies that have attempted to investigate eLearning adoption in Nigeria has been limited to case studies on secondary and tertiary education (Falana, 2015; Olutola, 2015; Nwabufu, 2013; Odunayo, 2013). The study, however, limits its findings to this one model, whereas several other factors can support eLearning adoption in a developing country such as Nigeria.



### 2.13 Summary

Global technological change has influenced the mode of teaching and learning over the years. Research revealed that technology-induced changes have impacted the role of the instructor as a traditional knowledge provider in guiding learners through the learning process and engaging in problem-solving activities. It has also introduced new possibilities in learning, as learning has further provided opportunities for various learning tools and content. Education is now learner-centric rather than instructor-focused and based on traditional means of passing knowledge over. In the era of technological teaching and learning, eLearning has become a tool to expedite the teaching and learning process.

This literature review delves into the principles of adult learning and their practical applications, particularly in adult education and eLearning. It underscores the significance of adult education as a potent tool for empowerment in developing nations such as Nigeria. Additionally, it explores the transformative role of technology, explicitly eLearning, in reshaping the landscape of education and training. The review highlights not only the advantages but also the challenges associated with eLearning, with a focus on its potential to address gaps in executive and corporate learning. Furthermore, it underscores the importance of government recognition of the benefits of ICT in public services and the imperative to address infrastructure and readiness issues for successful eLearning adoption in Nigeria.

As reviewed in several works of literature, the integration of technology in the educational system has become a global trend as the effectiveness of a teaching–learning process is determined based on the level of technology adopted. With eLearning, learners are more active, eager, and motivated to learn while assuming greater responsibility and handling problems independently. The need for an

individual or an organization to stay relevant in the area of focus has further informed the quest for continuous learning. Every organization works towards achieving its objectives and meeting set targets year in and year out while setting the pace for others. In reaching this objective, the need for continuous learning and access to updated information in the relevant sector is paramount. eLearning thus provides a platform for constant learning and sets individuals/organizations ahead of their contemporaries. It is then no surprise that technology is referred to as an essential skill a 21st-century learner must possess as it enables access to several sources of knowledge, among other things.

As stated by several researchers, the importance of continued capacity development in the public sector must be balanced. As revealed in the literature, the public service is established as a tool of government used to deliver services to the citizens. Public service thus creates a link between the government and the people. Supported by the report of the International Labour Organization (2021) on industries and sectors, the public service is considered the largest employer of labour in most countries as personnel are employed at the federal, state, and local levels of government. At each level, public servants carry out the following functions: policy development and implementation, strategy planning, infrastructural development, mobilization of resources, capacity development of human resources, monitoring, and evaluation.

The literature reviewed reiterates the vital roles that are essential for public servants to play in every aspect of the economy and during times of humanitarian and natural crisis. Some of these vital roles include ensuring continuous delivery of public services, providing selfless service or putting their humanity into practice, creativeness and innovation, creating awareness and generating sensitivity, planning

strategically, sustaining resilience and building an effective public service, enhancing government credibility and gaining people's trust and allocating resources effectively.

Measuring the ability of public servants to carry out the roles mentioned above effectively depends on their capacity and expertise. As such, the more equipped public servants are, the better their service; hence, effective capacity building is crucial. Governments focus on developing public servants' values and competencies while providing the technology, tools, and incentives required to enhance productivity. The investment of a government should thus focus on ensuring an efficient public service and quality public servants.

The level of performance of public servants in meeting the expectation of effective service delivery differs from country to country. Still, there is a need for regular public service reform to ensure goods and services are delivered efficiently. Training as a learning experience is organized to enhance an employee's job performance and is considered an ongoing development process. Several training approaches are available, of which the study stated three levels of training: individual training, organizational development, management and administration.

In designing training within the organization, the study identified the importance of developing a training plan. The training plan should contain the objectives, techniques, and methodology for on-the-job or off-job training. In the learning process, the interaction level between the instructor and the learner is a factor that determines the success of the training, as learning is described as a socio-cultural experience that necessitates social interaction to achieve effective learning.

Training approaches were reviewed; while the reactive training approach is focused on delivering technical skills with an activity that is event-oriented, the proactive training approach focuses on developing organization competencies and

ensuring learning objectives align with the organizational strategic goals. In the active learning approach, the focus is on the learner. The learner directs the training by leading in exploring situations under an instructor's guidance. As connecting better achievements to learner-centred procedures is increasingly tested and witnessed, active learning has gained broader interest in research and practice. The concept of active learning relates to the need for an instructional approach that balances learning and work life. Public servants require adequate on-the-job learning to enhance job delivery, requiring an instructional approach such as active learning.

Active learning as an instructional-led approach adopts learner-centred activity that has been recommended and accredited as an official instructional method in education. According to the Iowa State University's Center for Excellence in Learning and Teaching (2017), active learning techniques have many advantages, such as easy access to assessing learners, improving motivation, and igniting creativity. The dynamic learning approach has the long-lasting effect of learners retaining knowledge gained and applying it in solving problematic situations. In an organization, continuous learning is the bedrock of success, and the need for employers to ensure employees continually gain knowledge is essential as it leads to gaining a competitive advantage.

Organizations need to consider adult learning principles in adopting an active learning approach. Adult learning principles emphasize the need for active involvement in learning, learning that has immediate relevance to them, prior experience as the base for adult learning, and adult learning being problem-centred. The practical application of adult learning principles leads to improved self-confidence, job satisfaction, and job productivity. Adult learning principles form the bedrock of effective adult education. These principles underscore the importance of

active involvement in learning, relevance to personal or work life, using prior experiences as a foundation for learning, and a problem-centered approach. The practical application of these principles is instrumental in enhancing self-confidence, job satisfaction, and productivity among adult learners. This emphasis on self-concept, derived from the learners' perceptions, is crucial in influencing their thoughts and daily lives. In essence, equipping adults with knowledge not only empowers them but also boosts their independence and confidence.

Adult education is also associated with learners who are not part of a regular educational institution but part of an organized educational program to acquire applicable skills and knowledge. The need for continuous learning has made adult education an effective tool to empower individuals and identify societal potential. A developing country like Nigeria, with human capital as one of the significant resources, is dedicated to improving education. As such, it is crucial to know if an adult learner is driven by the gap or challenges associated with personal or work life that must be solved. In adult learning, the self-concept of a learner is derived from the learner's perception as it influences their thoughts and impacts daily living. Thus, equipping adults with knowledge improves their level of independence and confidence.

The primary vehicle that has transformed the world and brought advancement into the teaching and learning process is technology. In this contemporary educational landscape, technology has emerged as a game-changer, significantly advancing the teaching and learning process. These transformative changes are predominantly attributed to the advent of the internet and the rise of eLearning. eLearning encompasses various platforms, including videoconferencing (e.g., Zoom, Skype, Google Meet), virtual classrooms, web- and computer-based learning, and digital

collaboration via emails. The study's outcome revealed that eLearning enables a learner to direct the path of knowledge. One notable advantage of eLearning is its learner-centric approach. As per Jethro et al. (2012), eLearning allows learners to steer their learning paths, enabling control over content, pace, and sequence. This adaptability empowers learners to tailor their educational experiences to meet their objectives. Additionally, eLearning transcends temporal and spatial boundaries, making learning accessible and flexible. It enriches the learning content and widens access to information resources.

This chapter thus highlighted several advantages of eLearning that are categorized as learning delivery and learning enhancement. In learning delivery, learners and instructors have access to information, efficiently distribute personalized instruction, standardize content, and are accountable for learning activities. In enhancing learning, eLearning grants access to educational materials required in a short time. Learners can then locate adequate information when needed. For instance, synchronous eLearning content delivery is a real-time, instructor-led learning mode. All learners in an asynchronous learning mode receive information and learning content simultaneously while interacting through online learning mediums such as video calls or instant messaging at different points in time. Learning is self-paced in the asynchronous mode of knowledge, as the receipt of learning content is not simultaneous. Learners under the asynchronous mode of education are also responsible for their learning and learning pace.

eLearning as a contemporary training method has provided organizations with opportunities to train employees to ensure effective service delivery continuously. The use of eLearning in organizations is beneficial as it offers different range of tools that enable the learner to be creative, improves the quality of learning as the learner is

connected to experts both in and out of the organization, supports personalized learning, and provides flexible understanding, which is suited for distance learning. This shift towards eLearning is evident in Nigeria's public service sector, where the importance of training and capacity development is well-recognized.

This chapter then discussed different categories of eLearning, such as courses, informal learning, blended learning, communities, knowledge management, and learning networks. Public service continuously seeks ways to effectively equip its employees to ensure quick and better service delivery. In achieving this goal, several training approaches and methodologies have been introduced into the public service to support human resource capacity development. eLearning as a means of training has also been introduced into public service, considering its advantages. eLearning has become the preferred learning method for several organizations and individuals due to its wider reach and accessibility. Nigeria has also recognized the importance of training its Public Service workforce as established organizations to carry out such duties.

The COVID-19 pandemic has further revealed how important learning is to society. Since 2019, it has necessitated a rapid shift to online learning, driven by the forced shutdown of physical activities. This shift to online learning presented significant logistical challenges, fundamentally altering the attitudes of both instructors and learners toward online education. This disruption reaffirmed the importance of eLearning as a resilient and adaptable educational approach.

While eLearning offers numerous advantages, it has its challenges, especially in the context of public service training in Nigeria. Recognizing these challenges is crucial to harnessing the full potential of eLearning. Several obstacles are categorized into individual, technological, curriculum-related, and contextual factors. The

foremost challenge is the inadequacy of infrastructure, as pointed out by Mutisya and Makokha (2016). The lack of technical equipment presents a significant hurdle in implementing eLearning effectively. This underscores the necessity for substantial investments in eLearning infrastructure and heightened awareness.

Other factors hindering eLearning adoption in Nigeria include organizational readiness, employee readiness, crisis management, technical issues, and the necessity for collaborative efforts. Addressing these limitations is imperative to leverage eLearning as a transformative tool in public service training.

Governments worldwide have recognized the pivotal role of ICT in public services, making online learning increasingly acceptable and indispensable. It is vital for Nigeria, with its emphasis on human capital development, to invest in eLearning infrastructure and elevate eLearning awareness to enhance the skills and abilities of its public servants. Overcoming these challenges is instrumental in ensuring that eLearning continues to be a catalyst for practical training and capacity development, ultimately contributing to improved service delivery and societal development.

In conclusion, this comprehensive literature review has shed light on the principles of adult learning, the transformative potential of eLearning, and its implications for public service training in Nigeria. While eLearning presents numerous advantages, it also comes with challenges that must be addressed for successful implementation. The pandemic caused by COVID-19 has further emphasized the significance of eLearning as a robust and flexible educational method. The government's recognition of the value of eLearning in public service training and its commitment to addressing infrastructure and readiness issues are crucial steps toward realizing the full potential of eLearning in Nigeria. By overcoming these



challenges, Nigeria can harness the power of eLearning to empower its workforce and advance its public services, ultimately contributing to national development.

### **CHAPTER 3: RESEARCH METHOD**

Considering the vital role education plays in improving the overall effectiveness of public servants, the researcher identified the need for a proactive medium in ensuring public servants are equipped with relevant and adequate skills to offer effective service delivery. The organization's widely acceptable means of capacity building are characterized by some challenges that need to be resolved by advocating for a more proactive training of public servants due to the limitations of the existing training approach. This research on the adoption of eLearning for worker in-service training in the Nigerian Public Service addresses why and how it should adopt eLearning for the capacity building and development of public servants.

As this study aims to reflect on the current system of training programs, examining and comparing eLearning with existing approaches, this chapter discusses the research methodology in detail. The research approach and design section substantiate the appropriate method and design adopted for the study, describing why the qualitative design was adopted as an appropriate approach for the study over other research approaches. This decision is mainly influenced by the fact that the qualitative methodology permits users to gather knowledge by synchronous and asynchronous methods and successfully face the need to obtain required data within the target audience rapidly.

A comprehensive description of the study's population related to the size and characteristics of research participants was presented. The needed sample size and frame are indicated as the chapter describes the research instrument, its origin, reliability, and validity. The researcher then discussed the pilot-testing procedures alongside the development process of the research instrument.

Following this, the study procedures and ethical assurances were presented, starting with obtaining all necessary approvals from UNICAF Research Ethics Committee before data collection. In ensuring ethical assurances, the researcher's role in avoiding research bias was emphasized. The researcher reached out to the heads of organizations selected for the study and gained their approval for recruiting public servants within the organization. The confidentiality of the research participants was put into consideration as the names of participants are coded, and the researcher currently safeguards both the audio and Word document files obtained from the study to ensure non-accessibility by unauthorized persons. The researcher approached each participant with a detailed explanation of the research objectives as they voluntarily approved and consented to their participation in the study.

The chapter also gave a detailed description of the data collected, the steps used in the collection, and how data are coded. The researcher transcribed the audio-recorded data obtained from the face-to-face interviews, and this forms the first step of data familiarity with the researcher. Transcribed data were analyzed, and then themes and codes were generated, which were further discussed and evaluated in the study. A graphical representation of data occurrence in word maps and word trees was also furnished.

In concluding the chapter, information on the study's trustworthiness was presented. The reliability of data ensured the credibility of data obtained and data sources. According to Fogliaroni et al. (2018), trustworthiness asserts that reports of the study are trustworthy and justify their reliance within the context of the study. Highlighted areas were related to dependability, credibility, transferability, and confirmability. The reliability of the research study depends on the findings proving their trustworthiness if the study is repeated in the same contexts and with similar

methods and research participants (Kennedy-Clark, 2012). According to Korstjens and Moser (2018), "dependability involves participants' evaluation of the findings, interpretation and recommendations of the study such that all are supported by the data as received from participants of the study" (p. 121).

Credibility ensures that a study measures what is required (Nowell, 2017). A credible research finding is one that has been thoroughly vetted and peer-reviewed by experts in the field. It should be based on a well-designed study or experiment that uses appropriate methods to collect and analyze data. The results should be clearly and accurately reported, and the data should support the conclusions. Additionally, the research should have been conducted ethically and without any conflicts of interest. In summary, a credible research finding is one that is trustworthy and has been validated by the scientific community.

The procedures adopted to ensure the credibility of this study include prolonged engagement, persistent observation, peer briefing, and member checking. Moreover, in proving the trustworthiness of the research study, transferability was considered as it describes the notion that findings can apply to a larger population (Vasileiou et al., 2018). Transferability, also known as generalizability, is the degree to which the results of a study can be generalized beyond the specific sample or population studied. It is the extent to which the findings of a research study can be applied or transferred to other settings, populations, or contexts. The higher the transferability of a study, the more widely the findings can be applied. The confirmability of the study focused on ensuring no bias on the researcher's part influenced the data gathered from the participants.

### **3.1 Research Approach and Design**

The research study on the adoption of eLearning for worker in-service training in the Nigerian public sector was focused on the importance of in-service training for public servants and the utilization of eLearning as an efficient training strategy. The capacity development of employees within the public service is essential to enable them to fulfil assigned mandates. As such, the design of training programs for public servants in Nigeria's MDAs is tailored towards providing continued capacity development to enhance job performance. Orji and Job (2013) believed that education has a significant stake in ensuring human capital development. This not only impacts productivity but also plays a crucial role in long-term performance, ensuring growth at both micro and macro levels. Education is thus an enlightenment process used to give and impart knowledge, making it essential in equipping public servants with the skills required to carry out assigned tasks effectively. Education could contribute immensely to the nation's development if deployed using appropriate training methodologies.

eLearning as a medium of transferring knowledge was considered a practical training approach due to the ever-changing trends in technology and economic models that could ensure a well-designed and cost-effective in-service training strategy. eLearning is a form of distance education focused on activities in learning institutions that are compatible with a model of pedagogy that reflects competency-based outcomes, collaboration in problem-solving, and reflective inquiry (Rudestam, 2004).

eLearning is described as a form of virtual learning environment and the latest trend in delivering training using network technology (Welsh et al., 2003). With the increase in usage and acceptability of ICT and the internet, eLearning in most world economies is becoming more acceptable. Several factors and circumstances were also

considered when understanding why eLearning is gradually being integrated into learning systems. This research study recommends the adoption of eLearning in Nigerian public institutions to improve the capacity development programs designed for public officers and to ensure maximum productivity in their job roles.

In achieving the objective of this study, a constructivist research paradigm was considered, which employed qualitative methods that allowed for an in-depth exploration of individuals' perspectives, experiences, and interpretations. The constructivist paradigm as a philosophical and theoretical framework underpins research and inquiry in social sciences and education. The paradigm views knowledge as subjective, context-dependent, and socially constructed, and it emphasizes the importance of the learner's role in shaping their understanding.

This study adopted a qualitative approach methodology and a case study research design. The qualitative research approach enhances understanding of individuals' cultures, beliefs, and values as well as human experiences and situations and develops theories that describe these experiences (Holloway & Galvin, 2016). The qualitative approach started from the behavioral and social sciences as a system that allows understanding of human beings' special, eccentric, and integrated nature, unlike the use of numerical data to access information that is associated with a quantitative research approach (Kalu & Bwalya, 2017). A positive inquiry strategy during data collection can help avoid complexities about the research subjects. According to Yin (2015), qualitative research probes to get to the heart of what happened to the participating individuals, which leads to decision-making and a better grasp of how the choices made affect their understanding.

The qualitative research approach allows the formation of contemporary ideas, enables the redirection of the research framework when further information and

findings emerge, and enables the possibility of studying significant dimensions and social meaning. According to Mahajan (2018), other characteristics of the qualitative research approach include increased opportunities to develop provisional ideas and theories for in-depth and continued explorations of leadership phenomena and interests for practitioners. Despite the strength of qualitative research, it also presents some disadvantages, such as the rigidity involved in assessing and demonstrating data, difficulty in replicating results, the requirement of repetitive research periods, and researcher interest that can harm the data collected, as the process depends on researchers' skills, which are subjected to personal idiosyncrasies and biases (Mohajan, 2018).

The qualitative methodology employed involved a case study design and adopted in-depth interviews as a data collection tool. Case studies are a type of qualitative research that has two perspectives. Harwati (2019) identifies the perspectives as a philosophical viewpoint, which is interpretive and holistic, and a methodological perspective, which includes life histories, documents, in-depth interviews, and participant observation. According to Harrison et al. (2017), case study research is a valid form of inquiry to explore a broad scope of complex issues, mainly when human behaviour and social interactions are essential to understanding topics of interest. One of the theoretical problems of case study research lies in its definition, as its authors have defined it in various ways (Harrison et al., 2017; Yazan, 2017). Case study investigation seeks to raise knowledge on a particular case extensively and intensely, without generalizing the phenomena, as the most significant interest lies in profoundly understanding a specific topic in detail (Yazan, 2015). The case study design was appropriate for this study because the study's targeted location for obtaining data was the Federal Capital Territory- Abuja with

selected institutions. The consideration of a case study for this selected sample is due to the fact that similar rules and regulations apply to Nigeria's public institutions and public servants, irrespective of the organizations or location. Likewise, the capacity development process is identical across institutions, as indicated in the Nigerian Public Service Rules.

Other designs, such as ethnography and grounded theory, were not considered because ethnography as a study of culture only applies to this research, as eLearning is not a cultural phenomenon and public service is generalized among all ethnicities and cultures. Grounded theory, a methodology focused on deriving new insights from participants' experiences, is not suitable for this study. Instead, this research was intended to propose methods for adopting training based on existing eLearning channels rather than generating entirely new approaches. Instead, the case study design permitted the researcher to elaborate, clarify, and build on other methods and continuously examine the research question from different perspectives to rule out potential contradictions. Ebneyamini & Moghadam (2018) define the case study research method "as an empirical inquiry that investigates a contemporary situation within its real-life context; when the boundaries between phenomenon and context are not evident; and in which several sources of evidence are applied" (p. 1).

Research design involving a case study is used to generate a detailed, intricate understanding of a complicated topic in its authentic context. It is an established research design extensively used in various disciplines, particularly the social sciences (Sarah et al., 2011). Case studies enable a holistic review, providing various tools that researchers would otherwise not apply when using other stand-alone research techniques. Gustafsson (2017) described it as an intensive study of an individual or group to generalize similar entities. Despite the advantages associated with case study



design, it is challenging to establish cause–effect connections, making it difficult to generalize from a small sample (due to confidentiality assurances) and to create a case study that suits all subjects (Queirós et al., 2017).

The need to have an established method of conducting research design has been emphasized by many authors (Bender et al., 2002; Seepersad et al., 2006; Green et al., 2002). Over time, the contributions of researchers from various disciplines have helped develop and strengthen case study research. Case studies have been known to help connect the micro level or actions of individuals to the macro level or large-scale social structures and processes. In this research, the micro level was considered to be the public servants whose action ranges between the traditional learning approach in training and the modern eLearning approach.

Yin (2002) presents a detailed, comprehensive approach to forming the case study research design with a perfect look at every step of the research process, from the construction of research questions to data collection and analysis of data in light of prior theoretical propositions to the reporting of the entire investigation. According to Yin (2006), case study research addresses descriptive or explanatory questions such as what happened, how, and why.

The first step in the case study design was defining the research question. A research question is developed to explore the research area. The research question is described as the backbone of research that addresses different concerns depending on the areas to be evaluated. According to Kishore et al. (2011), formulating a good research question is the first significant step in the social research process of generating knowledge to promote and maintain societal values systematically. Developing the research questions begins by identifying the subject of interest to be

investigated and information gaps based on previous research work. Then, the scope and focus of the study are narrowed, and questions are framed.

Good case study design involves providing empirical data for analysis and conclusion (Rashid et al., 2019) but doing so in such a way that stands up to scrutiny. The case study in this research was public organizations in Nigeria. The purpose of this qualitative study is to investigate the adoption of eLearning in the Nigerian Public Service to improve the capacity development of officers and ensure maximum productivity in their job roles.

According to Dasuki (2022), the total number of public servants in the Thirty-Six States of Nigeria is Seven Hundred and Twenty Thousand (720,000). Using the Federal Capital Territory as a case study state, sixty (60) participants were selected from the six (6) public institutions identified due to the convenience of accessibility by the researcher and acceptability from the target institutions of participants to respond to the interview questions. The adoption of Abuja as location, six public institutions and sixty participants was based on the understanding that the same public service rules are applicable to all public servants in Nigeria irrespective of the State or institutions; public servants across boards have similar experiences as it relates to training and capacity development strategies. In selecting the institutions and participants, non-random purposive sampling was adopted as the researcher selected institutions in Abuja, with institutions and a smaller group of participants to participate in the study. The adoption of purposive sampling allowed the researcher to gather in-depth information, which enhanced the study's outcome.

In a qualitative research approach, there are several methods of collecting data. Data can be collected through interviews, focus group discussions, and participant observation, which are the most commonly used methods for qualitative data

collection. Participant observation involves the researcher's participation and observation of a group of individuals over an extended period (Moser & Korstjens, 2018). It also provides a direct experience of how elements of the social environment interact (McGrath & Rudman, 2019). The interview is another data collection method and an interactive process in which an interviewer asks the respondents questions to seek detailed information (Adhabi & Anozie, 2017) face-to-face, telephone, or online. In obtaining data from the participants, interview questions developed from the overall research questions were used as the data collection tool. Questions were designed in such a way to obtain information from participants that will enhance the outcome of the study. The selected participants answered the questions to ensure data is gathered to reflect the actual happenings regarding capacity development in the organization. The interview process was conducted in each participant's office with a duration of 30-45 minutes period. This study's recorded face-to-face semi-structured interview method enables the researcher to clarify responses to ensure the respondents' responses are not misinterpreted, as the method is flexible.

According to Azungah (2018), qualitative data analysis is often difficult, laborious, and time-consuming, with minimal theoretical attention. Therefore, after collecting the recorded data, the initial process of analyzing data was the transcription of audio-taped interviews and field notes, which constitute a significant data source. The transcribed documents are also checked to ensure they are correct and are a complete representation of the discussion; this also includes punctuation, pauses, and non-verbal data in order to facilitate the process of analyzing the data. Here, the researcher was heavily immersed in data reading and digesting to understand the whole data set.

Data gathered was then analyzed using coding techniques. NVivo, a computer-aided analysis software, was adopted for analyzing the data. The NVivo version 12 data analysis software supports the thematic content analysis of the information gathered. It also enables the organization, research, and finding of insights into data collected from the interview sessions. Through thematic content analysis, the researcher is anticipated to offer a thorough and intricate analysis of the data, aiming to provide a nuanced interpretation of the significant themes by analyzing available data (Dawadi, 2020). According to Allsop et al. (2022), "NVivo ensures easy, efficient and effective analysis of qualitative inquiry that is replicable and rigorous" (p. 157).

The final stage of the design step involved preparing a research report. This report detailed all activities carried out and stated a detailed description of the analysis by elaborately and precisely examining the study's findings. In writing a research report, the participants are described, and the selection method, apparatus for selection, procedures and results are outlined (Kabir, 2016).

### **3.2 Population and Sample of the Research Study**

Public services are seen as so crucial that, for moral reasons, governments should guarantee their universal provision. Nigeria is well equipped with natural and human resources, which are enough to drive its socio-political and economic development. With over 180 million hard-working and resilient Nigerian citizens, the Public Service consists of thousands of public servants. According to Dasuki (2022), 720,000 public servants work at the federal level. As it is not feasible to involve all of the workers in this study, a sample size is selected as the study population. Shukla (2020) describes population "as the set or group of all the units on which the research findings are applied" (p. 2). As such, a study's population of interest comprises an

individual, groups, or organizations the researcher is interested in finding out about to understand certain phenomena or to whom the research findings may be applicable (Casteel & Bridier, 2021). Using the Federal Capital Territory (FCT) Abuja, which is one of the states as a case study, participating organizations and individuals were selected from institutions in FCT.

Identifying and selecting a population of interest includes considering boundaries such as age, gender, ethnicity, race, marital status, education, income, sexual orientation, and gender, among others. This study focused on gender, age, education, and years of experience in the Public Service. Out of the overall population of interest, the target population, which is specific and represents the population of interest, was selected using non-random purposive sampling. The selected target populations are carefully determined to ensure they are inclusive enough to provide adequate data for the study and exclusive enough to avoid misrepresenting participants. According to Ackerman et al. (2019), it is crucial to operationalize the characteristics of interest in determining the target population based on the study's variables to accurately transfer the study's findings back to the population of interest.

The target population represents the sample selected for the study, and the selection is the set of a unit representing the overall population of interest (Gravetter & Wallnau, 2017). Several assumptions and findings have argued that accurate sample sizes cannot be predetermined but that they depend on the research's nature (Sim et al., 2018). According to Baker and Edwards (2012), the appropriate number of participants in qualitative research is still a matter of debate among experts. They argued that determining the sample size is dependent on various factors, including epistemological, methodological, and practical considerations. What they do agree on is that the sample size must be broad enough to describe the subject matter and

address the research question adequately. Notwithstanding, it is essential to note that a significant sample size risks presenting repeated data.

According to Vasileiou et al. (2018), considering the nature of the study, "samples in qualitative research tend to be small to support the depth of case-oriented analysis that is fundamental to this mode of inquiry". As such, the researcher of this study focused on getting information on the various aspects. According to Fusch and Ness (2015), "When adequate and rich data have been collected, the ability to obtain additional new information is no longer present, and when further coding does not present new codes or lead to new themes, the data collection should terminate" (p. 1410). This study's sample frame was public servants who work at MDAs in the 36 states in Nigeria. Out of the 28 Federal Ministry Institutions in Abuja, participating institutions were selected randomly.

To determine the sample size, the non-probability sampling technique of purposive sampling was used. Non-probability sampling techniques adopt non-randomized methods in drawing research samples as they are manageable, less complicated, and cost-effective. According to Showkat and Parveen (2017), "Non-probability sampling is used to study existing theoretical insights" (p. 6). Erika and Bala (2017) stated that "non-probability sampling is a sampling procedure that will not bid a basis for any opinion of probability that elements in the universe will have a chance to be included in the study sample" (p. 215).

Purposive sampling was selected to enable the researcher to identify and choose appropriate respondents to achieve the research objectives (Patton, 2002). The purposive sampling enables the researcher to select organizations and individuals within the public institutions relevant to the research design and represent the larger

population's interest. This study used non-probability sampling because it provides richly textured information pertinent to the phenomenon under investigation.

Du Plooy-Cilliers et al. (2014) state that purposive sampling is when the researcher chooses who to interview (who to include in the sample) based on a set of characteristics. Purposive sampling relies on the researcher's judgment when selecting the units (people, cases/organizations, events, pieces of data) to be studied. Usually, the sample being investigated is relatively small, especially when compared with probability sampling techniques. The sample size for this research study was sixty (60) participants, making it a good fit for purposive sampling.

Sargeant (2014) believes that the sample size in qualitative research is not usually predetermined but depends on the number required to gather adequate information. The 60 respondents were selected from the six public institutions to achieve data saturation for further practical analysis. The participants were public servants aged 30–60 years who had spent not less than five years in the Nigerian public sector system, as well as decision-makers with five years of experience in the public sector. This sample was deemed to have spent a good number of years in the Public Service and to have undergone more than one in-service training within the organization, thus whose views will reflect the broad view of public servants in Nigeria. Generally, in practice, sample sizes for content analysis of semi-structured interviews can range from as few as 10 to 50 participants or even more, depending on some of the identified factors (Creswell & Creswell, 2017). The researcher carefully considered the specificity of the research context, goals, and constraints to determine this sample size as appropriate. The researcher also reviewed secondary data from previous journals, articles, books, and government publications to gather more information about the study.

According to Cavana et al. (2001), qualitative research emphasizes understanding by closely examining people's words, actions, and records rather than assigning mathematical symbols to these words, actions, and documents. As such, the researcher used interviews as the data collection method to better understand the participants' opinions through dialogue. The interview type chosen for the research was a semi-structured interview as it used standardized open-ended interview questions, and the same open-ended questions were targeted at all research participants. This approach allowed for more straightforward analysis and comparison and enabled the researcher to seek clarity and probe deeper to gain an understanding that ensured the reporting was reflective of the participants' views.

When employees of an organization are being interviewed, top managers will ordinarily assist in setting up the interviews, greatly simplifying the process (Adams, 2015). As such, the researcher contacted the selected public service institutions' top managers to nominate participants who meet the selection criteria. The researcher carefully chose sixty participants, and an informed consent letter explaining the process of participant identification, the objective and purpose of the research, what it entails for the participants, information on any potential risks or benefits, and the researcher's contact information was sent to participants before conducting the face-to-face interview.

Adams (2015) highlights that conducting face-to-face interviews can provide valuable information beyond what is being said verbally, as the interviewer can also observe non-verbal cues. These non-verbal cues can help the researcher gain a deeper understanding of the interviewee's perspective and enhance the quality of the data collected. To ensure respondents were not misinterpreted, face-to-face interviews were conducted in their place of work.



### **3.3 Materials/Instrumentation of Research Tools**

#### ***Research Instrument***

The qualitative research study on the adoption of eLearning for worker in-service training in the Nigerian Public Service used interviews as the research instrument. An interview is described as a face-to-face conversation between the researcher and the research participants, transferring knowledge to the researcher (Quad, 2016). In a qualitative study, interviews are used in exploratory studies, survey designs, and descriptive studies. Constructing research questions and deciding on the paradigms and best research techniques to answer the interview questions and sampling is vital for the quality of research. Interviews are significantly important when a researcher aims to uncover the story behind participants' experiences and gather in-depth information on the subject matter. According to Buriro et al. (2017), "interviews contain straight reference from people about their practice, view, thoughts, and awareness".

The researcher developed the interview questions after conducting a series of research via peer-reviewed, published empirical research articles and other resources for an acceptable, existing, and validated instrument and was unable to locate one that fit the objectives of this research study. The interview questions developed were approved by the UNICAF Research Ethics Committee (UREC) as criteria to measure validity before applying the analysis. The researcher also ensured to avoid close-ended questions as they seemed to presume a pre-set response (Creswell, 2017). As such, the interview questions developed were open-ended and allowed the researcher to obtain more focused and precise data to answer the research objectives.

The researcher developed and displayed skills for the interview process. For instance, the researcher studied the subject matter and was knowledgeable about the

topic, created a standard structure for the interview process, was sensitive and tolerant to participants' opinions, spoke distinctively, and provided short and straightforward questions. In addition, the interviewer must control the interview process, allowing no room for digression, being critical in testing the reliability and validity of information obtained from the participants, retaining information, and appropriately interpreting information provided by the participants.

The study used semi-structured, in-depth interviews to obtain adequate information from the respondents. The semi-structured type of interviews allowed the researcher to approach the interview with the notion of a discussion, asking a few questions and generating other successive questions based on the participant's responses (Mathers et al., 2000). Using a semi-structured interview to collect data is more accessible as a researcher can modify the questions, and it also maintains a more profound knowledge and higher expertise in gathering information (Buriro et al., 2017). One type of semi-structured interview is where the interviewer questions areas or topics of importance for the interviewees (Bell & Waters, 2014).

The interview questions were well thought out, considering the logic and ease of respondents for the participants. Also, the questions are brief enough to ensure time is effectively managed, as the participants were all interviewed during their official working hours. The interview questions are structured to allow the researcher to ask all participants the same or similar questions (Bernard, 2012). To further validate the research instrument and ensure its effectiveness, a pilot study was conducted. A pilot study is a feasibility study that is used to assess the practicalities of the leading research study as it relates to its implementation (Malmqvist et al., 2019). Doody and Doody (2015) stated that "a pilot study is a smaller version of a planned study conducted with a smaller selected group of participants similar to participants that will

be recruited later in the larger-scale study" (p. 1074). According to Fraser et al. (2018), pilot testing facilitates decision-making as it represents a test to decide how to carry out a more significant project.

The study pilot testing was carried out with five selected public servants whom the researcher recruited through direct contact. Face-to-face interviews were conducted with the five participants, and data gathered were analyzed using the trial version of the NVivo 12 software. The analysis of data from the pilot study produced the results that during the COVID-19 pandemic, the lockdown further exposed public servants to the use of technology. Participants also believed that eLearning would reduce the cost of training, with about 50% of the participants of the pilot study expressing resistance to the use of eLearning as a worker in-service training strategy. Poor internet connectivity was identified as a significant barrier to effective eLearning. Experiences and results obtained from the pilot study were then used to evaluate the research instrument and implementation methods (Leon et al., 2011).

### ***Reflexivity***

Reflexivity is defined as "critical self-reflection on how the researcher's background, assumptions, positioning, and behaviour impact the research process" (Finlay & Gough, 2008). Within post-structuralist and post-modern theories, the researcher is part of the research methodology (Matsumoto, 1996; Miller & John, 2000). Gee (1999) stated that the researcher as an interviewer in qualitative research plays an essential role in constructing reality, as the researcher's outlook on life, life experiences, and observations have a high likelihood of influencing the collection, analysis, and interpretation of data. Miller (2000) states that interviews should be handled as a social interaction, whereby the researcher's contribution is as interesting as the interviewees.

### **3.4 Research Bias**

The researcher in this study is a professional who has his own experiences regarding training and development. However, while the researcher admits that he could identify with the participants, he made sure that he did not impose his opinions on the participants during the interviews. Jootun and McGhee (2006) argue that reflexivity enables the researcher to derive an in-depth understanding of the meaning of the phenomenon under investigation. This further suggests that the researcher can draw on their encounters to understand what the participants say or express during the research process. However, despite using the researcher's own experiences and viewpoints, the focus of the investigation or research remains to understand the phenomenon from the participants' perspective (Babbie & Mouton, 2001). The researcher, therefore, had to put aside his understanding of the subject and truly listen to understand it from the participant's view. It was essential for the researcher to continuously reflect on his neutral position in the research process and remain focused on the content of the interviews. To further counter potential bias, the researcher conscientiously avoided imposing personal opinions on participants during interviews, ensuring that the focus remained on understanding participants' perspectives. This commitment to self-awareness and neutrality contributed to the study's validity by mitigating the potential for researcher sample bias.

#### ***3.4.1 Instrument Validity***

A sample represents the larger population only if each person has an equal opportunity to be part of the selection. If everybody in the population is not given an equal chance to be part of the selection, the sample will be biased. To bring validity to this qualitative research, the researcher had to determine which instrument would be used and establish that the device's measurement was accurate for the study's design.

To adopt the use of thematic content validity, this study is based on the results and comments on the proposed research. The instrument must show that it fairly and comprehensively covers the domain or items it purports to examine to demonstrate this form of reality. The researcher ensured that the elements of the research's main issue are both a fair representation of the broader issue under investigation (and its weighting) and that the details chosen for the research sample are themselves addressed in-depth and breadth (Cohen et al., 2007).

According to Yaghmale (2009), thematic content validity refers to the extent to which the instrument covers the proposed content to measure. Thematic content validity can thus be referred to as the degree to which items adequately measure or represent the properties the researcher wishes to measure. In general, thematic content validity involves evaluating a new survey instrument to include all the essential things and eliminate undesirable items to a particular construct domain (Boudreau et al., 2001). The researcher kept an eye out for any data evidence that became repetitive or irrelevant to the interview questions in this research process. The judgmental approach to establishing thematic content validity involves literature reviews and follow-ups with an expert judge's evaluation.

### ***3.4.2 Instrument Reliability***

The extent to which a research instrument yields consistent results is known as reliability. A device is reliable when it measures the variables accurately and consistently and obtains the same results under the same conditions for a specific period. It measures the consistency, precision, repeatability, and trustworthiness of research (Chakrabartty, 2013). The more errors found in an assessment, the greater its unreliability, and vice versa. To ensure reliability and reduce errors, the researcher ensured the population and sampling method chosen for this research were well suited

for the study's nature. Hence, choosing a suitable age range and experience level was essential for participant recruitment.

### **3.5 Data Collection**

The purpose of the research was disclosed to the research participants. While explaining the study, appropriate language ensured the audience understood the information passed across while explaining the survey. Regarding promises and reciprocity, all information provided about the survey identified that participants will not receive any benefits from the research; however, the results would inform those responsible for implementing change in the Public Service through the publication and dissemination of parts of this thesis. Moreover, it was reinforced to the participants that the information they provided would not be formatted in any manner that would identify individuals. Participants were informed that the study's findings would be shared with them. They were assured that they could decide whether or not to participate in the study or withdraw voluntarily from the study at any point and would not be impacted. Participants were also fully informed about the objectives of the study.

All participants were over 18 years of age and did not demonstrate any impaired mental capacity, as determined by their ability to perform in their workplace and at their positions. Before commencing the research, a risk assessment of the individuals involved was conducted, and this project was considered low risk. However, the possibility that reflecting upon issues and concerns relating to workplace upskilling may cause anxiety for individuals was considered, and the researcher had contacts available for post-interview counselling and debriefing. Though these services were available, none of the participants required a referral.

Confidentiality was guaranteed to all organizations and individuals involved in the research. The identities of the organizations and the individuals were made confidential using codes instead of names. These codes were allocated to the individuals by the researcher and maintained identities in a secure location to assure all participants that their answers were confidential and used only for academic and detailed research. All data gathered for this research was stored securely and will be maintained for at least five years as required by the Code of Conduct for Research.

The researcher obtained informed consent for all study components, and permission was acquired from the organizational contact to access the organization. The researcher then provided each participant with an Information Sheet and Consent Form relating to the study to report their written acceptance to participate in the research through a signed Informed Consent and Debriefing Letter approved by UREC. Equally, participants were asked to sign a Debriefing and Withdrawal Letter from UREC. Both letters aimed to reassure participants that their participation in the research was entirely voluntary and that they were free to withdraw from the study for any reason. At all times, it was made clear that interviewees were free to withdraw from the study at any stage.

All individuals have rights that are not to be infringed. Participants were not negatively affected either physically or psychologically during the research. Likewise, the researcher ensured the creation and maintenance of a comfortable climate during participant interactions. All processes performed in this research involving human participants followed the ethical standards of the institutional research committee and other comparable ethical standards. Memo writing was employed regularly throughout the study (Birks & Mills, 2011; Charmaz, 2006). This researcher's memos included thoughts or concerns related to the study, interpretation of relevant books

and papers, reflections on the quality of the process, and thoughts on emerging codes, categories, and theories. Memos, in particular, remind the researcher of their thoughts and help them separate thoughts that they might impose on the theory versus the theory that emerges from the data (Birks & Mills, 2011).

The study gathered qualitative data using the interview questions developed by the researcher. Collecting qualitative data for the analysis was born from the researcher's perceived means of obtaining detailed information from research participants. The qualitative research method fits the researcher's opinion as it answers questions about the 'what', 'how', and 'why' of a particular situation or subject matter. The adoption of the qualitative approach is ideal for obtaining accurate information about participants' feelings and experiences, and it enables the interpretation of participants' behaviors. The qualitative approach thus "allowed deeper insights into issues related to designing, administering, and interpreting language assessment" (Rahman, 2016, p. 104). The quantitative research approach focuses more on analyzing variables to obtain research results. Quantitative data involves the gathering of data and analyzing using mathematical and statistical methods. Although quantitative research helps obtain comprehensive data and analyze variables, it was not considered a fit approach for this study over the qualitative approach as the study requires data obtained from participants who could freely express themselves based on opinions and experiences without being constrained by strict response rules. "While quantitative research seeks to explain, generalize and predict patterns through the analysis of variables, qualitative research questions are more interested in understanding and interpreting the socially constructed world around us" (Bryman, 2016; McMullin, 2021, p. 2). The data gathered described factual information that enables the researcher to find the identified problems.



The researcher developed interview questions based on the research aims and objectives. Questions were designed to prompt participants to express their opinions freely. The research question is essential in organizing and directing the research study (Moore & Liompart, 2017). The research supervisor reviewed drafted interview questions before final approval from the research ethics committee. The researcher ensured that the interview questions aligned with the data to be collected as the first interview questions on how many in-service training the participants have attended in the cause of being a public servant and if they have participated in both conventional and eLearning forms of in-service training. The questions are focused on laying a foundation for data to be collected as the study expected participants to provide information based on personal opinions and experiences; responding yes to having participated in both forms of training assured that participants will provide the expected information. The interview questions were administered to all participants through a face-to-face interview session at the participant's chosen location and at a convenient time of 30–45 minutes. To collect data during the interview, the session's audio was recorded while the researcher also took notes and observed participants' body gestures and reactions. Audio recording of the interview process has widely gained acceptance as it enables the researcher to capture accurate data (Crozier & Cassell, 2016). These recordings are then used to generate interview transcripts, a tool that ensures qualitative research rigour and validity (Rutakumwa et al., 2019).

The researcher manually transcribed the audio-recorded data gathered during the interview sessions. The researcher listened over and over to the audio file while typing out the exchanges. After the rough transcription, the researcher repeatedly listened to the audio file to ensure all points corresponded with the typed document to obtain an acceptable transcript, then synchronized the fine transcript with the notes

taken by the researcher. While transcribing, the researcher omitted nonverbal and verbal nuances in filler words (hmmm, ugh), unnecessary repetitions, incomplete words and sentences, and persistent sounds. Elements such as conjunctions starting a sentence, false sentences, and pauses in speech, among others, could be omitted in the transcription to enhance the readability of the transcribed document (Kumar, 2017). The transcription was intelligently done as the researcher wanted the data to be an accurate reflection of the participant's submission. According to Rincon (2018), as the priority of the researcher is to obtain a transcribed document that reflects the original content as clearly as possible, the transcript must be an intelligent transcription that analyzes what participants say.

### **3.6 Data Analysis**

The data organization and analysis process in this study involved utilizing NVivo 12, a computer-assisted qualitative data analysis software. This software was pivotal in efficiently managing and making sense of the collected data. To elaborate further, let's delve into the steps and significance of using NVivo 12.

Firstly, the transcribed data from the interviews was uploaded into NVivo 12. This step marked the transition from raw textual data to a format that is amenable to systematic analysis. It facilitated the management of a substantial volume of textual data, ensuring that the data was organized and readily accessible for analysis.

Subsequently, the process of data coding was initiated. Data coding is a well-established procedure in qualitative research, as Creswell (2017) outlined. It involves systematically classifying text segments to form broader themes or categories. Data coding serves as a way for the researcher to group and categorize content that pertains to specific ideas or concepts. This step is instrumental in reducing the sheer volume of

information while identifying and summarizing similar and related points as overarching themes.

Thematic content analysis, a widely recognized qualitative research method (Kiger & Varpio, 2020), was employed to dissect and make sense of the coded data. Thematic content analysis is a multifaceted procedure that entails several stages. In the context of this study, the thematic analysis process unfolded as follows:

***Familiarization with Data:*** The researcher initiated the process by becoming intimately familiar with the data, starting from the transcription phase. This deep immersion in the data allowed for a comprehensive understanding of the context and nuances embedded within the textual content.

***Code Generation:*** Codes were systematically generated from the data. Each code represented the text's specific aspect, idea, or concept. The codes represent the building blocks for more analysis.

***Theme Identification:*** Building on the generated codes, themes were identified. Themes are overarching patterns or ideas that emerge from the coded data. They represent the key elements or concepts that encapsulate the essence of the data.

***Review and Definition of Themes:*** After the initial identification of themes, the researcher conducted a thorough review of relevant literature to define further and refine these themes. This step ensured the themes were grounded in existing research and accurately represented the data.

***Analysis and Results:*** The defined themes were subjected to a rigorous analysis. This involved exploring the relationships between themes, delving into their significance, and interpreting their implications. The results of this analysis were crucial in generating meaningful insights from the data.

The choice of thematic analysis in this study was deliberate, driven by its flexibility and accessibility. The thematic analysis allowed the researcher to distil the critical features and interpret the richness of the comprehensive data sets (Nowell et al., 2017). This approach yielded valuable research results that shed light on the subject's intricacies under investigation by systematically identifying, defining, and analyzing themes.

In summary, the utilization of NVivo 12 and the application of thematic analysis were integral components of the research process, facilitating the efficient management and analysis of qualitative data. These methodological choices ensured that the research findings were well-structured, grounded in the data, and could provide valuable insights into the phenomenon under study.

### **3.7 Study Procedures and Ethical Assurance**

#### **3.7.1 Approval Process**

Before proceeding to collect data, the study obtained all necessary approvals from UNICAF Research Ethics Committee (UREC). Considering the importance of ethics in conducting research and the challenges associated with conducting research, educational institutions go to great lengths to protect the dignity and safety of research participants (Silverman, 2009). Before carrying out this research, the UNICAF Research Ethics Committee (UREC) provided forms to be completed by all research students. The arrangements are obligatory and depend on the type of research, if applicable. The forms this researcher completed as required by UREC are the Research Ethics Application Form (REAF), the Informed Consent Form, and the Gatekeeper Letter. The REAF is an application form that is first part used to provide basic information about the researcher, such as the Name, Student ID, supervisor's Name, Program of Study and Research Project Title, project estimated timelines, and

information about external research funding where applicable. The other part of the application form was focused on details about the research project. The section was used to collect information on the project summary, significance and potential benefits of the study, research methods and tools, proposed participants and their relevance to the research, recruitment process of participants, relationship between the principal investigator and the participants, potential research risks, ethical issues and a final declaration by the applicant/researcher.

The researcher completed the forms as requested and submitted them to the committee for approval as a doctoral candidate. The completed forms were introduced to the supervisor for review before being forwarded to UREC. UREC initially approved the forms with comments for minor revision, which stated, "researcher to ensure that the interviews are long enough as the number of participants is just 20, at least double it that it aims at 40 and possibly add more institutions" UREC returned the forms to the researcher to revise based on the comments. The researcher then reviewed the forms, increased the number of participants and sent the corrected application forms to the School of Doctoral Studies, and final and ethical approval was granted to the researcher to conduct the research and proceed to data collection. It is of fundamental importance that ethics approval is ensured before data gathering for any research involving human participants commences (Fleming, 2018). After obtaining final approval for the data collection, the researcher developed the data collection tool-interview questions, which the supervisor reviewed, and approval to proceed with data collection was obtained. The researcher followed the specific data collection, analysis, and findings guidelines to enhance the study's validity further.

The Gatekeeper letter was of utmost importance to this study as the research participants were recruited from various public organizations; therefore, it is of

essence to officially approach the head of these organizations with details about the research to enable the researcher to gain access to the target participants. The Gatekeeper letter was used to introduce the researcher to the organization and to request assistance and permission to recruit public servants in the organization to participate in the study. A brief about the research project, the supervisor's name and contact details were provided using the gatekeeper letter.

The Informed Consent form was used to debrief the participants of the study. The form consists of basic information about the researcher, such as the Name, Program of Study, University and Research Project Title, and a short description of the research project's purpose, aim and significance. In addition, the informed consent form categorically stated the voluntary participation of research participants, the participant's right to withdraw at any stage prior to the completion of the study without any consequences, that data and information obtained would be securely stored physically in an iron safe which can only be assessed by the researcher and online in a coded drive that is and not accessible to anyone outside the researcher, their right to access their data, ask for more information and contact details in case of a complaint.

The target participants were public servants in six public organizations. The researcher followed up with the gatekeeper letter submitted to the public organizations and obtained approval and permission to recruit participants. Since the participants of this study are humans, confidentiality is essential. According to Badampudi et al., "confidentiality refers to protecting the raw data and only publishing the aggregated results that cannot be traced to an individual or an organization" (2022, p.3). Confidentiality is a crucial principle in research that is an obligation of the researcher to ensure that any data obtained or shared by human

participants respects the autonomy and does not violate the participant's interest (Bos, 2020). The researcher understood and agreed with the participants that private information or words/statements that could be linked to an individual will be handled with topmost care. Guaranteeing participants' confidentiality enhances the degree of information participants are willing and able to provide during the study.

To achieve confidentiality, the researcher took the following actions: to start with, all participants were briefed on the objectives and purpose of the study and the study's process. Secondly, the researcher obtained full consent from participants as being involved in research should bring no risk to the participant and respect fundamental rights and relationships. The researcher assured them of voluntary withdrawal from the study at any stage. Bos (2020, p. 153) stated that in safeguarding participant confidentiality, "participants must give active consent, are not coerced to participate, and retain the right to withdraw their cooperation at any moment (even after the study has been completed)". Thirdly, the researcher ensured that data from research participants remained confidential. Fourthly, the researcher only collects private data when necessary and with good reason. While conducting the audio-recorded interview, the researcher avoided the participants mentioning their names and ranks to avoid being able to link them to the information provided. This step is essential in protecting participants from harm; hence, beyond protecting participants' names and rank, the researcher ensured participants avoided using self-identifying information and statements, as Fleming & Zegwaard (2018) mentioned. Furthermore, the fifth step the researcher took was to provide the participants with opportunities to review their data and make any necessary corrections as they deemed fit.

In ensuring participants' validation, the public servants targeted for this research must be in active service, not above the age of 60 years old, to ensure they

are still in active service and not yet retired. They must have participated in in-service training with experience in both the traditional classroom in-service training and online training during their service and must have at least five years of working experience, public servants in decision-making positions within public organizations were also considered. A staff member was dedicated to the researcher in each organization to support in identifying and nominating participants based on the set participant criteria. Identified public servants in each organization were briefed about the study's objectives and purpose, while those interested in willingly participating indicated interest. Inclusion/exclusion criteria were also utilized in selecting the participants based on their mental capacity related to their experience and participation in conventional and e-learning courses.

According to Rajesh (2016), inclusion and exclusion criteria define who can be included or excluded from the study sample. The inclusion criteria identify the study population in a consistent, reliable, uniform and objective manner. The exclusion criteria include factors or characteristics that make the recruited population ineligible for the study. The researcher met with each interested participant to schedule a convenient date, time and place to conduct the interview. All participants were more comfortable having the interview session in their various offices. Before each participant's scheduled day and time, the researcher placed a reminder call to ensure the appointment was still valid and followed up with messages. On the interview day, the researcher was at the scheduled place at least 15 minutes before the scheduled time to set up things and be ready. Once the participants were set, the researcher sat across the participants and gave another brief about the study and all the participatory rights of the participants. At this point, some participants further asked more questions to ensure they understood the process, after which the researcher



handed over a hard copy of the informed consent form. Participants physically signed the consent forms, and then the interview began.

The audio-recorded interview started with the researcher asking a few demographic questions of each participant. Demographic questions include the participant's age range, gender, Level of education, Number of years the organization has been in operation and the number of years of experience in the organization. After collecting the demographic information to ensure participants meet the required criteria for participating in the study, the researcher proceeds to ask questions about the number of training attended, type of training, experiences, observed challenges associated with each form of training, and organizational support for e-learning, among others. Participants in decision-making positions within each organization were also asked management-related questions such as allocated training budget, eLearning effect on training budget and observed barriers to adopting e-learning in the public service (find attached the data collection instrument in the Appendix section). Audio-recorded data collected were then transcribed by the researcher, after which data cleanup was done to remove duplicate and irrelevant words, fix unwanted outliers and remove incomplete information. After cleaning up the data, the researcher began analyzing data gathered using NVivo software analysis. The outcome of the analysis informed the results and conclusion sections of the study.

### **3.8 Ethical Assurances**

According to Patton (2002), a comprehensive framework identifying ten vital ethical issues within a research project includes explaining the purpose, promises and reciprocity, risk assessment, confidentiality, informed consent, data access and ownership, interviewer mental health, advice, data collection boundaries, and ethical versus legal. In addressing each of these issues in the study, the research ethics

application form was completed according to the guidelines and requirements of UNICAF Research Ethics Committee (UREC).

Fleming (2018) stressed the importance of a consent form and information document being detailed, clearly written and presented accurately, as an unclear consent form can cause a weak consent agreement that can lead to mistrust and eventually compromise the data gathered. The research focused on participants who were public servants, and the researcher obtained approval from the heads of public institutions before the participants were selected. The researcher ensured that the participants selected were willing to participate in the study without coercing them. After indicating their interest in participating in the study, all participants agreed and signed the informed consent form.

According to Lumeng et al. (2020), performing human-associated research during the coronavirus pandemic has posed new ethical and practical challenges as it requires close contact between the researcher and the participants. The study posed no potential danger to participants, and the only health risk present during data gathering was associated with the prevailing coronavirus pandemic. To mitigate this risk, the researcher ensured safety protocols, such as wearing masks, keeping a safe distance, and observing the use of hand sanitizers during the face-to-face interview sessions.

The study took into consideration the confidentiality of the research participants. Allen (2017) refers to privacy "as separating or modifying any personal, identifying information provided by participants from the data, while anonymity refers to collecting data without obtaining any personal identifying information" (p. 4). In this study, the researcher ensured the confidentiality of the participants and information gathered by observing the following steps: the research participants did not mention their names in the course of the interview, the researcher tagged each

interview in numerical order starting from one, and the researcher did not obtain any private data from participants. The researcher also explained to the participants that their communicated information would be confidential by not being shared with unauthorized persons and storing the audio files and transcribed documents in an encrypted file on Google Drive. Then, at the beginning of data collection, all identifying characteristics of the participants, such as their position, institution, and ethnic background, were changed (Kaiser, 2009). The protection of research participants from any form of risk is a paramount responsibility of the researcher. Before gaining access to recruit research participants, the gatekeeper letter presented to the head of organizations described the researcher, the research subject, a brief description of the study, its significance, and what is required of the organization.

The qualitative research tool adopted for the study also followed the procedures needed before the researcher administered the developed questions to participants. According to Hammarg et al. (2016), when general or probability information is sought on opinions, attitudes, views, beliefs or preferences, when variables can be isolated and defined when variables can be linked to hypotheses prior to data collection, and when the question or problem is known, clear and unambiguous, qualitative research is used. The researcher ensured that interview questions were clear and open-ended to give participants a better understanding of what was expected and encourage them to share their opinions freely. Throughout the interview, the researcher encouraged active participation from the participants to elicit more insights on the topic. However, care was taken to avoid bias towards specific direct or indirect responses. The interview sessions were audio-recorded to ensure that the researcher lost no data.

The researcher ensured that the research participants' rights were protected to the highest standard, as is paramount to the overall research report. Bryman and Bell (2007) identified ten crucial ethical considerations in research:

- Protecting research participants from any form of harm
- Giving precedence to upholding the dignity of participants in research
- Obtaining consent from participants
- Ensuring the protection of privacy
- Ensuring an adequate level of confidentiality of data
- Avoiding deception or exaggeration about research objectives
- Declaring any possible conflict of interest
- Communicating regarding research study in a transparent fashion
- Avoiding misleading or misrepresentation of information

According to Resnik (2020), adhering to ethical procedures in a research study promotes the research objectives and collaborative values as a research study involves the collaboration of different individuals and organizations, assures accountability of the research study, and helps build public support.

### **3.9 Beneficence and Non-maleficence**

While this research has a great potential and benefits, there is no major risk associated to the researcher or the participants. The wider benefit of this research is its potential to help review and maximize the benefits of the research with the organization, which will be an indirect benefit to the participants and their organizations. The researcher promised the participants and the participating institutions access to the final copy of the study.

Declaring a conflict of research interest is essential to improve the research process's transparency. According to Fleming (2018), "existing relationships or prior

activities by the researcher can potentially create a conflict of interest that are important to report transparently on within an ethics approval application, so the committee can guide how to manage this conflict of interest" (p. 211). According to Dunn et al. (2016), conflict of interest compromises the research as it hinders their ability to mitigate the risk of bias. Romain (2015) describes the conflict of interest as legitimate activities that are not unethical. It thus becomes challenging and can influence the research process and findings if the researcher does not disclose the conflict and takes conscious steps to ensure it does not affect the research process. To further ensure ethical considerations, despite being a public servant for over 27 years and currently the Chief Executive Officer of a public institution, the researcher clearly understood his role and avoided biases in selecting participants by not interfering with participant's responses, not leading participants into responses based on personal and professional experiences. In addition to the above, the researcher made a conscious effort to ensure that personal opinions were not included during data analysis and presentation.

### **3.10 Trustworthiness of Data**

Trustworthiness has been described by Pilot and Beck (2014) as the degree of confidence in data and the methods used to ensure the quality of the study observed, from data collection to reporting results. According to Gunawan (2015), trustworthiness has become an issue of persuasion as the researcher is examined to make the research process visible and auditable. Trustworthiness and transparency in the conduct of the research are essential to the integrity of the research findings (Cope, 2014). Birt et al. (2016) describe trustworthiness as the basic principle for quality qualitative research. In ensuring trustworthiness in the conduct of a study, a researcher

adopts several techniques to increase the level of trust in the survey to assure reviewers that the data were appropriately collected, analyzed, and reported.

Qualitative research focuses more on the trustworthiness of research rather than the data, which has four components: credibility, transferability, dependability, and conformity. The study scrutinized the trustworthiness of every stage of the analysis process, starting from preparation to reporting results. The survey of the adoption of eLearning for worker in-service training in the Nigerian Public Service considers the importance of data trustworthiness, which inadvertently affects the research's overall outcome. The researcher noted everything detailed as essential and ensured that aggressive note-taking, observation notes, and all files relating to the study were kept to enable the research reader to determine the study's credibility. Also, detailed transcription, systematic coding using the priori coding, and final coding with the analysis software are some strategies this researcher used to ensure rigour and trustworthiness. The following components of trustworthiness were adopted and reflected in this study.

### ***Credibility***

Qualitative researchers examine the trustworthiness of the data and subsequent data analysis to know if the study is correct and accurate. This is the most crucial method of checking credibility in a study, as the researcher takes on activities that increase the probability so that there will be trust in their findings. In ensuring credibility, the researcher provides the reader with supporting evidence that the findings accurately represent what was studied (Johnson et al., 2018).

According to Gaziano and McGrath (1986), credibility is present in research if the research result mirrors the view of the people under study. In this research, the participants were public servants who form the subject of the study. The selection of

these subjects ensures first-hand information about the views and opinions of the stakeholders in the adoption of eLearning in the Nigerian Public Service for their capacity building. The procedures for increasing the credibility of qualitative studies carried out by researchers are presented below.

***Prolonged Engagement.*** This is an activity used to learn the customs and traditions of the participants and build trust among the participants. Here, the researcher examines distortions and misconstruction of the investigator's questions. Prolonged engagement is essential in establishing trustworthiness and integrity in a qualitative study. Abdul and Closs (2015) stated that extended interaction with research participants could lead to a more in-depth understanding of the data and help identify other potential participants who may contribute significantly to the research.

Prolonged engagement entails investing sufficient time in collecting data to enable the researcher to deeply understand the participants' culture, values, and views, test for misinformation, and ensure data saturation. In this study, prolonged engagement between the researcher and the participants helped build trust, enabling more information to be gathered. The researcher engaged the participants in discussions before asking the questions in the interview process. This arrangement enabled the researcher to obtain more information by digging deeper into related discussions. The prolonged engagement strategy adopted in this study enabled the researcher to gain a further understanding of organizational and policy issues relating to the capacity of public servants in the Public Service. This knowledge of the issues then enabled the researcher to explore the topic under study comprehensively.

***Persistent Observation.*** Observation is considered a fundamental research approach that involves collecting data using sense by listening and observing (Smit & Onwuegbuzie, 2018). Persistent observation examines the researchers' in-depth details

and investigate factors. The participants' facial and body language in response to the questions enabled the researcher to obtain detailed information and corroborate their verbal responses. Persistent observation also helps identify the similarities or differences between the responses received from participants, their gestures, and actual practice (Ciesielska et al., 2018).

**Data Triangulation.** This can be described as combining two or more data sources, theories, or methods in one occurrence to converge on a single construct. It thus means a process of verification that increases validity by incorporating several methods or techniques to understand the study phenomenon. Triangulation increases the credibility of a study as it gathers data from different sources to confirm or refute themes and assertions (Johnson et al., 2018). Triangulation asks the same interview questions from various study participants or collects data using different methods and participants from multiple sources to answer the same questions. Triangulation was considered in this study as the researchers asked 60 research participants from various public organizations the same interview questions. In ensuring trustworthiness, researchers must emphasize the role of triangulation as it helps reduce the effect of bias, enables the readers to determine the extent to which constructs emerging from the study can be accepted, and ensures a detailed research description.

**Peer Debriefing.** This activity ensures that researchers are not biased in their opinions. Researchers ask others to check for the study's credibility and verify if the results align with the data. Nguyen (2008) states that peer briefing could also be analytic triangulation. In peer briefing, the researcher continuously discusses all the processes in the research, from data collection to analysis and interpretation, with a peer not directly involved in the study. As such, "peer debriefing enhances credibility and trustworthiness as it allows the researcher to ensure those emergent hypotheses,



themes or theories are derived from the data and are sensible and conceivable to a disinterested debriefer" (Abdul & Closs, 2015, p. 5).

In this study, the researcher ensured credibility by adopting peer briefing to improve the quality of work by reviewing interview questions and data collected with the co-research students from other institutions with no specific interest in the study area. Also, the study's abstract was presented at the First Annual Online Unicaf University Graduate Conference (UGraC), March 22–23, 2021 (UNICAF Online, 2021), which was subject to critique.

***Member Checking.*** This is a crucial technique qualitative researchers use to establish credibility, wherein the data, its interpretations, and conclusions are shared with the participants. As a result of humans' unpredictable and distinctive nature, misrepresentation and miscommunication can arise between participants and the researcher, hence the importance of member checking (Carlson, 2010). It allows the participants to make their intentions known, correct errors, and provide necessary additional information.

Gunawan (2015) regarded member checks as "the single most critical technique for establishing credibility" (p.10). To ensure credibility in the study, through member checking, certain activities were carried out throughout the research interview process. Member checking began during the interview session, as the researcher repeated most information, restated significant sentences, and summarised information derived from participants to determine its relevance to participants' contributions and accuracy. According to Brit et al. (2016), member checking is a valid technique used to explore the credibility of qualitative research results as it allows the return of data to participants to ensure accuracy in the record of their experiences.

After the interview sessions, participants were allowed access to the audio-recorded interview transcript to confirm that transcribed data reflected their candid opinions and contributions. As such, researchers also refer to member checks as respondent validation, applied in several qualitative research validation processes, as it addresses the nature of knowledge by providing participants with an avenue to further engage with data earlier provided by deleting or adding more information to reflect individuals' opinions adequately. The utilization of member checking can be done haphazardly or in a coordinated manner by integrating the three lenses of the researcher, the participants, and the reviewer/readers. For effective trustworthiness through member checking, "data should be continually revisited and scrutinized for accuracy of interpretation and meaningful, coherent conveyance of the participant's narrative contributions" (Carlson, 2010, p. 1105).

### ***Transferability***

Transferability is referred to as the ability of a research's findings to be generalized and applied to other situations and contexts. Researchers cannot prove that outcomes based on the data interpretation are transferable, but it can be established that this is possible by providing readers with evidence that the findings can be applied to other contexts, situations, and populations (Schloemer, 2018). This process is a form of non-probability sampling used to maximize specific data relative to the context in which it was collected. Ways in which a researcher can apply transferability include gathering of data using one collection method in different groups or locations, providing a diverse range of experiences in which the reader can build interventions, and understanding to decide whether the research applies to the practice.

Simply put, the transferability of a study is determined when it describes the application of the study result to multiple similar situations (Kuper, 2008). In ensuring transferability of the study, different organizations were considered to recruit participants, although similar policies apply to all public servants and institutions when it comes to in-service training.

### ***Dependability***

According to Williams and Kimmons (2021), "dependability is the standard by which the logic, reasoning, methods, and results are expected to be consistent over time" (p. 7). In checking the dependability of qualitative research, researchers verify that everything was correct on their part from conceptualizing the study to collecting data and interpreting it to reporting the findings.

Techniques adopted by positivists when addressing reliability revealed that similar results would be derived if the research process is repeated with the same approach. Other researchers argued that a study's changing nature and situation is not static. In their opinion, Lincoln and Guba (1985) argued that credibility and dependability are closely related as a demonstration of credibility ensures dependability and can be achieved through combined methods. Dependability is also referred to as the stability of data over time and under different conditions, allowing future researchers to follow the decision trail used by a researcher in their work. Also, the detailed description of the research process allows the reader to assess the extent to which followed proper research practices (Shenton, 2004).

In ensuring dependability, details of principles and criteria in selecting participants are presented to prove the study's trustworthiness (Elo, 2014). To ensure the study's dependability, the researcher described the specific purpose of the research, presented a detailed discussion on the criteria and process of the participant's selection,

described the data collection process and duration, discussed the interpretation and presentation of data findings, and described how data credibility was determined. The process involved in the research study was reported in detail to enable future scholars to repeat the same.

The researcher adopted the following approaches to ascertain dependability:

- Inviting peers to participate in the analysis process
- Providing a step-by-step outline of the research methods
- Conducting a pilot study

### ***Confirmability***

Confirmability can be referred to as the degree to which other researchers can confirm a research study's findings. It is concerned with establishing that data and interpretations of the findings are not figments of the researcher's imagination but derived from data. Shenton (2004) stated that the "concept of confirmability is the qualitative investigators' comparable concern to objectivity" (p. 71). According to Williams and Kimmons (2021), confirmability is a standard that describes the level of support qualitative research receives from the research participants. It thus tends to assume that the researcher brings a unique perspective to a study.

The data in this study is confirmable as the research participants are public servants in selected public institutions in Nigeria. The researcher also provided the following information to ensure confirmability of the study further: the number of organizations involved in the study, criteria for participation, details about data collection methods, number and length of data collection sessions, and duration of data collection. The literature reviewed also revealed that the researcher's interpretation of the study and interpretations of people outside the scope of the study can strengthen confirmability.

The appropriateness and saturation of available data, analysis, and reporting determines the trustworthiness of thematic analysis findings. According to Satu et al. (2014), improving the trustworthiness of thematic analysis begins with thorough preparation before the study and the intricate skills of the researcher to gather data, generate nodes and codes, and report findings. Verifying the trustworthiness of data can be achieved by providing detailed information about the research methodology. In this study, the researcher displayed effective ways of reporting thematic analysis validly and understandably, which will benefit both future writers and reviewers of scientific articles.

### **3.11 Reliability and Validity of Data**

The validity of a study is described as the extent to which the instrument measures what it is set to measure. Allawi (2013) describes validity as the "defensibility of the inferences researchers make from the data collected through the use of an instrument" (p. 43). According to Robson (2011), the validity of a research instrument assesses the extent to which the device measures what it is planned to measure and describes the level at which the study results are accurate. Considering the choice of the interview as the research instrument to measure this research study correctly, the interview questions' validity was tested to ensure that it helped produce the required result.

As required for all types of research studies (Oliver, 2010), validity was checked using both internal and external validity. Internal validity refers to the extent to which a study establishes a causal relationship between an independent variable and a dependent variable. It measures how well a study is designed and executed and how well the results can be attributed to the specific factors being studied. For a study to have good internal validity, it must have a clear and logical design, control for

extraneous variables, and accurately measure the variables of interest. External validity, on the other hand, is the extent to which the results of a study can be generalized to other populations, settings, or times. It is a measure of how well the findings of a study can be extended to other groups beyond those included in the study. If a study has high external validity, its results can be considered to be widely applicable. Factors that can affect external validity include the sample size, the characteristics of the population, and the methods used in the study. The validity evidence was built over time, with validations occurring in various stages and populations. Validity encompasses the whole process involved in experimenting with the concept under study and demonstrates that the results obtained meet the requirements of the scientific research method. A qualitative research study's validity is based on the issue of dependability, trustworthiness, and utility (Zohrabi, 2013).

As such, the internal validity of the study focused on the credibility of the results. According to Bolarinwa (2015), internal validity relates to how accurately the measures derived from the research quantify what it was premeditated to measure. The external validity revealed whether the study results are transferable to similar interest groups. Wong (2012) states that "external validity refers to how accurately the measures obtained from the study sample described the reference population from which the study sample was drawn" (p. 211).

This qualitative study utilizes different procedures to check for the accuracy of the research findings, as stated by Creswell (2017). In assessing the validity of the research instrument, the content validity was checked first. According to Kimberlin and Winterstein (2008), content validity depends on the opinions and ideas of experts in the field of concept under study. It also addresses how items are developed to operationalize a construct and provide accurate representatives of the sample of

everything that might measure the construct. Content validity measures how well a study's findings can be extended to other groups beyond those included in the study.

In testing the content validity of the study, the interview questions were checked severally for clarity and readability before and after approval from the research supervisor. Interview questions are checked for readability and clarity to ensure that the interviewees easily understand the questions, as clear and straightforward questions help to ensure clarity and understanding, which can lead to accurate and reliable responses. Also, clarity in questions can help to reduce bias by ensuring that all interviewees have an equal opportunity to understand and respond to the questions. The interview questions were reviewed to ensure that they adequately covered all aspects of the study while considering the study's objectives.

Other experts in the training field, the supervisor, and the research ethics committee also checked the content of the questions before the instrument was distributed to research participants. Experts in the training of public servants from Knowledge Nation Limited, a training institution, reviewed the draft questions and identified further research objectives. Feedback from the experts was applied in rearranging the questions, deleting some irrelevant questions, and making necessary adjustments. This move was essential as the researcher developed new interview questions, as a literature search needed help locating already validated interview questions that could be adopted.

To further ensure validity, the researcher selected a window of 4 weeks to gather data. Moreover, the researcher was sensitive in capturing and interpreting circumstances, objects, and behaviors of individuals and organizations involved in the research process through deliberate intentions, deep conceptual understanding, and conscious processes. The validity of generalization ensured that reports from this

study could be extended to other situations at different times. Here, validity generalization is described as the "condition of raising the explanation to other specific circumstances or other populations, places and times as it usually occurs through the development of theories that can encompass larger and different situations" (Hayashi et al., 2017 p. 101).

The reliability of the research study was also considered as a vital indicator of the quality of the interview questions. "Reliability contains a particular embedded notion of stability of the results found, which means they will be repeatable over time" (Golafshani, 2003; Hayashi et al., 201, p. 99). In this study, reliability was used to evaluate the stability of measures and internal consistency of the measuring instrument. Reliability supplies consistent results when utilizing equal values as it measures consistency, repeatability, trustworthiness, and repeatability of research. In qualitative research, reliability is when the research approach is consistent across different projects and researchers (Twycross & Shields, 2004). In ensuring the reliability of the study, the researcher clearly defines the research questions, uses a valid and reliable measurement tool to collect data, uses an adequate representative sample, and reports all methods and results in sufficient detail to allow for replication of the study.

The recruitment of sixty participants in the study improves the study's reliability as opinions from different participants reduce the impact of the researcher's subjectivity. The interview process was also conducted at the participants' place of choice with no external interruptions. The researcher further enhanced the reliability of the study by ensuring objectivity, although the researcher was a retired public servant and most of the research participants were public servants who were either former colleagues or subordinates. Also, the researcher considered the potential



sources of bias and took steps to minimize them by using randomization and blinding. Additionally, the study reported all study limitations and envisaged conflicts of interest. The challenges associated with in-service training of public servants have been previously discussed among many of them, so several respondents responded in line with the researcher's personal opinions and felt that the research would influence the decision-makers in the Public Service to ensure public servants can benefit from worker in-service training using eLearning. The researcher's awareness of this bias did not affect the study's objectivity, as participants were not pressured to participate and were allowed to express their opinions freely.

The researcher considered the two types of reliability for the study. The stability of the study was proven as data gathered from participants from different organizations produced similar results. The reliability and stability ensure the measure of a concept remains the same over time. Data were also collected consistently from public servants to ensure inter-rater reliability. The researcher fostered consistency in the research procedures using open-ended interview questions with all research participants. According to Miles et al. (2014), reliability is ensured by following outlined research procedures, demonstrating consistency, triangulation, developing a coding manual, and ensuring data analysis and collection co-occur. The study's credibility was further enhanced by considering several techniques for its validation, such as gathering primary data from the participants directly involved in the subject matter, clearly defining the study goals and objectives, and matching the assessment measures to the research objectives.

### **3.12 Limitations of the Research Methods**

**Sample Size:** One of the limitations of this study is the relatively small sample size compared to the overall number of public servants in FCT Nigeria. The study

focused on sixty participants from selected public service institutions in the Federal Capital Territory (FCT), Abuja, with set criteria to ensure they provide relevant information and cover diverse opinions based on their experiences over the years in public service. While purposive sampling was used to ensure that participants met specific criteria, the limited number of participants might not represent the diversity of perspectives and experiences within the Nigerian public service. As a result, the findings may only be generalized to some of the population of public servants in Nigeria, which numbers in the hundreds of thousands.

**Generalizability:** Qualitative research, such as this case study, is often context-specific and emphasizes in-depth exploration. While this approach provides rich insights into the specific context of the FCT, it can limit the generalizability of the findings to other regions or states in Nigeria. The public service landscape, training practices, and attitudes toward e-learning may vary across different parts of the country.

**Subjectivity and Researcher Bias:** Qualitative research involves subjective interpretation, and the researcher's background, perspectives, and biases can influence the study's outcomes. In this case, the researcher's familiarity with the public service environment and the shared social background with the participants may have influenced the data collection and interpretation process. Despite efforts to maintain objectivity, the researcher's personal experiences and views could have subtly shaped the findings.

**Data Collection Method:** While interviews are a valuable data collection method for qualitative research, they also have limitations. Interviews rely on participants' self-reported experiences and opinions, which can introduce social desirability bias or memory recall issues. Participants may provide responses that they

believe are socially acceptable or align with the researcher's expectations, potentially affecting the accuracy of the data.

***Time Constraints:*** Conducting face-to-face interviews with public servants during official working hours may have imposed time constraints on the study. Participants' availability for interviews might have needed to be improved, potentially impacting the depth and breadth of data collected. Additionally, the COVID-19 pandemic and related lockdowns may have influenced participants' perspectives on e-learning, and this context needed to be explored in detail due to the time constraints of the study.

***Data Saturation:*** While data saturation is used as a criterion for sample size determination, it can also be a limitation. Data saturation occurs when new data no longer yield novel insights or information. In this study, data saturation was reached with a sample size of sixty participants. At the review of data collected from the sixty participants, the researcher believed that enough information had been gathered to gain a comprehensive understanding of all aspects of the study related to the adoption of e-learning in the public service. Also, the study adopted thematic content analysis as data obtained from participants were examined in-depth. Data saturation was achieved when data obtained from participants were no longer providing new insights and themes, and the data available sufficiently addressed all research questions to ensure trustworthiness. However, this limited the exploration of diverse viewpoints or emerging themes that could have arisen with a larger sample.

***Use of NVivo Software:*** The study's reliance on NVivo 12 for data analysis is both a strength and a limitation. While NVivo is a powerful tool for qualitative data analysis, its effectiveness depends on the researcher's proficiency with the software.

The quality of analysis and interpretation may vary based on the researcher's skills, potentially affecting the validity of the findings.

***Limited Exploration of Cultural Factors:*** The study's limited exploration of cultural factors pertaining to the adoption of e-learning in the Nigerian public service is a notable gap in the research. Understanding the cultural context is essential, as cultural beliefs and attitudes can significantly impact how individuals perceive and embrace technology-based learning. For instance, in some cultural contexts, there might be a preference for traditional, face-to-face learning methods over e-learning, while others may readily accept technology-driven educational approaches. Further research that delves deeper into these cultural nuances would shed light on how e-learning can be tailored to align with the cultural predispositions and expectations of the Nigerian public service workforce, potentially leading to more effective and culturally sensitive e-learning initiatives. This comprehensive investigation is vital for ensuring the successful integration of e-learning into the Nigerian public service and maximizing its benefits.

### **3.13 Summary**

This chapter of the thesis outlines the research methodology employed in the study, focusing on adopting e-learning for worker in-service training in the Nigerian public sector. This chapter of the study begins with a brief introduction to the section and describes the research methodology. This study on adopting eLearning for worker in-service training in the public sector considers the overall process of in-service training within the Nigerian public service. Training and capacity development within the organization has been identified as essential. Nigerian public service organizations are generally saddled with the responsibility of providing service. The public service of Nigeria as a nation is the sector that implements government policies and serves the

citizens in diverse ways. As a service organization, delivering quality service is vital to achieving the organization's objectives. The study used a qualitative approach to obtain rich and adequate data for a valid result. Qualitative research produces data from open-ended responses, observations and reflections, as its primary objective is to understand and interpret social interactions. The training of workers within the organizations is essential to equip them with the necessary skills to carry out assigned tasks. As such, the qualitative research methodology enabled the researcher to direct the research process and create new ideas. The qualitative research methodology's aptness for this study was drawn from its strength of allowing participants to express themselves freely, enabling the researcher to probe for more responses targeted at specific participants, including their opinions, beliefs and experiences.

Interviews were used as the research instrument to collect research data, with the researcher conducting face-to-face sessions with all the participants. The researcher developed the interview questions to direct participants to provide information that addressed the research objectives. Before beginning data collection, the research ethics committee reviewed and approved the interview questions with the guidance of the researcher's supervisor.

The study selected 60 participants from six (6) selected government institutions, with at least one participant being a decision-maker in the organization. Criteria for selecting a participant in addition to being a public servant include years of experience in public service, which must be at least five years, in which the participant must have participated in both conventional and eLearning forms of training, among others, which were strictly followed. The sample selected for the study was to represent other public servants as similar rules and policies guide the implementation of training programs in all government institutions. A non-probability

sampling technique was used as it supports non-randomized methods in selecting research participants. In the non-probability sampling method, not all population members have an equal opportunity to be part of the study as it is heavily dependent on observation by the researcher. For this study, non-probability sampling was used in selecting participating institutions. Non-probability samples advantage includes easy access to potential respondents/participants, a speedy data collection process and cost-effectiveness in conducting research (Kyu-Seong, 2022). In adopting the non-probability sampling technique, the researcher carefully considered the possibility of participant selection bias, which was avoided by ensuring participants were first nominated by their organizations. After being briefed about the research objective and purpose, they willingly agreed to participate in the study. All participants nominated by each organization agreed to participate in the study and were all recruited as respondents.

This chapter also described the pilot testing procedure adopted by the researcher and the positive effect of the pilot study in modifying the interview questions. The pilot study was conducted using 5 participants and focused on testing the research instrument to ensure that drafted interview questions produced the required information from the participants. Experience from conducting the pilot study enabled the researcher to modify the interview questions to ensure they aligned appropriately with the research aim. Carrying out a pilot study enabled the researcher to analyze initial data, which stands as a guide to estimate the cost, time and resources that would be required to conduct the broader study while also helping the researcher to reduce or avoid risks and challenges that may arise during data collection, analysis and interpretation. The reflexivity of the research process, instrument reliability, and validity were then discussed in detail. The importance of instrument reliability to a

research study is to ensure that the measure of a construct is consistent when all conditions are the same. The chapter stressed the importance of noting that educational research must meet certain standards; otherwise, the suggestions from its findings will be ineffective, leading to unreliable data. Data from the research participants were analyzed using NVivo 12 analysis software, and themes were generated. These themes were then analyzed using thematic analysis, as the flexibility of the thematic analysis method enhances the researcher's interpretation of the complex data. Thematic analysis, as described by Dawadi (2020), is applicable in identifying themes in transcribed data by thoughtfully reading and re-reading while also being flexible for identifying, describing, and interpreting themes within a data set, especially in exploring complex research issues.

The study's procedures and ethical assurances were ensured by receiving adequate and necessary approvals from the UNICAF Research Ethics Committee on the interview questions, debriefing form, informed consent form, gatekeeper letter, and research application form before commencing the research. The debriefing form contained information about the study's aims and significance, the contact information of the researcher and the supervisor, and information and risks the study poses to participants. The debriefing form provides basic information about the study to the participants. The informed consent form is used to obtain participants' consent to participate in the study. Once a participant willingly agreed to participate in a study, he/she signed the consent form, which was kept safe as evidence of assuring research study ethical compliance.

Other ethical procedures followed include respecting the dignity of participants, which was ensured by not coercing participants into participating in the study; the research procedure was sensitive to humans and the principles of respect

for human participants, participants' welfare, and justice are of topmost priority to the researcher. Respecting human dignity in a research study, as contained in Belmont Report, stressed the importance of adhering to principles of respect for participants, full right to autonomy, participant's rights to freedom from any form of harm, discomfort, exploitation, rights to fair treatment and privacy. In addition, the researcher obtained full consent from participants before including them in the study. In obtaining a signed consent from the participants, the researcher provided a document which contains the following information: research topic, research objective and purpose, researcher institution, an indication of the data collection process to be an audio-recorded face-to-face in-depth interview, stating that the interview process will be an average of 30-45mins duration in participants office, the study does not pose any risk to participants and participants can freely withdraw from participating in the study at any point in time without prejudice and that participants confidentiality will be maintained by ensuring participants does not mention any word or statement that could be an identifier. The researcher also ensured that the informed consent form was written in a simple language easily understood by the participants. The informed consent process gave the participants an adequate understanding of the study's risks and described ethical codes and regulations for the study.

While this study provides valuable insights into the adoption of e-learning for in-service training in the Nigerian public service, it is essential to acknowledge its limitations and the implications they may have on the interpretation of the study's findings. In conclusion, the chapter, the trustworthiness of the study was presented. Ensuring data reliability and trustworthiness is paramount in research. Factors like dependability, credibility, transferability, and confirmability play key factors in establishing the credibility of the research findings. The researcher ensured the study's



dependability, which involves consistent results when the study is replicated with similar methods and participants. Credibility necessitates rigorous peer-reviewed research with ethical conduct and clear, data-backed conclusions. The study's credibility is reinforced through prolonged engagement, observation, peer review, and member checking. Transferability gauges the extent to which findings can apply beyond the studied sample. Lastly, confirmability ensures data is free from researcher bias.

## CHAPTER 4: FINDINGS

The study on adopting eLearning for worker in-service training in Nigeria's public service focused on adopting an alternative or complementary form of equipping public servants with adequate knowledge and skills to carry out their duties effectively. Public servants as employees in the country's public institutions span the Ministries, Department and Agencies (MDA'S) at the Federal, State and Local Government levels. In designing training and capacity development programs for public servants, it is essential to consider the ever-changing trends in the organizational models caused mainly by technology.

Technology has had a major impact on organizational training, leading to a shift towards more self-paced, online training programs. eLearning platforms and mobile learning apps have made it much easier for employees to access training materials and complete courses on their own schedule. Additionally, virtual reality and augmented reality technologies have been used to create more immersive and interactive training experiences. Another trend caused by technology is using artificial intelligence and machine learning to personalize training and development programs. This allows organizations to tailor training content to direct specific needs and skill levels of individual employees, making it more effective and efficient. Technology has also enabled the use of gamification in training, which makes the learning experience more engaging and enjoyable for employees. Additionally, analytics and data tracking tools have been used to measure training programs' effectiveness and make data-driven decisions about future training initiatives. Overall, technology has greatly expanded the possibilities for organizational training, making it more accessible, personalized, and effective for employees.

An appropriate assessment of these parameters will ensure the robust improvement of employee productivity and job performance enhancement as public servants participate in effective capacity development programs. The study identified the challenges associated with the conventional education system to include lack of individualized instruction, limited opportunities for hands-on learning, inadequate attention to non-academic skills, such as creativity and critical thinking, socioeconomic and cultural disparities that can impact student performance and limited opportunities for students to apply their learning in real-world contexts.

Hence, the study considers adopting eLearning for more effective capacity building. As it has been found that the trend of using technology in education has positively affected the teaching–learning process, government institutions can greatly benefit from incorporating technology through eLearning in their in-service training of public servants. According to Bubou and Job (2021), "Online delivery systems have further transformed educational technology and provide easy access to educational and training services for many, who hitherto could not have participated, thereby facilitating meaningful learning activities".

Learning is identified as one of the rapid transfers in technology that has affected the passing and receiving of knowledge. The utilization of technology through the adoption of eLearning creates flexibility in the teaching and learning process (Al-Atabi & Al-Noori, 2020). eLearning unites learning and technology, which is the enabler of the learning process. The different types of eLearning include computer-managed learning (CML), computer-assisted instruction (CAI), synchronous and asynchronous online learning, fixed eLearning, adaptive eLearning, linear eLearning, interactive online learning, individual online learning, and collaborative online learning.

The purpose of this research was to explore the different approaches to in-service training in the Nigerian Public Service, the importance of adopting eLearning as a traditional medium of activity in the Public Service, and the challenges associated with this adoption. Specifically, the study's objectives include studying the effectiveness of eLearning currently demonstrated, examining the delivery methodologies of eLearning, comparing eLearning with conventional instructor-led approaches, analyzing the effectiveness of eLearning training, and identifying the effect of the adoption of eLearning for worker in-service training in Nigeria's Public Service. This chapter is dedicated to reporting data collected and the subsequent analysis. Thematic content analysis, used to identify patterns or themes within a set of data, such as interview transcripts, survey responses, or other forms of qualitative data, was applied in the study to generate the findings. The use of thematic analysis in the study is to ease the extraction of concepts that reoccur from the data for practical data analysis. This method of analysis is a flexible one that "establishes a more systematic and explicit form without threatening depth of analysis" (Javadi & Zarea, 2016, p. 39). Thematic content analysis is a systematic and transparent method that allows other researchers to replicate the analysis and assess the credibility of the research findings. Its flexibility enabled it to be used with various data sources that can be applied to both small and large data sets. The flexibility of thematic content analysis made it possible to modify it to the needs of this study while providing a detailed account of data.

The findings revealed the impact of capacity building within the Public Service and how it related to effective service delivery. Considering the government's level of commitment to equipping public servants with relevant capacity, as stated in the data gathered, some challenges were identified. Consequently, some suggested

solutions were also presented in this chapter. The data were collected and analyzed in two parts. Part A focused on collecting demographic data, which includes age, gender, educational level, and number of years of experience, while Part B gathered responses to the interview questions. This chapter then presents tables with themes generated and participants' responses relating to each article.

Finally, this chapter presents the evaluation of the findings of the research study. The evaluation of the research findings involved assessing the quality and credibility of the research in order to determine its validity and reliability. The process included a critical examination of the research design, methods, data analysis, and conclusions. Factors such as sample size, selection, and control were also taken into consideration. Additionally, external factors such as potential conflicts of interest and the reputation of the researchers and institutions involved were also evaluated. The findings may also be compared to other studies in the field to determine the consistency and generalizability of the results.

The section on the review of results focused on the need for a new yet complementary technology-inclined mode of transmitting and receiving knowledge in Nigeria's Public Service and proposed solutions to identified challenges associated with effective capacity development. Throughout this chapter, detailed discussions are presented on the COVID-19 pandemic and its effect on eLearning, highlighting the increased acceptance of eLearning as a means of receiving knowledge.

#### **4.1 Research Findings**

The study adopted a qualitative research methodology to generate adequate findings on the importance of the adoption of eLearning for in-service capacity development for public servants in Nigeria. Sixty participants, who are public

servants, were selected from different MDA, including the Industrial Arbitration Panel, Ministry of Industry Trade and Investment and its agencies such as the Nigerian Export Promotion Council, Nigerian Investment Promotion Council (NIPC), and Nigeria Export Processing Zones Authority (NEPZA), as well as the Public Service Institute of Nigeria (PSIN). The research instrument was in-depth interviews, participants were interviewed face-to-face, and the process was audio recorded while the researcher took field notes. Participants were individuals with not less than five years of working experience having participated in different training/capacity development programs. One participant from each organization where the interview was conducted is a decision-maker within the organization. The interview was conducted at the participant's place of work, and each interview lasted an average of 30 minutes.

Participants responses were transcribed, and some data cleaning was carried out to remove irrelevant words. The NVivo data analysis software was used to analyse the data gathered using thematic analysis. Such an analysis offers the possibility of systematically analyzing qualitative data through coding and the generation of themes. The thematic analysis of this study was carried out in phases after the collection of data. The first phase involved familiarization with the data collected. The researcher transcribed the audio recordings collected and proofread it to ensure it reflected each participant's responses. Data were then compared with field notes, and the researcher generated priori codes. The data was imported to NVivo for coding, searching, and reviewing themes.

The interview questions, divided into Part A and Part B, are attached in Appendix 1. Part A focused on obtaining demographics information from participants.

This included questions regarding participants' age, gender, level of education, and the number of years of experience.

**Table 1**

*Age Range of Participants*

Age Range	Number	Percentage %
25–35	10	16.7
36–40	15	25
41–45	10	16.7
46–50	13	21.6
51 and above	12	20

Table 1 presents an overview of the participants' age. Ten out of 60 participants (16.7%) are aged 25–35 years and fifteen (25%) are aged 36–40 years. Another 16.7% of the participants ( $n = 4$ ) are aged 41–45 years, while 13 (21.6%) participants are 46–50 years old. The remaining 12 participants, which represents 20% of the population, are aged 51 and above. This distribution revealed that 41.6% of participants recruited for the study are 46 years and older and have thus spent a considerable number of years in the Public Service.

**Table 2**

*Gender of Participants*

Gender	Number	Percentage %
Male	38	63.4
Female	22	36.6

Table 2 shows the gender of all participants. Out of the 60 participants, 38 (63.4%) are male, while (36.6%) are female. The researcher did not influence participation as participants had voluntarily accepted to participate in the study. Hence, the result revealed that male public servants showed more willingness to participate than their female counterparts.

**Table 3**

*Participants' Level of Education*

Level of Education	Number	Percentage %
Undergraduate	4	6.6
Graduate	31	51.7
Post-Graduate	25	41.7

Table 3 presents the level of education of participants. In becoming a public servants, it is a criteria to have a level of certification that informs your capability to deliver and the type of service you can deliver. Four of the participants representing 6.6% of the sample population are undergraduates, and this indicates they are lower level workers within the organization. Thirty-one participants (51.7%) had completed a graduate level of education which is the category with the highest number of participants, while the number of post graduates was 25 (41.7%). These results indicated that most participants have a graduate level of education and thus understood the interview questions and could provide relevant answers.



**Table 4***Participants' Number of Years of Experience in Public Service*

Years of Experience	Number	Percentage %
5–10	21	35
11–20	19	31.6
21 and more	20	33.4

Table 4 presents results of the number of years participants spent as public servants. One of the criteria for participation is participants having no less than five years of experience in the Public Service. Twenty-One participants representing 35% of the sample population have 5–10 years of working experience, 19 participants (31.6%) have 11–20 years of experience, while 20 participants (33.4%) have 21 and above years of experience. This distribution of number of years of experience in the Public Service indicates that 65% of responses gathered are from participants with greater than 10 years of experience, which proves that the responses gathered suitably answer the interview questions.

Part B of the interview process included open-ended questions that allow participants to express their opinions on the issues and allow the researcher to ask follow-up questions when required. The open-ended questions probe participants on the type of training programs they have attended, challenges associated with the mode of training, views and opinions on eLearning, and challenges associated with adopting eLearning for capacity building in Nigeria's Public Service.

#### 4.1.1 *Type of Training Program*

**Question focused on the types, number, and the extent of capacity development training participants have undertaken during the course of their service.** The first interview question aimed to obtain information from participants regarding capacity development programs they have previously participated in. All sixty participants responded they have participated in training/capacity development programs in the Public Service. These numbered between not less than two and as much as thirty over a periods of work experience.

Over the years, 51 out of the 60 respondents (85%) have participated in conventional classroom training and eLearning. Nine out of the 60 respondents (15%) have never participated in an eLearning program. Respondent 7 stated that, *the conventional is on-site, while eLearning is online. I enjoyed both methods.* According to respondent 9, *I have not done eLearning but the conventional classroom training.* In addition, respondent 15 stated that they *have attended numerous capacity development training. With 30 years of work experience over the years, I have attended varieties of training – both conventional and eLearning – but more of the conventional training.* Respondent 39 stated that, *in the conventional training, everybody is in the physical class. You can interact with other classmates and the facilitator.* According to respondent 57 *for the classroom training, it is more engaging because there are other participants you can interact with and ask questions about their values and development in other countries and economy crime or visit places, compared to online which is confined to a place either your office or room. My experience is the it gives one the opportunity to even ask question-* Respondent 45

As the question regards the opinion of public servants on eLearning, it revealed that they mostly believed eLearning as a form of training should be embraced alongside the conventional form of training. Respondent 18 stated that, *we have moved to an age that requires connectivity. So, therefore, imbibing eLearning to the Curriculum is a plus that all learners should adopt.* Respondent 8 was of the opinion that, *eLearning is faster. It reduces costs. Instead of spending money, it reduces finance and time; one could stay at their desk performing regular functions and also attend the meeting and training.*

***On the number of Training Programs Attended***, all participants responded that they have attended capacity building programs in the course of their service. Of the participants, 60% have attended more than ten training and capacity development programs. The study revealed that the number of capacity development programs attended by public servants largely depended on their level of education and, most importantly, the number of years of experience. According to respondent 5, when asked how many training programs they have attended, they responded, *well, its uncountable because of I have stayed a number of years in the Civil Service.* Respondent 8 stated that, *there have been several. I can't actually remember because I have been here since 1999, and it's been a long time from now. I can only remember just few, that must have been conducted not long ago, like two to three years back.* Respondent 15 also could not specify the number of years, simply replying, *yes, I have attended numerous capability development training. I have 30 years work experience and over the years I have attended varieties of training.*

As such, findings from the study revealed that public servants had undergone more conventional classroom training than eLearning.

#### 4.1.2 *Experience with Conventional Classroom Training*

**Participants experiences in conventional classroom training and eLearning forms of training.** According to the responses, conventional classroom training requires the physical presence of the learners and teachers/facilitators. Its training sessions are more practical and involve interaction, learning activities, assessments, demonstration, and sharing of experiences, thus making learning and recollection easier. Furthermore, most people have undergone more conventional classroom training and prefer it to all other forms of training. However, about 10% of the respondents (n = 4) stated that the training did not always suit their needs. For instance, respondent 39 stated, *the conventional form of training is also time consuming.*

**Participants experiences with eLearning Training (Nature, Number of Training, Remarks).** According to the responses, 51 out of 60 representing 85% of public servants have undergone one form of eLearning training organized mainly by the government or their MDAs while others have also participated in online seminars and workshops. In the quest for more knowledge than provided by the organization, respondent 4 stated that *they take advantage of learning platforms like Udemy, YouTube, and Google to improve knowledge.* It was further remarked that eLearning training reduces the cost of training; it is faster and does not consume as much time as classroom training. eLearning also eliminates the distance barrier and can be done at one's convenience; however, it was stated that it is not as practical as conventional classroom training. It also had lower incidence of interactions, further hindered by the low computer literacy among public servants. It was stated by a respondent that he has undergone two eLearning training in the past one year.

#### 4.1.3 *Participants perceived effect of Technology on Training*

59 out of 60 respondents representing 98% have the perception that technology has changed and improved the way public servants are being trained. According to the source Abdul & Closs (2015), as technology becomes more prevalent in various activities, the use of eLearning can reduce the amount of paperwork required for training and other educational activities. According to respondent 14, *technology is here actually to make things much more easier*, while respondent 28 stated, *technology has affected us positively because one doesn't have to go through the rigorous way of training*. Respondent 30 stated,

*Technology has really affected the way public servants are trained, from the invention, and technical compulsory use of WhatsApp to pass information. This has really aided a lot to know how to use a lower form of technology, which has made explaining the outline of any training easy.*

Only respondent 51 is of the opinion that technology has not affected the way public servants are trained *I don't think it has, it hasn't*.

However, six out of the sixty participants (10%) of the population were of the opinion that technology had not been fully harnessed in the capacity development of public servants. According to respondent 24, in training public servants using technology, *not much has been affected. Though there are some improvements, more can be done.* - respondent 21. Respondent 9 stated that technology has not affected the way public servants are being trained, *many people opted for this e-training, which in my own opinion, is not the best so it has affected the training of public servant*. Respondent 41 is of the opinion that its relative while stating that *it depends because most organization still use the old ways*.

**Negative Effects.** It was stated by six respondents that technology has only somewhat achieved its purpose in the Public Service; hence, its use results in negative effects on the training of public servants. For instance, respondent 35 is of the opinion that, learners going through eLearning could be distracted due to other tasks around. Some other effects include lack of concentration during training, growing preference for classroom training due to its interactions, and lack of interest from public servants that are not technologically inclined.

**Positive Effects.** Around 90% of respondents opined that technology has positively affected how public servants are trained and how they operate. Moreover, the increase in the use of eLearning for capacity development was as a result of COVID-19. It was further stated that eLearning has been more convenient and efficient and has actually improved the knowledge of more public servants. According to respondent 26,

*eLearning has made it a lot more efficient; making it efficient on both sides, on the side of people who are training and on the side of people who are doing the training. So you can have experts from anywhere in the world take part in a training exercise and become consultants. These ordinarily a typical civil servant will not have access to.*

Respondent 29 stated,

*With eLearning, you can sit in the office, put on your internet, do work effectively, but then the conventional training consumes a lot of time and money. eLearning has also made documentation easier. Files can be easily shared and accessed wherever you are within few minutes*

Respondent 40 stated,

*Technology has opened up new ways of doing things. I will say it has affected the mediums of training positively, though it is sometimes expensive to deploy all the necessary and up to date technological devices. But once they are deployed, it helped to upgrade the way public servants were trained and acquire knowledge.*

Moreover, 54 out of 60 respondents representing 90% specifically stated and described the convenience of eLearning as a result of its flexible characteristics. According to respondent 15, *technology has affected learning positively, especially during this COVID-19 period. Civil servants can now sit in the comfort of their homes and get trained.* Also respondent 28 stated,

*Technology has affected public service positively because one doesn't have to go through the rigorous way of training and all that but these days with eLearning. Just like today, there is a training that we had on our virtual platform. I was just sitting down in my office, learning; answering of questions was all done online. It makes it easy for me, as there is no need of traveling; its cost effective and not expensive.*

Respondent 2 stated, *technology has really affected [the] Public Service greatly because public servants no longer like the conventional style, as Google is accessible to them to gain knowledge.* According to Respondent 58, *with eLearning you can attend a class at your convenience with your computer without any stress it very easy to learn.*

**Improves Efficiency.** Further inquiries into the effect of technology on training public servants revealed that eLearning through the application of technology improves efficiency. As respondent 8 stated, *it makes work more efficient and increases the experience and any other thing you can think of – reduces labour and*

*stress, makes work easier. Respondent 11 is of the opinion that technology has affected us positively because technology has helped us be more effective. It cut out unnecessary delay, especially in how we deliver our services. So, it has affected us positively.*

*With technology we are able to research further, know what's happening in other countries when it comes to Foreign Direct Investment (FDI), as technology is used to attract investment, it's not feasible to start going there physically; therefore, the work is done through technology.*  
(Respondent 36)

**Figure 1**

*Advantages of Adopting eLearning for Capacity Development of Public Servants*

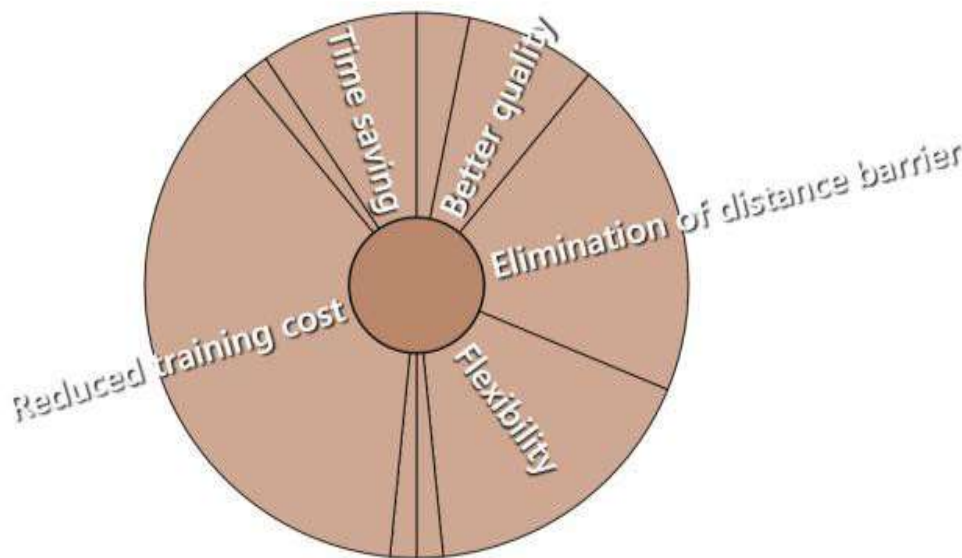


Figure 1 reveals a pie chart where each sector and its proportions relate to responses gathered from the research participants and the recurrence of the identified themes on the advantages of adopting eLearning for the capacity development of public servants. Of the many themes, the most popular ones are flexibility, eliminating distance barriers, reduced training cost, better quality, and time-saving.



**Participant's perception of eLearning programs.** The respondents affirmed that eLearning programs had enhanced public servants' capacity and knowledge due to their cost-effectiveness, making them more effective. However, some perceived eLearning as less effective due to limited interaction between the learner and the teacher. Also, it was disclosed that as a new system of learning in the public service, it would take time for people to adapt. According to respondent 16, *not everyone has come to the new normal that eLearning is the new learning mode. So, therefore, it will take time to adapt to this change.* Also, costs associated with setting up an eLearning facility within some organizations was identified as a challenge. Respondent 1 stated that *some offices do not have the privilege of having a network within the system, so that is the issue.* According to Respondent 44, *the public service will not like eLearning because it will take out of what they will get, but the government should adopt it in a way that there should be a benefit to it.*

#### ***4.1.4 Advantages and Disadvantages of Conventional Classroom Training***

**Advantages and challenges associated with conventional classroom training.** The advantage of conventional classroom training is associated with its physical presence, which leads to better understanding, greater concentration, and more interactions during training. Respondent 3 stated that *besides the actual learning of conventional training, there is this interaction demonstration and experiences that are added.* Also, respondent 24 stated that *with the conventional, you can interact with the learner, trainers and environment. With conventional training, you have the privilege of interfacing one-on-one, and you ask direct questions on the eLearning you can also use the platform to ask questions.*

As such, some respondents believe classroom training is better because it is easier to interrupt the session, ask questions, and get clarifications, as well as interact

with the trainers. According to respondent 38, *in the conventional training, the participants have the opportunity to interact physically with the resource person. If there are questions and all that, the learning environment will enhance the free expression of learner's opinions.*

According to the responses, the disadvantages of conventional classroom training include the following: absenteeism from work to attend training, which could affect the productivity of the organization; travelling risk due to the distance of the training, bad roads, and insecurity in the country, especially when the training is in another state; class distraction and interruptions, which affects concentration during training and hinders the objectives of the training; the high cost of conventional classroom training, as many people do not get trained due to the high cost of logistics, especially when travelling is involved; and further logistics such as accommodation and other classroom training expenses. Some of the other challenges mentioned include the inability to multitask official work with the training, especially when it is done at the office. Moreover, it was also stated that this causes distraction during training.

A few respondents stated a need for follow-up/post-training assessment. Classroom training often falls short of meeting the specific needs of public servants due to its time-consuming nature and venue limitations. As highlighted in Osamwonyi's review (2016), public servants require flexible, efficient, and accessible learning opportunities. E-learning, with its anytime, anywhere access and adaptability, addresses these critical needs, making it a more suitable choice for enhancing the skills and knowledge of public servants while maximizing their productivity..

#### **4.1.5 Organizational Support for eLearning**

Forty-four respondents (73%) opined that their organizations support eLearning for the capacity development of public servants and have started adopting eLearning for staff training.

*Well, I will not say no. Considering the shift in things due to coronavirus, the organization is gradually embracing online training. Some individuals have participated in some fully online training and some [in] partly online training, and the report from the training has been positive. So I will say yes, my organization is in support of eLearning. (Respondent 40)*

Twelve respondents acknowledged the role of eLearning in training public servants but that their organization still need to implement it. According to respondent 39, *eLearning was not part of the organizational strategy for training and capacity development before now. But considering the recent shift in technology due to COVID-19, it has.* And so, it was stated that organizations are beginning to support eLearning for staff capacity development because of its numerous advantages, such as increased staff participation, lower cost of organizing, and overall effectiveness, especially during the COVID-19 pandemic.

#### **4.1.6 Pros and Cons of eLearning**

**Participants opinions on the pros and cons of the adoption and selection of eLearning for capacity development.** Respondent 27 believes that eLearning should be adopted because it can train more public servants on different courses using a single platform without requiring the public servant to travel a long distance, reducing the cost of training on the organization and the government: *we have been able to reach a large number of people, more than we have reached since this place has been established, within a short period of time.*

It helps to have continuous staff training, as this enables public servants to be competitive and technologically inclined. Respondents 38 and 6 further opined that policymakers should sensitize public servants on eLearning to ease its adoption. Funding for required devices and connectivity were identified as challenges for adopting eLearning.

#### ***4.1.7 Use of eLearning in Improving Public Servant Capacity***

**The use of in-service eLearning programs among public service institutions in the enhancement of public servants' capacity.** The respondents are of the opinion that eLearning can improve the capacity of public servants as they have more access to information and knowledge. According to respondent 37, eLearning will improve the capacity of public servants *because before now, public servants find it difficult to go for training. That is why I said earlier that, in a year, they can attend training either once or twice, but with eLearning, they are always being trained. So it will definitely improve their capacity.* Respondent 22 responded, *Yes, it will. Most public servant[s] are literate in basic IT knowledge. So, therefore, it will be beneficial to learn via this medium.* According to respondent 40, *the encouragement of eLearning for the capacity development of public servants will allow public servants to have easy access to training [and] acquire knowledge from within and outside their environment.*

Moreover, The cost-effectiveness of eLearning has made it accessible to public servants: eLearning programmes are easily accessible, both paid and free. So, it allowed any public servants to learn new things and develop capacity. So, encouraging eLearning within the organization will definitely enhance capacity according to Respondent 39. With a different opinion, respondent 47 responded that *No because already the average civil servant is already not encouraged by*

*themselves in most cases. A civil servant wants to only go for a training because of the monetary values attached to it.*

#### **4.1.8 Barriers to eLearning in the Public Service**

The respondents highlighted several barriers, including inadequate eLearning tools (internet connection, phones, laptops, and electricity), insufficient knowledge of eLearning tools, and the desire to maintain the status quo by public servants, leading to them rejecting the new eLearning system. Also, it was disclosed that the eLearning system is designed in a way that allows distraction or non-participation, thereby making learning ineffective. Limited interaction between the teacher and the learner and reduction or lack of incentives given to public servants for eLearning further discouraged public servants from accepting eLearning. As part of the culture, the average public servant already perceives training as a means of welfare through the incentives attached. However, adopting eLearning only necessitates some of the incentives required for a conventional training system.

Respondents also identified some challenges associated with inadequate eLearning tools. According to respondent 1, *the device matters as only some devices you can use for eLearning. Some people will tell you they don't have money to buy an Android phone, they don't have a laptop, so how do you get them to learn?* Also, respondent 14 noted the poor network connectivity and electricity. Respondent 13 stated,

*I won't recommend eLearning for the same reason that not everyone is computer literate. There have been many times while on Zoom that it keeps dropping due to poor connection, and once the audio is bad, cracks somewhere else, learners can get tired.*

As eLearning is new to some organizations, there needs to be more knowledge of the tools required. According to respondent 4, this constitutes a barrier to the adoption of eLearning:

*Technology has to be accessible. Because most people know how to play a game on the computer, it does not mean they know how to typeset. They do not really know how to typeset.*

Respondent 28 stated that *the challenges for eLearning includes (i) everybody has to be digitally compliant, for instance, if you don't know anything about computer, how do you take part in eLearning?; (ii) electricity supply; (iii) cost of data consumption; and (iv) network issues.*

Respondents also identified difficulty in accepting change as one of the challenges associated with eLearning. According to respondent 37,

*One of the challenges is that you know, it is not easy to adopt a new thing. So you find civil servants feeling reluctant to acquire new technology, being that eLearning is trying to take over conventional training. You find people in their lackadaisical attitude towards the new invention.*

Also, as respondent 33 stated,

*Change will always meet resistance, most especially from people who are of advanced age. For young people, it is a way of life to them because that is what they have been used to. However, older people will find it awkward because they are not used to it. I thought it was something difficult, but when I tried it, it was more convenient and easy.*

Respondent 54 stated that *resistance because most staff in the public sector prefer physical classes to eLearning.*

**Distraction/Non-Participation.** Distraction and non-participation were identified as some of the challenges associated with eLearning. According to Akorful & Abaidoo (2015), factors such as contemplation results in lack of full participation of online learner. Learners may not have access to an environment conducive to learning. The absence of a quiet and comfortable space can lead to distractions, reducing the focus and participation of students. Noise, family obligations, or inadequate facilities can hamper the learning experience. Respondent 9 stated,

*Many staff do not like to participate. The physical learning is better as some might sign in and not listen, participate, or pay attention. Logging into an online platform such as Zoom to participate does not mean the learner is concentrating. eLearning is good, but it shouldn't be the only form of training in the Public Service because it won't be effective.*

**Inadequate/Lack of Infrastructure.** Other disadvantages identified by respondents are lack of adequate infrastructure. Infrastructural issues include unreliable internet connectivity and frequent power outages. These technical limitations can disrupt online classes and deter students from participating actively. Inconsistent access to the internet can lead to missed lectures, making it difficult for students to stay engaged. According to respondent 3,

*How many people can afford a good set of devices and equipment? How many people can afford a generator set to ensure electricity backup to last the training duration? Third, how many people live in locations convenient for eLearning outside the office space?*

Respondent 13 stated,

*I did not support virtual platforms because the other time that the Executive Secretary gave a virtual speech, the audio was very poor. Moreover, when it comes to*

*eLearning, a strong bandwidth is required, and in Nigeria, the bandwidth is limited. And then there are some areas where there is no connectivity. Connectivity is very weak, so I do not even encourage eLearning.*

According to respondent 55, *there is a scarcity of funds to purchase facilities, which discourages organizations from getting this equipment, and even if staff provide their technology, the organization might not support them with the basic things to aid them, i.e. data or WIFI access.*

**Limited interaction.** With eLearning, respondents identified limited interaction with fellow learners and instructors as a major challenge. E-learning often lacks the face-to-face interaction of traditional classrooms. This absence of real-time engagement with instructors and peers can lead to disinterest and non-participation. The sense of isolation can be discouraging for some students. For instance, according to respondent 9, *eLearning or online meetings have limited time to talk expressively.* Other respondents also had comments on the current eLearning setup:

*The barrier to eLearning is a restriction on cultural and social interaction with people. With the advent of eLearning, one can sit in his comfort zone to learn, which deprives him of the ability to interact with his social environment. Therefore, continually adapting to eLearning is not advised -Respondent 16.*

eLearning lacks motivation and exposure. Instead of being alone and learning without interaction, classroom training is another form of networking. Outside of the learning that takes place in the classroom, there is an opportunity to discuss and interact with each other. The adoption of eLearning for worker in-service training will not allow that to happen - Respondent 35

**Reduced/lack of incentives for training.** According to respondent 2, in the public sector, as a whole, one of the major challenges eLearning will face is where the



employees are familiar with travelling for training and getting an allowance. And now, with eLearning, they sit at their desk and participate in the training, and no allowance is paid. Most public servants will prefer the conventional form of training as it comes with a travelling allowance package.

Thus, findings from the study revealed that there need to be more travelling allowances, which is a form of incentive for public servants for training programs, which will cause some resistance to the use and adoption of eLearning in the public sector. Respondent 8 stated that,

*Resistance will always be there because a public servant will prefer to participate in capacity training through the conventional method because DTA will be paid. But with the eLearning, such allowance will not be paid, except for data subscription.*

Respondent 3 also remarked,

*The classroom form of training has a lot of attraction to common civil servants. When a civil servant travels out of a resident location, allowances such as transportation, accommodation, and food are paid, and such allowances are mostly used for personal expenditures. So, if public servants are sincere, almost 75%, if not 80%, will object to eLearning training.*

#### **4.1.9 Effect of eLearning on Training Costs**

**Cost effect of eLearning on training public servants.** About 70% of the respondents are of the opinion that the adoption of eLearning for the capacity development of public servants will reduce the cost of training. Respondent 38 believed that, generally, it may not be the case initially because of the need to set up the infrastructure. eLearning infrastructures are not just mentioned as organizations

aim to obtain the best there is to offer, but there is a need to make a substantial initial investment. However, this will reduce the costs of training in the long run.

#### **4.1.10 eLearning Recommendations**

**Recommendations to the government regarding the adoption of an eLearning system.** Improvement actions to ensure adoption of eLearning in the public sector include acceptance of eLearning as the best option by policymakers, change of environment for the participant to enable people to move out of their comfort zone to learn, encouragement of concentration, enforcement of the adoption of eLearning in the sector, and provision of eLearning infrastructure.

In addition, it was suggested that the cost of eLearning should be reduced to ensure affordability, the formulation of policies that would foster eLearning, and provisions for eLearning in the public sector budget. According to respondent 2, *the policymakers have to accept eLearning; if the policymakers are participating in training online through eLearning, automatically every other person will key in.* According to respondent 10, *it is crucial policymakers work hard to make sure eLearning is acceptable.*

**Change of Environment.** Respondent 12 is of the opinion that even with eLearning, learners should be moved to a different location to enhance knowledge acquisition:

*There should be a way to move civil servants to other locations for that same eLearning. This is what I will recommend; people should be moved out of their environment to build interest and enthusiasm in each other to make an impact.*

**Compulsory Adoption of eLearning.** On the adoption of eLearning for worker in-service training in the Nigerian Public Service, respondents are of the opinion that eLearning should be adopted.

*I will recommend the government goes ahead to adopt the eLearning system, irrespective of few civil servants who may not like it for personal reasons, such as because it makes the civil servants in the country sit up and upgrade their skills in*  
ICT -Respondent 2

**Consistency.** Ensured consistency in eLearning was also mentioned to enable people to become acquainted with the eLearning system. According to respondent 13, the Public Service should consider *making it mandatory for all public servants*. Moreover, *after this, participants of eLearning who are public servants should also be encouraged with some added benefits after successfully completing their training*  
Respondent 39.

**Infrastructure Development.** Respondents are of the opinion that more attention should be given to technological infrastructure development in the organization. According to respondent 18, *the policymakers and Government should push towards this mode. This is a new age, and they should provide more internet service and communication and other provisions to make it a requirement. Also, if we are emulating third-world countries, we ought to provide an infrastructure similar to what they have to ensure a smooth adoption* -Respondent 23.

**Policy of eLearning.** Around 90% of the respondents are of the opinion that developing and implementing eLearning policies will enhance the use of eLearning. According to respondent 11, *establishment of policies that are IT drilling in terms of policies or regulation and also support organization to adopt technology are needed to move from the analogue program or system and adopt the modern technological policies*. Respondent 30 stated that *eLearning policies will help develop the amenities required for public servants*. Respondent 22 declared, *let there be a policy that*

*eLearning should be adopted, make it known to the public why it should be adopted. Also, policymakers should see the efficiency in lowered costs for adopting eLearning.*

#### **4.1.11 Annual Training Budget Allocated**

According to the respondents, the annual training budget ranges from one Hundred Million Naira to Three Hundred Million Naira, depending on the annual budget allocation of the organization. However, most respondents stated that they are not aware of the training budgets of their organization. According to respondent 34, *my experience in the Government is that we have classified, privileged information, and restricted information. I am not aware what is allocated to my agency to the best of my knowledge.* Respondent 38 also stated, *No, I don't know that.*

#### **4.1.12 Effects of eLearning on Training Budgets**

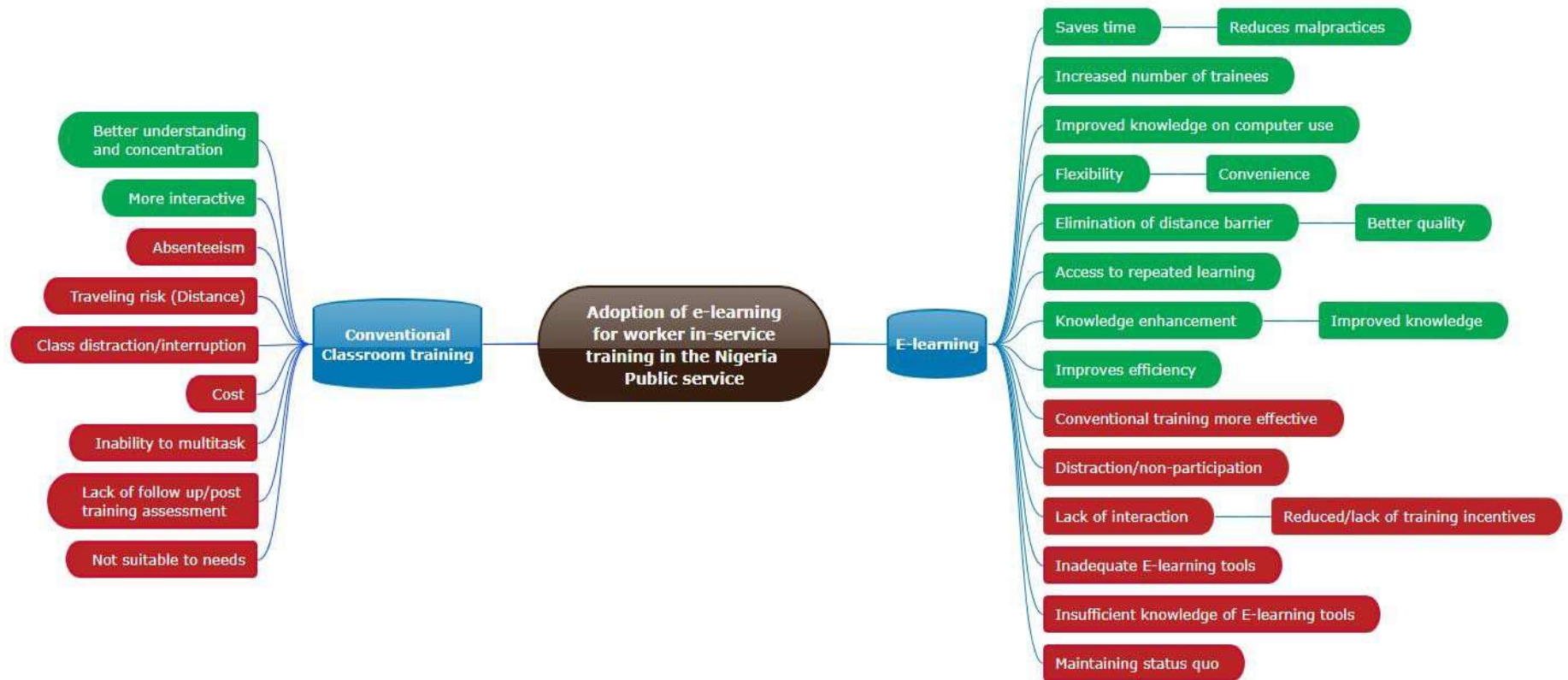
Some respondents opined that conventional classroom training costs a lot, and the adoption of eLearning will reduce costs. According to respondent 15, *the Government can help to reduce the cost and bring about a standard rate for students and learners to adequately infuse them into the eLearning mode of training.* Respondent 39 stated, *Yes, it will because costs like transportation, accommodation, food are not involved. This will definitely reduce the overall cost of training.* Respondent 35 said, *Yes, it does, definitely. For the government, yes. But for the public servant, the motivation will not be there.*

The following thematic map (Figure 2) shows a graphical representation of themes generated relating to the adoption of eLearning for worker in-service training in the Nigerian Public Service. To the right of the map are the advantages of eLearning for worker in-service training in green, while the advantages derived from the study are highlighted in red. To the left of the map, the advantages of the conventional form of training as derived from participants' responses are displayed in

green, with the disadvantages displayed in red. The thematic map provides an illustration of the specific themes on the advantages and disadvantages of eLearning and conventional training for ease of identification for the reader and to draw efficient links to study's evaluation.

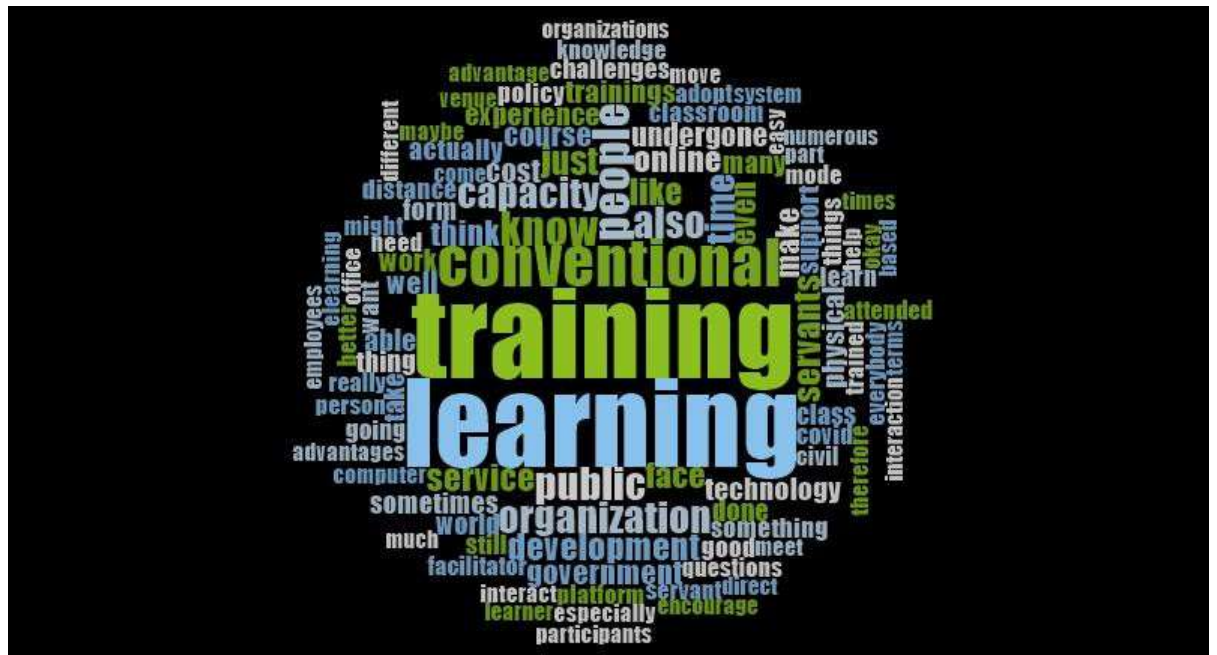
**Figure 2**

*Thematic Map for Qualitative Findings*



Note. The green elements describe the advantages, while the red elements describe the disadvantages/barriers.

### Word Frequency Cloud



The word cloud derived from the NVivo analysis software is a graphical illustration that revealed the frequency of each word based on its size following a frequency query. This graphical representation enables the researcher and reader to understand the re-occurrence of each word and its importance to the study. Figure 3 provides an overall sense of words often used by the respondents.

From the in-depth interviews, it was gleaned that the demand for eLearning was mostly associated with some of the challenges experienced in the conventional training mode. The effect of the obstacles is observed to negatively affect the capacity of public servants' ability to deliver effective service. In mitigating the challenges, eLearning is considered an option that is implementable within the public service. As

the preliminary findings were previously discussed, the following sections discuss the evaluations of the research findings regarding the research questions in detail.

***Research Question 1: What methods do Public Service institutions use for in-service training?***

This research question aims to gather adequate information to support available literature on in-service training for public servants in Nigeria. The literature studied for the research indicated several training and capacity development methods for worker in-service training, which the following interview questions further established.

**Description of type, number, nature/scope of training attended.** Findings from the study revealed that all participants have participated in capacity development programs within the organization. From the NVivo word cloud, the word training was frequently used as it relates to the objective of the study. This result supports Okafor and Agu's (2020) opinion that the government has subsequently propelled human resource capacity building and training. Though this does not represent the whole population of public servants in Nigeria, the findings are in line with the revised guidelines in FCSC policy, which state that extant staff training is critical and requires a systematic approach to make training a vehicle for ensuring effectiveness in the public service delivery (Okotoni & Erero, 2005). Findings from the study also revealed that the number of years of experience in public service influences the number of training programs participated.

Thus, the responses obtained from the interview question met the objective above, as the researcher derived sufficient information that proves that public servants understand training and capacity development as essential activities in the organization. The findings also align with the theory of self-concept of adult learners



presented earlier in the study. Since all public servants are adults, their participation in training programs revealed their desire to learn (Knowles et al., 2014), which is fundamental to the self-concept of a learner who desires to be responsible for their actions.

Even though all participants of the study have participated in capacity development programs, data provided revealed that in the total population, most public servants do not have the opportunity to participate in training programs as required due to the challenge of lack of funds and poor funding. Responses from participants on the nature of training attended revealed that most have participated in conventional training and eLearning. However, generally, public servants participated more in conventional classroom training than eLearning. These findings support the study by Zalat et al. (2021), which found that despite the increasing interest in eLearning, the technology has not been equally extended to all nations and cultures. Participants' responses revealed that eLearning was not an option for in-service workers' training until recently.

The findings on the recent consideration and use of eLearning in the public service also prove the theoretical model of eLearning on connectivism. Connectivism as a learning model recognizes a major shift in how knowledge flows and how information-sharing mode changes due to massive data communication networks (Corbett & Spinello, 2020). The gradual change to eLearning, as revealed by participants of the study, is not necessarily based on individual control but on effects such as technological change, the impact of the pandemic, and the quest for other means of learning. Participants related to the move of changes in the digital space globally, which the public service could not be left behind but to join the train of accepting digital change. This was evident as participants gave examples of their

organization's shift in learning mode to eLearning due to the lockdown influenced by the COVID-19 pandemic.

**Experiences as participants of conventional classroom training and eLearning.** Respondents had diverse opinions regarding their classroom experiences and eLearning forms of training. Findings from data revealed that the conventional form of training allows for deeper interaction among learners and instructors. According to the participants, conventional training gives room for physical interaction with other learners and the trainers, whereas you can sit in the comfort of your office/home in eLearning.

Moreover, much emphasis was laid on the fun that training participants derive from face-to-face classroom training during discussion periods, as it gives room for in-depth discussion beyond the scope of learning and, most of the time, learning from other classmates' experiences as people from different regions and backgrounds. These findings are in accordance with Sichau and Fassler (2017), whose results found that traditional face-to-face learning helps provide more individual feedback and in-depth discussions with the learners. Some participants opined a preference for conventional training over eLearning, with the opinion that conventional classroom training makes it easier to have that one-on-one relationship or connection with the instructors and provides an opportunity to ask many questions and get feedback.

***Associated advantages and challenges of conventional classroom training?***

In addition to the advantage of providing a platform for in-depth discussions and interactions, conventional classroom training enables a deeper understanding of the subject matter as learners can be more open-minded to learning through group discussions. Learning is also made easier when the learner can connect with the instructor and study physical gestures to enhance learning. The conventional

classroom training followed the active learning pedagogical approach, as indicated in the literature review. The conventional application of training is gradually shifting to a procedural approach that manages the participant through a learner-centred approach.

Findings from the study revealed a preference of some respondents towards using conventional classroom training for worker in-service training. Participants in this category aligned more with the conventional form of training, which they believed did not have disadvantages. These findings corroborate the opinion of Liu and Long (2014) that conventional classroom training is the most effective and direct method as it allows for vital personal interactions between the trainer and the learner.

***Research Question 2: To what extent do Public Service organizations use eLearning to train their staff? If not, why?***

This research question aims to gather information from participants on the status of eLearning as a means of in-service training in their various public institutions and the relevant challenges faced.

**Opinions on how technology has affected how public servants are trained.** The participants responded based on personal opinions and observations of how technology has affected the training of public servants in both negative and positive ways.

Despite the significance of technology in the public service, the Nigerian Public Service has been slow in its proper implementation (Aimuan & Aigbe, 2019). The majority of the respondents believed technology has improved how public servants were trained and enhanced efficiency, although the process of fully embracing it has been slow. The incorporation of technology into the teaching and

learning process, such as the Internet, has opened up new potentials that have made learning easier, more accessible, and more exciting to learners (Haleem et al., 2022).

Respondents also acknowledged that eLearning had impacted the way the Public Service carries out its activities and transfers knowledge. Experience shared by respondents indicated how technology has affected how public servants are trained, starting from the invention and the compulsory technical use of WhatsApp to pass information. As such, the evolution of technology has influenced training in Public Service, as technology enhances the understanding of learning methods to create variation and an abundance of learning possibilities (Darling-Hammond, 2020).

Pointing out the convenience of eLearning, findings from the study revealed the significance of eLearning during the COVID-19 pandemic. Public servants can now acquire knowledge from the comfort of their homes and offices without the fear of being infected by the virus. Such is the case all over the world, as learning has been digitalized due to the effect of the coronavirus (Dhawan, 2020).

Findings also revealed that technology had positively affected the organization by influencing a higher level of effectiveness, cutting unnecessary delays in service delivery and enhancing government transparency.

**Organizational support for an eLearning strategy for training employees.** Given the limitations brought about by the pandemic and the growing influence of technology on the learning process, respondents stated that their organizations support the eLearning strategy, as eLearning has gradually become an acceptable means of equipping public servants with the required skills and knowledge. Respondents believe that almost all government organizations support eLearning. Today, nearly all meetings are virtual rather than physical; therefore, COVID-19 has compelled organizations to use eLearning for capacity building. Responses from

participants also indicated that eLearning is fast becoming an acceptable means of training public servants as the COVID-19 pandemic has forced institutions to carry out activities digitally.

*COVID-19 and eLearning.* The declaration of COVID-19 as a pandemic by the World Health Organization (WHO) has forced the shutdown of educational and organizational activities (Adedoyin & Soykan, 2020). The subsequent effect of the shutdown declared by the Nigerian president on 25 March 2020 led to the closure of organizations and institutions with the acute observation of the social distancing regulation. The pertinence of social distancing negatively affected available learning opportunities (Dhawan, 2020); also, the uncertainty concerning how and when the pandemic will stop and things return to normal resulted in further dependency on eLearning in disseminating knowledge (Goldschmidt, 2020).

As such, the adoption of eLearning in organizations is encouraged as limiting the spread of COVID-19 requires less human interaction. Organizations are also compelled to adopt the use of eLearning for capacity building. Institutions such as Nigeria's Chartered Institute of Public Finance and Accounting (2020) adopted the online method to train public servants on good governance to manage the COVID-19 crisis. This finding is in concurrence with the outcome of the study by Mishra et al. (2020), which stated that the effect of the COVID-19 pandemic led to an educational pedagogical shift from traditional classroom methods to modern approaches to teaching and learning through online platforms. As such, organizations are forced to adopt digital means of carrying out their activities to ensure relevance and share information for meeting purposes and, subsequently, for training programs, among other reasons.

Today, to ensure continued knowledge acquisition for public servants, the most convenient means is through the digital transformation process, utilizing eLearning. Public organizations began by adopting incomplete technology forms during the lockdown, starting with participating in virtual meetings. Findings revealed that technology was one of the main tools enabling public organizations to perform duties during COVID-19. Technology now helps to carry out lots of activities with eLearning. Public servants are now being trained in the comfort of their homes/offices while using eLearning. Therefore, in efforts to curtail the spread of the virus, eLearning has reduced physical contact and serves as the best fit for carrying out training programs in this time of crisis. This stance was echoed by respondent 39, who stated that their organization fully supports eLearning as a medium of developing capacity within the organization, considering the recent shift in technology due to COVID-19 and the advantages of eLearning.

**Resistance and barriers to eLearning adoption in the organization.**

Respondents highlighted several barriers they have felt and experienced towards adopting eLearning.

***Resistance to Change.*** Participants were of the opinion that there was a lot of resistance from public servants to accepting eLearning. The first reason for this resistance is that most public servants are not computer literate and are stereotyped in in-service training. In an organization, some factors that cause resistance to change are self-interest, destabilization effect, and psychological impact (Al-Ameri, 2013). Particularly, civil servants feel reluctant to acquire new technology because eLearning appears to be taking over conventional training; as such, people have a lackadaisical attitude towards the new invention. "Several factors lead people to demonstrate resistance to change: complacency, fear of the new, fear of losing power, ignorance of

the contents of the advantages and disadvantages of the changes and ignorance about changes that occur in the environment" (Goncalves & Goncalves, 2012, p. 297).

As most people find it challenging to change their ways of doing things, resistance to change is one of the significant barriers to implementing eLearning in the organization. The findings on resistance to change are inconsistent with a previous study by Bhardwaj et al. (2015) that found employees consider learning complex and have a reduced interest in conventional classroom training.

***Non-Payment of Travel Allowance.*** Public servants view the payment of allowance associated with travelling out of work location for conventional classroom training as a form of welfare. With eLearning, public servants need not travel out of work to participate; hence, they receive no travel allowance. This change stands as a barrier to eLearning adoption because public servants prefer to go for capacity training through the conventional method as it entitles them to DTA, representing a financial incentive. This is inconsistent with the PSR that describes DTA as an entitlement of public servants in monetary benefit apart from their salary to only travel out of location for a training program (Magbadelo, 2020). With eLearning, public servants are not entitled to any allowance; the only expense to be paid is for data to enable access to the Internet.

**Opinions on challenges eLearning can face in the public sector and the reasons.** The study identified some challenges that eLearning can face in the public sector.

***Inadequate/Lack of Infrastructure.*** According to the study, all respondents stated that inadequate infrastructure is a significant challenge associated with eLearning. This finding is inconsistent with that of Yu (2016), who stated that

insufficient technological infrastructure is one of the most significant barriers governments face in adopting new technology.

The infrastructure identified includes devices, internet connectivity, and speed. This is of major concern to participants as some of the public officials do not have access to technology tools within the organization, which makes it difficult to learn technical skills. Lack and inadequate supply of electricity are also mentioned as significant infrastructural challenges, in line with the findings of research by Nguyen et al. (2020), which revealed that the primary limitations of eLearning depend on technology management and the perspectives of stakeholders towards infrastructure.

***Limited Interaction.*** The physical interaction associated with conventional training is not applicable in eLearning; hence, it is a significant challenge that leads to resistance to the adoption of eLearning within the public organization. Few of the respondents tend more to the physical classroom model as the physical interaction makes learning more interesting for them. Participants value the interaction in classroom training rather than learning, stating that instructors' body and facial language have a positive effect on enhancing knowledge.

Several studies agree with these findings, such as that by Sichau and Fassler (2017), who state that face-to-face training enabled in-depth interaction that allowed learners to estimate current knowledge through targeted specific feedback. Another study by Tang et al. (2020) revealed participants were dissatisfied with the online learning mode due to the limited communication and feedback models. Inconsistent with these findings are those of Suryaman et al. (2020), who report various challenges associated with eLearning, such as the high cost of internet access and limited opportunities for interaction and socialization among learners. Additionally, the current pandemic has further highlighted the importance of technology in the learning



process. In contrast to the findings, the study by Tawfik et al. (2017) stated that high-quality learning includes three types of interaction: learner–instructor, learner–content, and learner–learner interactions.

**The pros and cons of adopting and selecting eLearning for capacity development in public organizations.** Participants believed that despite the advantages of eLearning, there are some disadvantages associated with it. With the eLearning approach of capacity development, training participants can participate in work activities, thereby avoiding absenteeism, attending to their families, and still effectively gaining adequate knowledge. While absenteeism from work is a significant challenge with the conventional approach of training, Cross and Daniel (2018) believe that some employees perceive training as time out of the office to have fun. However, the findings by Kocakulah et al. (2018) stated that absenteeism of employees is at a huge cost to the organization as it can lead to organizational failure and below-target performance.

Participants were of the opinion that eLearning should not be adopted as the only means of training public servants but should be a complementary means of training with the conventional form of training. The combination of the online learning system and the face-to-face mode is referred to as the blended learning strategy (Byrka, 2017), an innovation of online learning. Inconsistent with the findings, blended learning stimulates a higher level of interaction between the learner, instructor, content, and learning interface. Also, according to Cuesta (2018), blended learning allows instructors to customize learning using synchronous and asynchronous modes to deliver learning content and increase interaction. The findings of this study identify that combining both learning modes is a practical plan for

mitigating challenges associated with transformational changes in learning technological development.

As with other parts of the world, poor internet connectivity was identified by the study as one of the challenges associated with eLearning. In the words of respondent 13, eLearning could be challenging in Nigeria *because of poor internet connectivity*. This barrier is not limited to African nations, as Gonzales et al. (2018) estimated that 20% of learners in the United States of America have difficulty maintaining seamless online learning due to internet connectivity issues. In agreement with the findings of this study, studies conducted by Asio et al. (2021), Bishi et al. (2020), and Zulaikha et al. (2021) identified poor internet signals as a barrier for students in the learning process.

Other pros of eLearning are that it reduces cost and saves time; according to respondent 6, with eLearning, you can participate in a training program from any location. eLearning thus saves costs otherwise spent on transportation, food, and accommodation associated with face-to-face training. Inconsistent with these findings, Francis et al. (2019) claimed that online learning cost less than the face-to-face learning approach. Also, Pakdaman et al. (2019) research concluded that the virtual learning method was affordable and more effective than face-to-face.

In contrast with the study findings, Gordon and Gabriel (2021) demonstrated that the conventional system is more cost-effective, as the costs associated with the infrastructural set-up of eLearning may be huge. Some of the participants, about 12%, were of a similar opinion that the initial cost of setting up an eLearning system within the organization is very high. Hence, conventional forms of training are more cost-effective.

***Research Question 3: How will the use of in-service eLearning programs among public service institutions improve the enhancement of the capacity of civil servants?***

Through ICT, learners can acquire competencies that reduce the digital divide and improve education achievement (Al-Shammari, 2020). Encouraging in-service eLearning programs among public service institutions has the potential to improve the capacity of civil servants by providing them with access to training and development opportunities that they may not have otherwise. eLearning can be a flexible and cost-effective way for civil servants to acquire new skills and knowledge, and it can also help to promote lifelong learning and career development. However, it is important to note that eLearning alone may not be sufficient to fully improve capacity, and it should be combined with other training and development programs, as well as opportunities for on-the-job learning and experience. This study's findings also revealed the importance of the government in incorporating the conventional mode of learning and eLearning to meet global technological changes.

**The use of in-service eLearning programs among public service institutions improves the enhancement of public servants' capacity.** Data gathered from respondents revealed that eLearning is new to the public sector, and its training application has proved effective, especially during the COVID-19 lockdown. However, thirteen of the respondents specifically stated that the lack of face-to-face interaction in the eLearning form of training is a significant concern and makes it less effective.

Findings noted that the flexibility and easy accessibility of eLearning had improved the enhancement of public servants' capacity. The findings are consistent with the report by Al Rawashdeh et al. (2021), which stated that eLearning provides flexibility as learners can determine the place and time of delivery. eLearning is not

limited by time and space, making it convenient for learners such as public servants who are learning while on the job (Gordon & Job, 2021). eLearning will thus help enhance Public Service because most tasks within the organization are now carried out digitally. Despite the successes recorded by conventional classroom training, the medium faces many challenges, and technological advances through online learning provide a solution (Haleem et al., 2022). eLearning will help enhance capacity to enable public servants to improve their contributions to organizations, thus improving service delivery.

According to Respondent 26, motivation to use eLearning will push public servants to interact with technology. However, many people cannot still operate computers. As they are not all technology-inclined, making it mandatory for public servants to participate in online training will improve capacity in a long time. The Australian National Training Authority (2004) stated that eLearning for worker in-service training would allow public servants to develop information technology skills. Encouraging worker in-service training in the public sector will also serve as a tool for innovation in job training, prompt social cohesion, and promote cooperation locally and internationally (Tan et al., 2023).

**Research Question 4:** *How does the implementation of eLearning impact the training expenses incurred by public institutions when compared to traditional on-site training methods, addressing the issue of high training costs*

**eLearning effect on the cost of training public servants.** Investment in technology to support the adoption of eLearning is an innovative project that is very profitable and contributes to the total reduction of organizational costs (Dhawan, 2020). Findings from the study are in tune with this opinion, as eLearning was found to reduce the cost of training in the Public Service. Many public servants will not have

access to training when only the conventional form is applicable. Still, eLearning will reduce costs because transportation, accommodation, and food are separate. This will reduce the overall cost of training to governance. In agreement with these findings, Aimuan and Endurance (2019) stated that the organization's reduced overall cost of activity is the most influential factor in adopting eLearning as costs associated with room rentals, travel time, lodging, and meals are eliminated. Respondents were of the opinion that eLearning would reduce costs because the public servants would not have to move from place to place as all they require is to get their data in place with a good network signal. eLearning is also more feasible as it reduces facilitator and coordinator fees.

Despite the overall reduction of cost associated with eLearning, respondent 35 thinks that though eLearning will minimize costs for the government and public servants, it will lead to a lack of motivation as they no longer have access to allowances associated with off-the-job training. Unlike the participants in this study and other research on the cost-effectiveness of eLearning, Zulaikha (2021) is of the opinion that online instruction costs more than conventional instruction, and if development time is regarded, the extra cost will be significant.

**Allocation of the annual training budget to organizations.** The question aims to provide the researcher with data to conclude the adequacy of funds allocated to the organization for training. Findings from the study revealed that participants were unwilling to divulge such information. Respondents also viewed the response to the question as classified information and could not reveal the figure to the researcher. Some respondents stated that the allocation of funds might not be precise as it depends on budgetary allocation and additional funds could be provided when specialized training is required. Also, the dispensing of training funds to organizations

solely depends on government directives. Inconsistent with these findings, Adiele and Ibietan (2017) identified inadequate funding as one of the numerous problems facing manpower training in the public sector. Likewise, Sam-Okere and Agbeniga (2014) stated that funds budgeted for training public servants are usually not released and utilized for their allocated purpose. Also, Audu et al. (2015) argued that poor financial allocation for training is one of the factors that keeps training from producing the targeted impact on employee productivity.

**Effect on training budget if eLearning is adopted for capacity development.** Findings from the study revealed that adopting eLearning for training programs will enhance the utilization of the organization's allocated training budget. More public servants can take advantage of online training instead of spending the same amount on a few employees due to other associated costs for conventional classroom training. The study opined that the training budget would be drastically reduced if eLearning was adopted. This is echoed by Msomi et al. (2016), who revealed that eLearning in the public sector would train a more significant number of public servants at a lower cost. Thus, costs are minimized by using eLearning in the organization (Weller, 2004).

***Research Question 5: What is the contribution of policymakers to ensure the adoption of eLearning in the Nigerian public sector?***

**Recommendations to the government regarding adopting an eLearning system.** This question gathered participants' recommendations and expectations from the policymakers regarding eLearning.

Findings revealed that policymakers can develop policies to make provisions for eLearning infrastructure development in public organizations, especially concerning budgetary allocation. Policymakers can also accept eLearning for their

capacity development and be an example to other government institutions. Additionally, the need for more orientation and advocacy in implementing and using eLearning among public servants is required. This study revealed that resistance to eLearning by some public servants is due to a need for adequate knowledge of the use and importance of eLearning.

Policymakers can play a crucial role in ensuring the adoption of eLearning in the Nigerian public sector by creating policies and regulations that support the integration of technology in education, providing funding and resources for the development and implementation of eLearning programs and infrastructure, encouraging collaboration between government agencies, private sector, and educational institutions to promote eLearning, providing training and support for teachers and other educational staff to use eLearning tools and resources effectively.

Developing and implementing a national strategy for eLearning that takes into account the specific needs and challenges of the Nigerian education system, monitoring and evaluating the effectiveness of eLearning programs to ensure that they are meeting their intended goals, encouraging research and innovation in eLearning to improve the quality and effectiveness of eLearning programs are steps that policymakers could adopt. In ensuring a seamless eLearning process in public service, there is a need for an eLearning policy to address infrastructural and financial challenges (Zainab et al., 2015). Also, the government and policymakers should adopt a basic level of computer training for all public servants, and the use of Wi-Fi should be accessible to the public to facilitate the acceptance of eLearning.

### 4.3 Summary

The research on the adoption of eLearning for worker-in-service training in the Nigerian Public Service was centred on eLearning as an effective means of worker-in-service training and how it can be adopted. "eLearning delivers educational content and instruction through digital means, such as the Internet or computer-based learning management systems. eLearning technology depends on hardware to process digital or analogue signals; software that can encode and decode, collect, store and present communications in visual, textual and/or audio modes" (Ojeyemi, 2021, p. 2). Details gathered from previous literature revealed effective service delivery in performing their duties to the government and the citizens as a consequence of eLearning adoption. As the public sector keeps evolving at an accelerated pace, the need to provide effective service to citizens is becoming inevitable.

eLearning has been identified as a fit strategy for in-service training as its accessibility allows learners to participate in training regardless of their location, its flexibility enables learners to access content and complete learning on their own schedule, allowing organizations to train large groups of employees at once and its cost-effectiveness. The role of public service is to provide essential government services to the public. Public service carries out activities in a government capacity specifically for the benefit of the general public (Shittu, 2020). This can include services such as education, healthcare, police and fire protection, transportation, and social welfare programs. Public servants, such as government employees and elected officials, are responsible for delivering these services and making decisions that affect the well-being of their communities. They are also expected to serve the public's interests and act in an ethical and transparent manner. An effective Public Service



ensures government services and provisions are accessible and benefit the citizens, thus demanding they deliver efficiently.

According to Nwekeaku and Obiorah (2019, p. 30), "governments all over the world, Nigeria inclusive, desire ways to provide welfare services to the citizens with fewer resources, enhance transparency and accountability of public servants". Training can motivate public servants by equipping them with the necessary knowledge, skills, and tools to carry out their responsibilities efficiently (Isa, 2013). This can include training on new policies, procedures, and technologies, as well as opportunities to learn from experienced colleagues and participate in professional development programs. Additionally, training can help public servants understand the broader context of their work and how it contributes to the organization's goals and mission, which can increase their sense of purpose and engagement. Regular feedback and recognition for their efforts can also help motivate public servants to continually improve or invent new modes and strategies for service delivery.

Kok (2013) described eLearning as an innovative means of enhancing learning using electronic technology. This technology-based education system enables learners to be reached anywhere at any point in time. eLearning can be an effective means of training because it allows for flexibility in terms of time and location and provides access to a wide range of educational materials. Additionally, eLearning can be more cost-effective and efficient than traditional in-person training methods. It also allows for interactive and multimedia-based learning experiences that can enhance the learning experience and improve the retention of information. eLearning can be applied to various forms of education, such as corporate training.

As stated by Khan and Markauskaite (2017), the study of technology is essential as it allows self-learning, the transfer of knowledge, and the development of

skills that enhance job effectiveness. Findings from the study also highlighted the importance of the efficiency of eLearning in public service. This chapter focused on the purpose of the research study, credibility, confirmability and dependability, generalization of the research findings and consistency, the results obtained from the study's process, and the analysis of the findings.

Findings from this chapter also indicated that responses to the interview questions derived from the research objectives stated that the advantages of conventional classroom training include physical interaction, enhancing learners' concentration and better understanding. The findings then identified the benefits of eLearning for worker in-service training for public servants in Nigeria: it reduces training costs, is flexible, saves time, eliminates distance barriers, improves learning quality, provides access to unlimited information, and diversifies knowledge and learning. Also, eLearning focuses on learners learning at their own pace. The findings revealed that the traditional learning style lacks some requisite efficiency that eLearning can address. The findings of this study agree with available statistics on the deficiencies of traditional learning environments that negatively impact the learning experience.

One of the deficiencies identified is inflexible schedules; a study by the Babson Survey Research Group found that over 30% of college learners in the United States were taking at least one online course in 2016, indicating that a flexible schedule is important for many students. Another study by the National Center for Education Statistics indicated that only about 20% of traditional classrooms in the United States had access to high-speed Internet in 2015. This lack of access to technology and resources made it more difficult for students to engage with the material and understand complex concepts. Traditional learning environments'

deficiencies are inflexible schedules, limited resources, a one-size-fits-all approach, limited access to education, and high costs, as supported by statistics. These deficiencies negatively impact the learning experience and make it more difficult for some learners to succeed.

Eristi's (2014) review suggests that the current educational system is placing a greater emphasis on eLearning as a way to facilitate active learning among learners. This means that educational institutions and teachers are using technology, such as online resources and multimedia, to engage learners in the learning process and promote their participation and interaction. This approach is seen as a way to increase student engagement and motivation, as well as to provide learners with more flexibility and control over their learning experience. Additionally, eLearning can also provide opportunities for learners to access education remotely and at their own pace, which can be especially beneficial for those who face barriers to traditional classroom-based learning. However, the review also points out that while eLearning can have many benefits, it is important to ensure that the technology used is appropriate and accessible to all learners and that it is integrated effectively into the curriculum and instruction.

Findings from the research are consistent with Olutola's (2015) identification of four obstacles to eLearning adoption: inadequate internet connectivity, lack of appropriate technological equipment, absence of required software, and insufficient strategic planning in determining training needs. This chapter also revealed that inadequate eLearning tools such as laptops, phones, internet devices, and network connectivity, as well as resistance to change, availability of limited knowledge, maintaining status quo, and public sector limited resources, such as funding and personnel, to support eLearning initiatives are barriers to eLearning in public sector

organizations. In addition, the digital divide, as not all government employees may have access to the technology needed for eLearning, limits the effectiveness of eLearning initiatives, while lack of standardization, as with eLearning, different institutions may have different platforms and approaches, which can make it difficult for employees to apply their learning. The study also revealed that reduced/lack of incentive for eLearning in the Public Service, limited learning interaction, the higher possibility for distraction, and low rates of technology acceptance among public servants are challenges faced by eLearning in the Public Service.

Further findings from the study identified challenges associated with conventional classroom training as travelling risks related to training locations, time consumed, high costs, lack of follow-up after the classroom training, training unsuited to learner needs, absenteeism from work, inability to multitask, and teacher-centric learning (Monika, 2013). Responding to these issues, Msomi et al. (2016) stated that eLearning can avoid expenses procured on transportation, accommodation and feeding. The perceived effect of technology in public organizations can vary depending on the specific technology and the organization in question. However, technology is generally seen as a way to improve efficiency and productivity within public organizations. This can include things like automating repetitive tasks, streamlining communication and collaboration, and providing easy access to data and information. Additionally, technology can also be used to improve the delivery of services and make it easier for citizens to interact with their government. Therefore, the perceived effect of technology in public organizations has produced positive results, bringing about digital transformation, improving efficiency, and enhancing knowledge acquisition and convenience.

On the pros and cons of adopting and selecting eLearning for in-service capacity development, the evaluation of the findings of this study is that despite the advantages of eLearning, such as accessibility, scalability, self-directed learning and availability of a variety of resources, among others, adopting eLearning for capacity development in public organizations includes lack of human interaction, technical issues, limited motivation and limited assessment options. These findings are in agreement with several other findings, such as stated by Al Rawashdeh et al. (2021, p. 109), "eLearning allows to observe much flexible learning ways to access learning content whereby learners are allowed to get deeper insights of the information through activities that learners can respond to promptly". The advantage of flexibility and access to unlimited resources at any location offers disabled people the opportunity to advance their education and acquire knowledge and skill that keeps them relevant in their job role.

The study's consideration of improvement in public servants' capacity due to in-service eLearning programs provided that encouraging in-service eLearning programs among public service institutions can improve public servants' capacity by providing them with access to current and relevant training and development opportunities. eLearning allows for flexible and self-paced learning, which can be beneficial for busy public servants. Additionally, eLearning can offer a wider range of courses and resources that may not be available through traditional in-person training methods. However, it's important to ensure that the eLearning program is well-designed and implemented and that there is adequate support and follow-up to ensure that the training is effectively applied on the job. Harnessing the benefits of eLearning as an innovative learning strategy within the organization will definitely intensify learning outcomes (Bubou & Job, 2021).

Considering the cost impact of eLearning, eLearning is generally more cost-effective than on-site physical training because it doesn't require the costs associated with physical facilities, travel, or accommodations. It also allows for greater flexibility in terms of scheduling and location. Additionally, eLearning often allows for self-paced learning, which can be beneficial for some learners. On-site physical training, on the other hand, allows for direct interaction with instructors and other students, which can facilitate learning through collaboration and discussion. It also allows for hands-on training and demonstration of skills, which can be important for certain types of training.

Likewise, policymakers can play a crucial role in ensuring the adoption of eLearning in the Nigerian public sector by implementing policies and initiatives that support the development and implementation of eLearning programs. This can include providing funding for the development of eLearning resources and infrastructure, establishing regulations and standards for the use of eLearning in the public sector, and promoting the use of eLearning through awareness campaigns and training programs for educators and administrators. Additionally, policymakers can work to address any barriers to the adoption of eLearning, such as a lack of internet access or digital literacy among educators and students. Ojeyemi (2021) recommended that policymakers should develop a national policy on using eLearning in institutions to encourage the adoption of technology in learning by both the government and citizens.

As such, the study has contributed to the opinions of other researchers on the positive effect of technology adoption in public institutions. However, the findings also revealed that some public servants prefer the conventional form of training due to its advantages. In line with these findings, the study provides recommendations to

policymakers on actions that will enhance the adoption of eLearning for in-service capacity development for public servants in Nigeria, including imbibing the culture of adopting eLearning as a complementary methodology to transfer knowledge and skills and doing so themselves, developing strategies to sensitize public servants on eLearning and developing an implementable eLearning policy.

## **CHAPTER 5: IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS**

The study focused on adopting eLearning for worker in-service training in the Nigerian public service. The long-existing method for the capacity development of public servants is limited to achieving the objectives of a training program. The study's problem identified is the need for an active approach to the capacity development of public servants due to the limitations of the existing training approach. The study's proposed adoption of eLearning for worker in-service training was prompted by the organizational hurdles encountered due to unproductive capacity development programs in the public service. The purpose of the research was to examine whether and to what extent the adoption of eLearning for worker in-service training in the Nigerian Public Service can ensure that the capacity development of public servants is improved and that they are provided with adequate training required for excellent service delivery.

The training and capacity development programs in Public Service in Nigeria were examined in the previous chapter. The investigation was conducted by inquiring about and reporting the impact of eLearning in training and technology's effect on organizational performance. The learning strategy previously adopted was then identified with some strengths and weaknesses, as indicated in the literature studied and corroborated by the findings of the research. However, a more active approach is required to deliver effective capacity development programs to achieve the objective of training public servants. This implies that the current approach needs to be revised and that a more hands-on or interactive approach may be necessary for the training to be effective. It is observed that more than simply providing information or resources may be needed and that a more interactive and engaging approach is needed to



develop the capacity of public servants effectively. As part of the global trend of technological change, the online form of learning has been developed and aided by the Internet. The study thus investigated the relevance of adopting this eLearning approach for worker in-service training in the Nigerian Public Service to ensure the effective delivery of capacity development programs.

The study adopted a qualitative method using face-to-face, in-depth interviews as the research instrument. The interview was used to generate opinions and experiences of public servants with not less than five years of experience within the public service and who have participated in both conventional and eLearning forms of training. Sixty public servants were interviewed across ten government institutions. Data were gathered and then analyzed using NVivo software while adopting a thematic content analysis method to systematically draw valid inferences and conclusions. The evaluated findings were derived from the themes and codes from participants' responses. The study considered necessary ethical dimensions by ensuring all participants willingly participated in the study without any form of coercion, consent forms were duly signed, and participants were aware of their right to withdraw from the study at any point willingly. To prevent any potential bias, the researcher took measures to ensure that personal opinions did not influence the study's findings. The study ensured participant confidentiality, as no personal identity was mentioned throughout the interview process. Data gathered in hard copies such as consent forms signed, transcribed documents and audio files were all secured in a password Google Drive. Overall, the researcher followed all UREC procedures, obtained necessary approvals before collecting data, and ensured the study was conducted in a responsible manner and with no risk whatsoever to the research participants.

The findings of the study were in line with some studies, but in the same vein, they were inconsistent with some other studies. Some of these findings were unique in the context of public sector in-service training. Therefore, considering the lack of literature about issues and factors that influence the adoption of eLearning for workers in-service training in the Nigerian public sector, the outcomes of this research decently contribute towards the identification and understanding of issues and factors that would influence the adoption of eLearning for workers in-service training in the Nigerian Public Service.

This chapter on implications, recommendations, and conclusions provides detailed information about the research implication, describing the research results based on its expected or conflicting outcomes. The chapter provides an overview of the significance and practical applications of the research and suggestions for future research and improvement. The implications section typically discusses how the research findings can be applied in a broader context, while the recommendations section gives a detailed report on the importance of the study to the researcher and the findings, as well as how it could be applicable to individuals and organizations in the future. The conclusion section summarizes the main findings and contributions of the research, emphasizing the study's results and how it contributed to existing literature and practice, which includes a discussion of any limitations or areas for improvement. Together, these sections provide a comprehensive understanding of the research and its impact.

## **5.1 Implications**

The implications for the research study were obtained from the findings and evaluation of each research question. The literature review identified several sources

that are helpful to the development of eLearning in Nigeria's public sector, measure progress, and identify any challenges in the implementation stage.

The findings identified that methods or techniques that Public Service institutions use for in-service, on-the-job training are widely popular, followed by conventional classroom training organized within and outside the organizations. A less common and more recently adopted method is eLearning. The mention of eLearning by public servants as a method of training in public service is significant as it implies that they are gradually accepting it as a means of gaining knowledge. Previous research has reported on public servants' resistance to accepting technology, which was mentioned by some of the study's respondents. However, the study also revealed that eLearning is becoming an essential strategy for training in the Public Service, especially during the COVID-19 pandemic and considering all the accompanying restrictions. The following implications for practice were identified and are discussed in relevance to the research questions.

#### **Methods Adopted by Public Service Institutions for In-service Training.**

Responses support other studies on the different means of worker in-service training. Of significant importance are the conventional, also known as the traditional, face-to-face training conducted on or off the job and eLearning undertaken primarily while on the job. The study's findings revealed that training and capacity building within the public service is vital for all public servants, and they are to participate in it at least once a year. Several studies have linked the lack of productivity and inefficiency in the Public Service to the lack of capacity in workers. As shown by previous researchers, a drastic decline in manpower productivity is related to inadequate skills among employees (Peretomode & Chukwuma, 2016;

Ofobruku & Nwakoby, 2015; Oni-Ojo et al., 2014), further necessitating frequent training.

The implication of this finding is in line with Obi-Anike and Ekwe (2014), who report that continuous training for workers within the organization keeps them ahead of constantly changing technology and helps unlock their potential. Another implication of these findings in practice is that Public Service institutions should continue upholding the mandate of ensuring all public servants are trained in a year either through conventional or learning approaches. This is in line with Okafor and Agu (2020), who have witnessed the government set in motion training and capacity development activities within the organizations.

***Training of Public Servants using eLearning.*** As indicated by the study, technological advancement has compelled many organizations and public servants to apply eLearning for organizational training. These findings are inconsistent with the research outcome conducted by Zalat et al. (2021). The study further revealed that public institutions utilize online organizational activities and train employees, which implies that technology has gradually encouraged organizations to adapt to previously resisted learning modes. All organization employees interviewed in this study affirmed that eLearning is gradually becoming part of a usual strategy to train public servants. In encouraging the adoption of eLearning in Public Service institutions to improve the enhancement of the capacity of public servants, the study revealed that some public servants believe that eLearning enhances their abilities.

In contrast, some public servants felt the effect of eLearning in improving capacity is low due to the limited interaction between learners and trainers, as compared to more conventional training, which is face-to-face and in a classroom, enabling deep discussion and interaction. These findings agree with several other

studies, such as that by Dhull and Sakshi (2017), which state that learners can feel isolated during online learning due to a lack of physical interaction and the presence of other learners. Thus, eLearning forces learners to undergo a lack of relationship-building and interaction (Arkorful & Abaidoo, 2014). However, this is in contrast with Downes (2010) and Mpungose (2020), who state that due to the rapid development of technology, learning is socially constructed by students. This implies that eLearning is more participatory as it engages instructors and learners in the social construction of knowledge.

**The use of In-service eLearning Programs among Public Service Institutions to Improve Public Servants' Capacity.** Findings from the study revealed that the coronavirus had constrained public servants to function virtually. To keep up with trends and be competitive, public servants adopted learning for sharing and receiving knowledge during the coronavirus lockdown. Technology and the Internet thus became an essential element to ensure activities continued in organizations as the only means for communication. As these public servants are adults, they place importance on learner-centred education that is flexible (Bakia et al., 2012). The respondents testified to the flexibility of the eLearning mode of worker in-service training and its ability to provide both synchronous and asynchronous tools for learning. This is inconsistent with the literature review of the synchronous and asynchronous modes of learning and their effectiveness in improving learning, which enhances the adoption of new technology and its application in organizational training (Bhardwaj et al., 2015). As the OECD (2020) identified, eLearning is suitable for adult learning as it can address some challenges associated with conventional training, such as shortage of time (work or family-related), lack of financial resources, and inconvenient place or time of sessions. In accordance with Smedley (2010), adopting

eLearning provides organizations and learners with adequate flexibility in the time and location of receipt of learning information.

The study found that, although eLearning is said to have some disadvantages and limitations, such as decreased motivation, delayed feedback, and lack of or limited interaction, it should be encouraged as a medium of training public servants, as the challenges can be overcome with the support of instructors who adapt teaching strategies to the needs of learners (Coman et al., 2020; Yusuf & Al-Banawi, 2013). In contrast to the study conducted by Zalat et al. (2021), this study's participants strongly agree with the acceptance of eLearning for capacity development activities due to its perceived usefulness and ease of use. The review by Akorful and Abaidoo (2014) also buttressed the study's findings by stating that the role of eLearning in organizations has increased access to information and provided an environment for quality collaboration between instructors and learners, which has improved organizational productivity. Inconsistent with the findings, Ojeyemi (2021) stated that eLearning is an effective way for the public sector to provide its employees with continuous learning to equip them with the skills they require to be productive and enhance the public sector outcomes.

A potential limitation that affects the implication of this result is the limited number of research participants. A higher number of research participants will enable the researcher to conclude the level of eLearning weaknesses identified and the significance of its effect on in-service training for public servants. As with other literature, eLearning should be encouraged as a means of training. As such, the results obtained from this study on enhancing public servants' capacity through eLearning are complimentary and ought to be further investigated.

**eLearning Effect in Reducing the Cost of Training Public Servants.** One of the main advantages of eLearning, as identified in the study, is its cost reduction in training expenses. It was concluded that eLearning as a means of training public servants would drastically reduce the cost of training. Several other studies mentioned cost reduction as one of the significant benefits of eLearning as it saves time and money that could be expended on travelling expenses (Cantoni et al., 2004; Magaji & Adelabu, 2014; Ojeyemi, 2021).

The positive implication of taking up eLearning is that it will allow funds to be diverted from training budgets to other important areas of the organization that are short of funds. Thus, more public servants can be trained with available resources, and the public servants can frequently participate in regular training programs to improve their skills rather than on a yearly or bi-yearly basis, as associated with the conventional form of training.

*The cost incurred for eLearning versus on-site physical training. In evaluating the information gathered on the cost incurred for eLearning versus traditional classroom training, the huge high cost of setting up technology gadgets and providing necessary devices to public servants to enable easy access to eLearning was considered a huge cost. This is echoed by Pakdaman et al. (2019), who concluded in a systematic review that one of the limitations associated with eLearning is the relatively high initial cost of set-up.*

After the cost of initial set-up, however, findings revealed that costs associated with accommodation, transportation, and training materials for both the participants and the trainers in a conventional classroom training are saved while using eLearning for the same capacity-building program. Findings from the study did not reveal the exact amount allocated or available for an organization to train its employees, as some

relevant officers claimed not to have such information. In contrast, others stated that it depends on several factors and that the exact amount cannot be ascertained.

**Contribution of policymakers to ensure the adoption of eLearning in the Nigeria**

**Public Sector.** To enforce order in a democratic country like Nigeria, lawmakers formulate and then pass policies to affect its implementation. In ensuring the adoption of eLearning for training public servants in the Nigerian Public Service, the study revealed that policymakers are recommended to formulate policies that will encourage eLearning in training public servants. This is supported in a review by Kong et al. (2014) on the eLearning policy in school education in four major Asian cities, as they recommend developing an eLearning policy in curriculum integration, student/learner–instructors professional development, and capacity building. These policies are then to be used in developing models that will subsequently be used to plan and implement eLearning activities. The implication of developing and implementing an eLearning policy is related to empowering learners to be proficient in the use of ICT, providing adequate professional development on eLearning to instructors, and ensuring proper infrastructure to ease the use of eLearning.

Other recommendations include the adoption of a basic level of computer literacy for all public servants and essential equipment and services required to make eLearning accessible, such as free internet connectivity, be made available in all public institutions. This will ease extra data costs faced by public servants, serving as a backup internet access source to mobile data, which is more reliable than the other wired internet connectivity that could be limited with space.

In delivering adequate and quality training to public servants and considering the rapid and ongoing change in the technological space, eLearning has been advocated for as a supportive teaching and learning methodology alongside



conventional training. The study report presented by Olaosebikan et al. (2019) is similar in that it found the adoption of different training methodologies to be essential while designing a training program to enable trainees to gain knowledge effectively. These combined training methodologies are observed to enhance the knowledge acquired as participants can follow up with learning virtually before or after the classroom training.

The outcomes of this research are that it has contributed to the literature and knowledge in the field of eLearning adoption in Nigeria by reviewing the literature of eLearning generally and exclusively, listing and organizing the related studies about its learning adoption, and exploring the context of workers in-service training in Nigeria, which can be applied to other developing countries. The study also provides information on the different approaches to training in the organization, the usefulness of each method, their limitations and benefits, and preferences for teaching and learning techniques.

The study will be incredibly beneficial to the Nigerian public sector, as eLearning is a new model of learning proposed by the Nigerian government, fast-tracked by the global pandemic. As limited studies on eLearning in the Nigerian public sector are available, the study gives an insight into eLearning and supports the public institutions in identifying gaps in the implementation and adoption of eLearning.

## **5.2 Recommendations for Application**

The study's findings led to the following recommendations highlighted and discussed in this section as steps to address the identified challenges indicated by the study results.

**Advocacy and Sensitization on eLearning.** Considering the advantages of eLearning and its effect in public institutions, the study recommends proper and adequate advocacy and sensitization of public servants regarding eLearning in the form of constant engagement and sensitization meetings. Eke (2009) states that the government should create eLearning awareness for public institutions and encourage public servants to join in eLearning. The use of technology has influenced the educational sector and other sectors of the economy and brought many changes in the teaching-learning process. Technology has aided the transfer of knowledge as modern equipment and tools have made learning more engaging, easy, convenient and interactive (Raja & Nagasubramani, 2018). As the effectiveness of using technology in different sectors over the years has been associated with the level of the recipient's knowledge on its use and advantages, knowledge transfer and acquisition needs to be effectively presented to the public servants through awareness and sensitization to take advantage of the penetration of technology into the educational sector. As the custodian of the development and implementation of policies, the government must demonstrate adequate support for eLearning by implementing procedures in support of technology and eLearning strategies.

Participants of the study associated reluctance and resistance to eLearning in education by public servants with a lack of awareness of the benefits of eLearning to an individual and the organization. Eze et al. (2018) stated in their report that poor awareness is a significant factor that causes resistance to eLearning; hence, this study recommends spreading awareness among public servants of the use of eLearning for capacity development programs. The government should educate public servants using proper and adequate orientation on eLearning for capacity development in the workplace through public institutions.

### **Involvement of Public Servants in the Conceptualization and Adoption**

**Process of eLearning.** In the conceptualization and adoption phase of eLearning, public servants are to be involved in the planning and procedure. The involvement of public servants will be beneficial as the process will allow them to understand eLearning while implementing it. Including a section of public servants in formulating an eLearning policy framework will further deepen interest and a sense of belonging and ownership during the adoption phases of in-service training. There is an ever-growing awareness that policies fail primarily during the implementation stages Hunter et al. (2019). The study by Chesikaw (2016) also concluded that a critical factor in obtaining total support and implementation of a policy is the involvement of beneficiaries from the formulation stage.

**Increase in Budget Allocation.** Findings from the study revealed a lack of insufficient funds allocated for the capacity development of public servants. Though eLearning is cost-effective in the long run, its initial cost of setting up could be huge. Hence, the government must play its role in ensuring more funds are allocated for implementing eLearning strategies in the Public Service. The lack/inadequate funds for eLearning is a significant challenge to the implementation of eLearning as funds are not available to acquire essential infrastructure, technically qualified experts and poor planning, which, according to Bhalalusesa et al. (2013), increases the possibility of eLearning projects. The Nigerian National Assembly should ensure that while MDAs approach the legislative for review and approvals for the yearly organizational budget, depending on the organization's size, a commensurate fund should be allocated for eLearning. The availability of funds to be expended on effecting eLearning within the organization will enable the acquisition of appropriate infrastructure.

The recommendation to increase budgetary allocation to public institutions is to mitigate the challenges highlighted in the literature reviewed by Zainab (2019) and Montgomerie et al. (2016), identifying the lack of technological devices, technical experts accessible, or affordable, efficient internet connectivity. Lack of technical skill is also a significant challenge associated with eLearning in the Public Service, and it is recommended that more funds be allocated for the training of technology officers. Also, funding challenge towards the purchase of technical hardware for the eLearning centre pose a huge problem, so it is highly recommended that maintenance officers be adequately trained to make sure the equipment for the eLearning receive adequate and timely maintenance. This will enhance continuity and reduce unnecessary interruptions in the eLearning process as a result of equipment failure. This process will also make room for knowledge acquired to be handed down by older or retiring officers to new and upcoming colleagues.

**Flexibility of Public Servants.** Flexibility in learning mode is identified as one of the primary advantages of eLearning, as revealed in the study and other literature. The study on the impact of eLearning on students and teachers by Burac et al. (2019) reported that learners believed in eLearning due to its potential to enhance the learning process and offer flexibility to support better understanding in learners. Furthermore, Bakia (2012) believes that eLearning popularity is due to its flexibility in accessing learning content and resources alongside its delivery mode. Flexibility in eLearning removes barriers of space and time and facilitates collaboration among learners at their own pace (Akorful & Abaidoo, 2014).

One of the challenges identified from the study is public servant's resistance to change. Considering the changing nature of the world due to innovation and technology, it is of the essence for individuals and organizations to be flexible in

accepting change to enable them to keep abreast of issues. This study recommends providing adequate information to participants and allowing public servants to participate in activities to implement eLearning. The literature review revealed individual perception, loss of freedom, fear of the unknown, and threat to position as some of the reasons public servants are non-flexible to accepting the change accompanying eLearning. Disruption to traditional on-site learning systems and unfamiliarity with online means of learning are factors that lead to resisting eLearning (Vivolo, 2016). Of prominence to opposing eLearning, as reported by Mpungose (2020), is the digital divide, as some public servants are not accustomed to the Internet and technological devices. In order to make public servants more receptive to change and show eagerness to learn on the eLearning programs, rigorous sensitization exercises through internal jingles or adverts that will run exclusively within the Public Service organizations should be carried out and should come with promises of promotions after such training exercise.

**Training Needs and Motivation.** The study recommends that adequate training needs assessment of public servants and the organization to be carried out before determining the training suit for an individual. Findings from the survey revealed that one of the weaknesses associated with capacity development programs in the public service is that some training programs do not meet the specific needs of the participants and thus make the program ineffective.

Public servants against the adoption of eLearning gave a common reason: lack of incentive for participants of eLearning as opposed to the financial incentives in terms of per-diem accrued to public servants when they participate in conventional classroom training. The study recommends the provision of incentives to public servants when they participate in eLearning. This motivating factor could be monetary,

organizational recognition, or promotion. Also, upgraded software, an adequate information technology unit, a high-functioning computer, and other relevant devices with a stable network connection will boost the motivation of eLearning participants.

**Blended learning.** To take advantage of the opportunities presented by eLearning effectively, the study recommends a blended form of learning. Technology has affected the education sector and has influenced the discovery of several learning methods. Budhar (2017) supports the findings of this study that the integration of technology into the classroom has brought about a great way to reach diversity in learning styles. By combining eLearning and classroom training, training participants can benefit from the advantages of both learning methods. Classroom training provides a structured and interactive learning environment where participants can interact with trainers and peers in real-time, while eLearning offers flexibility and convenience to learners. Additionally, synchronous eLearning allows learners to interact with instructors and peers in real-time, while asynchronous eLearning enables learners to access pre-recorded materials and learn at their own pace. By combining these methods, organizations can design a blended learning program tailored to the unique needs of their training participants.

The use of blended learning enables training participants to have access to a variety of online courses and services after the classroom training while helping them access multiple pathways to personalize instruction and gain a deeper understanding of what has been taught.

**Basic Computer Literacy.** Findings from the study revealed that resistance to eLearning by some public servants is mainly associated with a lack of knowledge in attaining basic computer literacy. This study recommends that a clear vision is put in place so that public servants see the acquisition of basic computer literacy skills as

essential, with recommendations that policies should be developed and implemented to ensure that certification in basic digital literacy should be a criterion for employment in the public service, thereby enabling nearly every aspect of work and life. For the public servant to be equipped with essential digital skills, aid should be provided in improving public servants' confidence and readiness to accept and adopt eLearning and take advantage of opportunities brought by the ongoing advances in the eLearning platform.

The Public Service is advantaged by such skills as it can then inventory existing policies and programmes, identify a country's needs, and conduct an overall assessment of how current policies and programmes meet that country's needs. The up-to-date stage of e-government extends outside outsourced requests. It involves citizens, businesses and other governments in collective, virtual experiences that conventionally exist in real-time and space (Schelin, 2004). This legislative effort was accumulated in enacting the 2001 E-government Act, which provided the organizational and financial infrastructure of widespread e-government applications (Schelin, 2003, p. 124).

Many government administrations have introduced the International Computer Driving License (ICDL) as a fundamental element in their e-government programs, connected to validating the adeptness of their entire administration. That proficiency has become essential for all public servants, which digitally completes the development of public service approachability. Without education and competencies, online public services have no chance of becoming efficient, and most governments have an understanding of this. For instance, the Tertiary Education Trust Fund (TETFund) signed a memorandum of understanding with ICDL during the 2021

ICDL Africa Forum held in Kigali, Rwanda, based on providing digital literacy to the staff of the Fund's beneficiary institutions across the country.

As Bogoro (2021) stated, "In the 21st Century, no nation will be competitive with no digital literacy; it is a national imperative". Although the lack of motivation of those who have worked in the field for more than 40 years has contributed to the difficulty of e-government implementation, they continue to pay homage to the old bureaucratic methods. Very few of them can overcome those mental barriers and begin using computers at the level required for effective e-government implementation.

**Adequate Provision of Technology Infrastructure.** Reports gathered from the study identified the lack of sufficient infrastructure as one of the significant challenges of eLearning in the public service. The study recommends the provision of appropriate and proper infrastructure and technological devices required to make eLearning accessible and convenient for public servants. Infrastructures such as mobile devices, computers, and free and fast internet connectivity should be considered essential devices available in adequate numbers in public institutions. The importance of fast and reliable internet connectivity is to enable unhindered disruptions such as poor-quality visuals and audio during the learning period, which can strain the eLearning experience.

**Draft a Strategic Plan to Measure eLearning Success.** The study recommends the draft of a strategic plan to monitor and measure the success of eLearning in public institutions. The strategic plan supports measuring the outcomes of eLearning programs, considering the capacity development program objectives used to establish standards in the public sector. The strategic plan should include how Institutions can enhance eLearning and blended learning performance, how



organizations can enhance the online instructional materials and trainers, and ways to improve organizational readiness for knowledge acquisition using eLearning. For successful eLearning in institutions, the strategic plan for eLearning outlines the reason for transitioning more towards eLearning, the procedures followed by the institution to develop an acceptable plan within the institutional community, and the circumstances that enhance the process. It also indicates that concentrating on objectives, core values, principles, faculty development, and training is critical for transitioning from face-to-face teaching to eLearning. With a sound strategic plan for eLearning, the instructors, above all, will understand the different options available to them thoroughly and keep abreast of the changing needs of employers. Therefore, the plan recommended that organizations combine the move to eLearning and adopt new modes of teaching and learning that reflect the requirements of a workforce in an information-based community. A strategic plan guides your organization in all its activities. Creating a plan compels you to choose your long-term goals, rank your priorities, and help everyone understand the steps you must take to get where you want to go. It is recommended to have a strategic plan as it communicates your goals, strategies and programs, Engages, motivates, and retains external and internal audiences (e.g. board, staff, donors, etc.).

**Development of Specific Learning Content.** To effectively utilize eLearning for in-service training of public servants, it is recommended that appropriate learning content that meets the training objectives and is suitable for the target audience should be developed. Organizations and trainers should procure software to create learning content that will include video and audio to enhance synergy between the participants and the trainers (Brown & White, 2020). The eLearning platforms should be user-friendly and easily accessible to participants (Anderson & Davis, 2018).

As earlier stated, the purpose is to engage the audience. You cannot achieve that unless you are fully aware of learners' habits, characteristics, learning needs and behaviors. If you do not define the target audience, it will be hard for you to develop a project that genuinely resonates with them. The best strategy is to commence with a clear idea of your target audience: what knowledge and skills they already possess and what they would need more for further development (Smith & Johnson, 2019). Similarly, it would help if you had an idea about your audiences' educational background, preferences and learning abilities. When you have such a picture, you can define what learning achievements they can be interested in. And if you have something to propose in such a situation – there is an unmistakable sense to work on your project further. When you know what to propose to your target audience, you need to formulate those proposals that are called learning objectives.

The study recommends a precise definition of course goals. Knowing the goals for a course will help clarify what you want the students to learn and accomplish. These course goals in mind will inform decisions on specific content to select, teaching methodologies to apply, and an appropriate evaluation system. When course goals are defined, trainers focus on learners' mode and pace of learning. In developing training goals, trainers are to determine the knowledge gap in the organization or the individual and learning to be decided relating to physical and cognitive development. Goals should be specific and should be accessible. In developing the goals, trainers should consider the learning objectives that the learners should remember after the training program, the planned positive effect on learners, the skills to be acquired, and the relationship between the training program and the learner's disciplines. Training goals could be basic, fundamental, or advanced in the specific target areas.

Furthermore, it would help if trainers or training institutions learned about the learners who typically take the course (their level of preparation and academic interests) to think about how your training program will help this group of learners build their knowledge and understanding of the topic. For effective development of learning content, the trainer can consider the following steps;

***Determine course content.*** Choose the main topics and determine the order in which you will teach them. To acquire an initial list of course topics, look into current learning materials and literature. Recognize the learner's previous learning and knowledge and refine the list of potential goals based on the learner's characteristics.

***Determine the structure of the training program.*** Trainers are to organize training topics in a well-structured order, starting with the basics to the complex. Topics can be chronological, topical, conceptual, survey-oriented, or process-oriented. The development of a rationale to guide the delivery of the program will increase the learner's interest and ease a swift understanding of learning content. Trainers can also articulate the justification for the learning structure.

***Maintaining decorum during online learning.*** Findings from the study revealed that one of the most reoccurring challenges associated with eLearning is a lack of concentration and interaction among trainees and participants. This study recommends thorough supervision of eLearning training participants, applying different learning modalities, and ensuring lessons are given quickly with more extended periods allocated for discussions to increase interaction, as shorter lecture times will sustain participants' attention span.

***Decision-makers should adopt eLearning as a means of training public servants.*** Considering the importance of eLearning on worker in-service training, the study recommends that decision-makers within the public organization such as the

Chief Executive Officers, Executive Secretary, Director-General or Directors in charge of training in the respective organizations should approve and adopt the use of eLearning for in-service training. The adoption should be extended to the policymakers so that eLearning could gain some attention back through policy. The policy will further enhance the implementation of eLearning for training within the organization as provisions are likely to be made available for all the infrastructural and human capacity required for practical functionality.

Findings from the study revealed that most public servants have personal reasons that influenced their reluctance to accept eLearning. These personal opinions include fear of the unknown, maintaining the status quo and resisting change, lack of required knowledge and fear of missing out or failure. The study recommends increasing public servants' confidence in eLearning for in-service training. The acceptance and adoption of eLearning as a medium of gaining knowledge will improve work performance and enhance job productivity (AbuShanab et al., 2015). Increasing public servants' confidence can be achieved through sensitization programs, awareness creation on the availability of eLearning to equip individuals and organizations with required skills, accessibility to adequate and required knowledge and providing relevant infrastructure to ease the use of eLearning for in-service training.

The outcomes of this research have provided empirical investigations and validations to the factors and issues that would influence (positively or negatively) the acceptance and adoption of eLearning within the public service in Nigeria. These factors were identified and discussed in Chapters 2 and 4 and were examined and validated in Chapters 3 and 4. Although these qualitative findings were conducted across MDAs in Nigeria, they could be adopted in several other sectors that have

similar cultural and contextual characteristics within Nigeria. Furthermore, this research could serve as a decision-making tool to support the efforts of public institutions saddled with the responsibility of policy formulation that directly affects public sector engagement.

### **5.3 Recommendations for Future Research**

The demand for eLearning programs has grown rapidly, hence the need for research into eLearning adoption for in-service training, which is core to its success in the public service. Several authors agree that eLearning is regarded as a new solution to bridging the knowledge and skill gap through delivering needed training to public servants. Online learning generally requires several platforms for implementation; therefore, an appropriate platform to equip public servants with the necessary skills should be adopted. eLearning uses diverse instructional methods, combines collaborative activities with individual learning, and personalizes learning paths according to learners' needs (FAO, 2021).

The study used a qualitative research approach to derive information on adopting eLearning for worker in-service training in the Nigerian public service. Qualitative research is characterized by limitations that could affect the study's results over time, as perceptions of interview participants might change with time. The outcomes derived from the study's findings can be used as a frame of reference for further research in different contexts or to examine other issues and factors that can have an effect on and influence the adoption of eLearning.

Despite the research and studies that have been conducted to investigate and study factors influencing eLearning adoption, the researcher argues that no previous studies have attempted to address the topic of this research work. The study has

further highlighted some valid points on which further research study will be beneficial. Also, there are numerous additional areas that the study pointed out the need for more research work. Therefore, the following areas and topics are suggested for further investigation.

*Conduct broader research to include policymakers' opinions and perceptions on the adoption of eLearning for worker in-service training in Nigeria's public sector and the development of an eLearning policy.* Findings from the study indicated the importance of policymakers in adopting eLearning for the training of public servants. In most cases, the policymakers are described as the decision-makers, leading by example. According to Participant 11 of the study, *policymakers are to establish and supervise the implementation of policies that are Information Technology-driven support organizations to adopt eLearning, as the public service needs to move from an analogue system to adopt modern technology.* Findings from the study stated that policymakers are saddled with essential responsibilities that influence the use of eLearning for the capacity development of public servants. Also, further study should investigate public servants' opinions regarding the advantages of eLearning and their roles in the implementation of eLearning for in-service training. Almaiah et al. (2020) are of the opinion that the policymakers could seek the government's support to provide the required infrastructure to ensure more accessible use of eLearning within the public service.

Considering that eLearning is increasingly becoming an effective strategy of educational delivery, the study is proposing the development and launching of a policy document on the eLearning strategy. According to Dumbraveanua and Peca (2022), eLearning policies and strategies present guidelines for the effective designing and delivery of e-learning, which enhances a deep understanding of the eLearning

approach. The development of an eLearning policy is to project further the government's commitment to adopting eLearning. Literature earlier reviewed clearly states that eLearning has brought about a significant change in educational delivery. Information, communications and technology (ICT) have facilitated several changes in many sectors, which the educational sector is not exempted from. The influence of technology has brought about policy shifts and total change in policy in several sectors to enable the adaptation of technology to achieve significant landmarks. Navajo Technical University needs to develop an institutional eLearning policy that focuses on eLearning development and support, instructional development training, services and opportunities, eLearning environment, intellectual property, and eLearning expectations. The study recommends developing an approach that will enhance the government's commitment to eLearning, create a strategy for ensuring investments are made into the infrastructure required for eLearning, continuously create innovative teaching and learning, establish a sustainable eLearning implementation strategy and build technical quality standards as indicated in the study by Isroani et al. (2022).

*eLearning in times of crisis.* The study recommends further research on how eLearning can be applied in times of crisis. As a developing country, Nigeria experiences some peculiar problems and is also affected by other international turmoil. The study revealed that eLearning in public institutions and public servants became essential during the Coronavirus pandemic. The coronavirus pandemic has forced public institutions to close down due to the lockdown. The lockdown and other effects of the coronavirus have also prevented people from moving from one location to another, adversely affecting capacity development programs for public servants. eLearning became an option, and other online platforms have been used to achieve

some organizational goals of training public servants. As a result of the coronavirus, public institutions' activities moved online, including the use of online learning modes to reduce the spread of the disease, as stated by Harvey (2020) in the literature review. A recommendation for future research is to investigate the adoption of eLearning during times of crisis. This is to understand the factors that enable the effective utilization of eLearning systems in emergencies. This could involve examining various crisis scenarios, exploring how public servants can effectively utilize online platforms, and investigating the benefits of eLearning in such situations. The COVID-19 pandemic disruptions accelerated the process of e-learning, which resulted in several fundamental changes in the teaching and learning process (Mohamed et al., 2023).

***Further studies should be conducted using a broader audience to include more public institutions and participants.*** The study recommends conducting a more comprehensive study to have the opinion of more public servants selected from more institutions to gather views on the adoption of eLearning for worker's in-service training. The study used a qualitative approach with 60 public servants as participants for data collection. A more robust analysis is proposed to include more government organizations and public servants at the Federal, State and Local Government levels. A larger sample size can provide the depth needed to address some complex research questions and gain a deeper understanding of some concepts that are also important to the study (Denzin & Lincoln, 2018). The wider the sample population or respondents, the more the probability that the findings would differ, or in some instances, the quality of research findings can be extensively improved. Therefore, a more comprehensive study must be carried out to include more MDAs across the country.



***Assessment of the implementation of eLearning in Nigeria's public sector.***

Findings from the study revealed that some public organizations have started using online platforms for meetings, seminars, workshops and training. The study recommends the assessment of online learning from its inception within the organization. The study should cover areas such as the level of acceptability of online platform activities over the years, observed benefits of eLearning, challenges associated with eLearning and a general overview of eLearning as a means of worker in-service training in Nigeria's public service. The recommended study assesses the effect of online learning activities and investigates whether the initial objectives of initiating the process are achieved. The guided research should identify the challenges and develop strategies to improve and provide quality in-service training to public servants. Mdhlalose (2020) is of the opinion that training programmes in developing companies have yielded fruitless expenditures due to a lack of necessary strategies for learning implementation.

***The study is to provide different reports and submissions of research on the adoption of eLearning across all levels of government.*** This study recommends that the research related to the ones mentioned above be conducted at the local and state arm of government. It is recommended that eLearning be adopted into categorized learning across the regions; in the case of Nigeria, the six areas can connect to the internet and other intranet platforms and conduct in-service training for public servants simultaneously; this is critical to the development and adoption of eLearning across the regions. The importance of a collaborative learning approach, as proposed, enables learners to construct knowledge by interacting with others and working towards common goals (Trongtorsak et al., 2021).

***Training of eLearning lecturers.*** The study recommends the appointment and training of lecturers in the case of eLearning in Nigeria's public service, as this may be the first step in achieving in-service eLearning training. The study by Bubou and Job (2021) identified one of the challenges of implementing e-learning as the inability of trainers to assist learners and inadequate trained human resources to address the online learning needs of learners. The students abound, but lecturers with professional computer qualifications need to be improved in Nigeria, so measures must be taken to employ or train such personnel and equip them with the requisite tools to carry out such training for public service. This is very suitable for the success of in-service training in public establishments. Second, the infrastructure for eLearning must be put in place first. The maintenance of such facilities is regularly carried out and readily available so that eLearning can then be relied upon to function in the public service across all regions in the Federal Republic of Nigeria.

***Research into technology infrastructure.*** For effective adoption and implementation of eLearning for worker in-service training in Nigeria, there is a need for continuous research into the required and adequate technology infrastructural needs. Technology infrastructure has characterized current and future needs in daily activities. Furthermore, in the increasingly competitive business environment, information technology (IT) infrastructure is an essential view of all phases of human life, including business activities where organizations must keep up their IT developments to improve their performance. Your business's information technology infrastructure comprises hardware and software components such as your computers, data centre, software applications, and facility, among others. The components are applicable in creating effective communication, efficient processes, and productive workflow within your company.

Information technology infrastructure is the basic foundation of IT capabilities, including equipment, software, cabling, and human expertise, which helps realize a reliable level of services. This capability is also essential for creating business value through IT investment to support its process and company strategies (Ogiela & Ogiela, 2012).

***Further research on the challenges of eLearning as a strategy for worker in-service training.*** Attracting new employees and ensuring workforce retention is possible with continuous training within the organization. The study revealed that increased productivity, competitiveness, and profitability had been identified as factors to improve training. Training employees enhances change attitudes, behaviour, knowledge, advanced skills and abilities to prepare for improved performance in job roles. The research objective was to investigate the primary function of eLearning in small and medium organizations to develop employees' capacity using ICT. Training and development in such organizations should be prioritized as employees' knowledge and capacity are crucial factors that affect the organization's effectiveness and efficiency.

The COVID-19 pandemic that caused a significant lockdown has forced many workers to telecommute. Employees and employers had to scramble to set up workspaces and put procedures to keep their workflow intact. When it comes to training, conferences, workshops, and instructor-led classes that gathered everyone together in one room were cancelled considerably. Although virtual platforms like Zoom have been effective for meetings, they are only sometimes practical for training like other online learning platforms. Working out of the office location has changed the process of typical employees' days: The start and end of a workday have become flexible. People avoid a commute but must shuffle other at-home commitments, such

as homeschooling. Having a scheduled meeting for training might not work out, and many employees might feel empowered to skip scheduled sessions as home life encroaches on work life. eLearning is deployed to impart skills and knowledge that employees need but can learn at their own pace. Every individual is a different learner, and eLearning can help companies overcome that challenge and ensure all employees are trained consistently. For global companies, training employees for the same skill can be challenging. This is where eLearning comes in. eLearning is scalable and, as a result, cost-effective. An eLearning course can simultaneously be deployed worldwide to employees, ensuring steadiness in the information they receive and their skills. In addition to these, eLearning can help boost employee morale by enabling regular real-time feedback, and management can easily track their progress (Shahriar et al., 2023).

#### **5.4 Conclusion**

The perception and acceptance of eLearning as a means of training public servants in the Nigerian public service was an essential step in mitigating many challenges associated with effective service delivery by public servants related to the lack of required knowledge in different areas of expertise. Learning has also been greatly influenced considering the effect of technology in the present global changing world. The use of eLearning as a mode for in-service organizational training is observed to increase the knowledge and competency of employees.

Training and capacity development is considered essential investment in human capital development within the organization, and the overall efficacy is directly related to employee capacity development. In the public sector, public servants are government employees who carry out government functions, including

developing policy, implementing policy, monitoring activities, and delivering service to the citizenry.

For effective implementation of the policies and programs of the public service, public servants are to be equipped with updated and relevant knowledge to ensure the delivery of quality services to the citizens. Training and capacity development within Nigeria's public service has, over the years, been faced with some challenges that previous researchers have identified and further corroborated by this study. An institution is saddled with providing employees opportunities to improve existing skills or acquire new skills to improve service delivery and productivity.

Nigeria's public service has a traditional means of training public servants that have been limited due to factors such as time consumption, huge capital investment and challenges associated with distance and location. The researcher identified these problems and studied the need for proactive capacity development to manage human capital within the organization. The widely accepted current approach to training does not provide maximum output in an employee, hence the importance of adopting a technology-influenced approach such as online learning.

According to Msomi et al. (2016), several factors have been associated with the popularity and acceptance of eLearning. The conventional training model is gradually becoming unsustainable as technological advancement has made learning cost-effective, with opportunities for continuous learning through eLearning. The significance of the study was its inquiry to identify the advantages of eLearning to public servants' capacity development, the benefits of adopting eLearning as a medium for training within the public service and the challenges associated with eLearning.

The study reviewed several themes and subheadings to gather opinions of other researchers on the subject matter, ride on previous research and collect detailed information about all aspects relating to the topic. Reviews were made on the concept of adult education, considering that all workers in public sector organizations are adults. The study reviewed the importance of an adult learning approach and presented a detailed history of the development and implementation of the Nigerian National Policy on Education. Other concepts reviewed under active learning include the need to know by the learner, the self-concept of the learner, and the role of the learner's prior experience.

This research put forward constant engagements and discussions, even as previously stated in the literature review. The effectiveness of using technology in different sectors over the years has been associated with the level of the recipient's knowledge of its use and advantages. The penetration of technology into the teaching-learning process that resulted in eLearning for knowledge transfer and acquisition needs to be effectively presented to the public servants through awareness and sensitization to take advantage of the penetration of technology into the educational sector. As propelled by technology, eLearning has enabled learning to be easily accessible. As the custodian of the development and implementation of policies, the government must demonstrate adequate support for eLearning by implementing procedures supporting technology and eLearning strategies. Participants of the study associated reluctance and resistance to eLearning in education by public servants with a need for more awareness of the benefits of eLearning to an individual and the organization.

The significance of this study goes beyond the discovery of several advantages of eLearning to public servants' capacity development through the adoption of

eLearning by the Nigerian public sector and perceived benefits that lead to active capacity development and improved service delivery by public servants. Giovanis (2015, p. 47) indicated that if the eLearning programs are well-constructed, they can help companies reduce travel and other employee costs associated with preparing and improving the organization's efficiency. Arthur-Mensah and Shuck (2014, p.43) indicated that eLearning is significant because, from a Human Resource Development (HRD) viewpoint, practitioners can use eLearning to ensure that the current and future abilities and needs of their employees are met; this is to ensure that there will be an increase in the organizations' performance. The objective of eLearning is to create an attractive and collaborative environment to ensure that the learners or employees can be involved in a continuous learning process (Condruz-Bacescu, 2015, p. 101).

The public service is faced with providing formal and casual learning opportunities. As per Langford and Seaborne (2003, p. 50), an answer for the preparation and learning challenges experienced by the public sector is for the public institutions to adopt and start implementing training using eLearning. Langford and Seaborne (2003, p. 55) stated that the review conducted by the American Society of Training and Development reported that globally, there had been a developing use of eLearning both in the general population and the public sector. In June 2011, the Nigerian Public Service embraced eLearning as a means of in-service training for officers in the country due to the following identified advantages;

***Cost-effectiveness.*** In-person training programs are expensive compared to other modes of in-service training. eLearning is more cost-effective for large organizations like the MDAs in Nigeria as the cost is significantly reduced for training components like training halls and travelling costs. These logistics usually come at a considerable fee. In addition is time away from work, engaging a training

facilitator, and documentation costs. Meanwhile, ensuring participation throughout the training duration often becomes challenging.

In contrast, eLearning does not involve the aforementioned costs and has proven to be a more economical means of learning. With eLearning, service employees will require access to a learning device, a computer or, in some cases, a mobile phone and a convenient space to carry out the training. Public institutions can save millions of public funds by adopting eLearning for in-service training.

***Reduces Employee Training Time.*** Adopting eLearning by service employees will significantly reduce time spent on in-service training. Travels associated with training activity will be eliminated as participants can take part in scheduled or unscheduled training from their respective comfort zones. The following aspects of physical learning will be reduced significantly, if not eliminated: travel time, breaks and meals, starting and closing physical training sessions, and restriction in the number of participants due to space.

***Tailor-made programs.*** The eLearning mode of acquiring knowledge has developed at an impressive rate recently. One of the major benefits of eLearning is that organizations can select from a wide range of courses for their employee's in-service training. Employers can customize according to the employees and the organization's required needs and preferences. For example, program names, learning environment, objectives, content and individual competency can be personalized.

Higher rate of employee knowledge retention:

- Many eLearning topics are delivered in a manner that encourages retention.
- Fun parts are also introduced with gamification, videos, and other interactive content.



· eLearning has been adjudged to improve employee engagement and retention in very well-organized programs because employees can take the training modules at their convenience.

Gamification is identified as an effective strategy for gainfully engaging millennial employees. Incorporating gaming elements such as leaderboards, scores, and incentivization through eLearning has become much more accessible and convenient. It is classified as the best way to make learning fun and engaging. In motivating employees to be passionate and dedicated to participating in a training program, gamification is considered as it can stir inspiration and drive results. Also, gamification is more beneficial to employees as it can be used to assess individual strengths and weaknesses.

***Access up-to-date resources.*** Adopting eLearning in public service in-training will provide service employees with up-to-date training content as opposed to other forms of training that are mainly dependent on the capacity of the trainer. A significant drawback associated with physical instructor-organized group training is that employees usually avoid contributing for fear of being labelled failures by pairs or superiors. On the other hand, eLearning allows employees to fail in a safe environment without being ridiculed. Service employees can correct their failures in their privacy.

***Allows for broader collaboration.*** One of the benefits of eLearning is the opportunity for partnerships and pair reviews amongst many participating MDA's and organizations. eLearning facilitates online cooperation across a broad spectrum. Some eLearning solutions allow employees from different organizations to contribute to more extensive workplace discussions within the training module.

The receptive and active mode of designing most eLearning platforms allows a formidable interactive and collaborative way of learning. Often, learners can interact with instructors through webinars and joint discussion platforms. Furthermore, desirous employees can find opportunities to share knowledge and ideas by engaging in discussions, presenting opinions among themselves, and improving their skills. Employees are supported at each stage, and topics are presented simplified to ensure swift understanding. Also, lessons ensure timely feedback by incorporating quizzes and exercises.

*eLearning is highly scalable.* eLearning modules that are well organized are highly scalable and can easily be deployed to as many employees as needed in as many formats as the organizations need to require. Instead of facing challenges of finding the number of instructors and classroom space to deliver practical training, all that employees would require would be a learning device such as access to a computer or mobile phone.

Provides a timely feedback system: Scoring significant exam papers can be a monumental task. Giving feedback to employee questions takes a considerable amount of time for organizers of training programs, eLearning, on the other hand, provides access to real-time feedback during and after an eLearning training course. And because of the connectivity, management can also get up-to-date analyses on how systems and participants are performing and, therefore, can track the progress of individual service employees. Detailed reports about eLearning programs present a massive opportunity to the organization as employers and management can improve the capacity development programs' success rate, participation, steadiness, and potency. Developing and implementing new policies, course programs and contents, training strategies, and ideas are concepts that eLearning will continually enhance.

***Consistency and Standardization of Training.*** The moment a training course is organized and ready to be deployed, all participating employees will be granted the same high-quality training, regardless of their physical location. With eLearning, service employees can be assured of receiving standardized training across the board.

Effective implementation of eLearning programs will enable employees to gain specific skills, bringing the organization closer to achieving its set goals. Recurring global change has caused workplace practices, methods and technologies to evolve continuously. With e-training, public sector employees are updated with the recent information and happenings in their areas of interest. Through eLearning, employees can become more acquainted with overall changes and market trends and learn how to deploy best practices, resulting in the best use of resources, equipment, and technology. eLearning is supportive in providing structured learning for workers, and eLearning flexibility is a remarkable advantage over the conventional training mode. The self-pace characteristics of eLearning have been proven to make learning fun and exciting for learners as learning can be done at will. Public servants can be offered courses that can be completed over an allocated period, providing the flexibility and freedom to take classes when convenient. eLearning ensures that knowledge acquired is retained and can be recalled over an extended period of time.

In ensuring the study's findings are quality and reliable, Consider the degree of confidence in data and methodology by providing the trustworthiness of data. The four components of data trustworthiness, including credibility, transferability, dependability, and conformability, were adopted. The study's credibility was ensured by selecting public servants as the research participants as they are the direct human variable in the study. The selection of public servants enabled the researcher to gather direct information about the views and opinions of public servants in the adoption of

eLearning for their capacity building. In increasing the level of credibility in the study, the following procedures were adopted: prolonged engagement, persistent observation, peer briefing, and member checking. Transferability refers to the generalization of study findings and their applicability to other situations and contexts. The study established the possibility of transferability by providing readers with detailed information about the data collection method, gathering data from different public institutions, and providing other circumstances in which readers can decide if research applies to practice. The dependability of the research study refers to data stability under different conditions. Prove this by providing a step-by-step outline of the research methods and the conduct of a pilot study. The confirmability of the analysis depends on the use of public servants from selected public institutions as research participants and the use of secondary data sources such as peer-reviewed journals. The study provides adequate information and effective reporting of data and analysis to ensure trustworthiness.

The interview questions were drafted and presented to the participants to enable the researcher to obtain adequate and quality responses. The semi-structured interview session also enabled the researcher to ask follow-up questions to understand the researchers' opinions better. Data gathered from research participants contributed to previous knowledge available on the subject matter, especially regarding the advantages of eLearning as stated above. The first part of the interview questions obtained demographic information from research participants. Demographic information obtained included age, gender, level of education, years of experience as a public servant and name of the institution. Results obtained indicated that 15% of research participants were between 25-35 years, while 30% were age 51 years and above. 55% of participants were male, while 45% were female. On participant's level

of education, 52.5% were Postgraduate level, while 47.5% had over 21 years of working experience in public service.

During the face-to-face research sessions, the researcher audio-recorded the interviews while taking notes at the participants' workplace. The questions asked were based on the variables outlined in the research study. The interview session started with giving the participants an overview and objectives of the study and the role the participants played. It was assured of their confidentiality while all participants signed the consent form. In analyzing data gathered using NVivo qualitative analysis software, themes and codes were generated, and similar responses from different participants were grouped under each article. The themes developed include enhancement of knowledge, inadequate eLearning tools, insufficient understanding of eLearning tools, maintaining status quo and distraction. Also identified the need for more/lack of infrastructure and incentives, limited interaction, change of environment, compulsory adoption of eLearning, consistency, infrastructure development, consistency, and reduced cost of eLearning. This further revealed the importance of some opinions, phrases, and sentences regarding the study. The section on evaluating research findings focused on reporting the results obtained. The findings identified the level of experience selected participants had in training and capacity development programs, both physical and online, and participants' opinions and experiences on the nature and scope of each form of training. Each interview question was analyzed and evaluated to obtain valid findings. Challenges associated with adopting eLearning were identified based on participant's experiences and assessed the effect of technology in the learning process. The impact of technology in public institutions has influenced digital transformation, enhanced knowledge acquisition and improved

service delivery. Monika (2013) stated that several opportunities are presented by eLearning as it allows for much more flexibility in service delivery.

The study's implication derived from the findings and evaluation of the research question indicated that eLearning is becoming widely accepted and an essential strategy in training public servants. Previously, there has been broad resistance to eLearning as most public servants are afraid of change and prefer to maintain the traditional medium of capacity building. The study implied that this opinion is gradually changing as public servants accept eLearning, considering its advantages. The study revealed that eLearning enhances the capacity of public servants but only with some associated challenges, such as the restricted interaction between the learner and the instructor compared to face-to-face classroom training. Of note is the favourable implication of the adoption of eLearning for the capacity development of public servants as it allows more funds to be available to train more public servants, participation in regular training programs to improve skills and the development of public servants' skills in Information Communication and Technology (ICT).

Recommendations for the application of the research findings stated the importance for the government to improve public servants' perception of eLearning by educating them about the benefits of eLearning while attaching it to some requirements for career success. Furthermore, government allocations for eLearning for the capacity development of public servants should be reviewed upward. Though eLearning is cost-effective in the long run, its initial cost of setting up could be huge; hence, the government's role in ensuring more funds are allocated for implementing eLearning strategies in the public service. The lack/inadequate funds for eLearning is a significant challenge to the implementation of eLearning as funds are not available

to acquire essential infrastructure. The Nigerian National Assembly is encouraged by this study to ensure that ministries, departments and agencies include in their yearly budget, depending on the organization's size, a commensurate fund for eLearning. The availability of funds to be expended on effecting eLearning within the organization will enable the acquisition of appropriate infrastructure. The recommendation to increase budgetary allocation to public institutions is to mitigate the challenges highlighted in the literature reviewed by Zainab (2019) and Montgomerie et al. (2016), identifying the lack of technological devices, technical experts accessible or affordable efficient internet connectivity.

The study recommends further research in areas such as; policymakers' opinions and perceptions on the adoption of eLearning for worker in-service training in Nigeria's public sector, the development of an eLearning policy, eLearning in times of crisis, assessment of the implementation of eLearning in the public service, advocacy and sensitization of public servants on eLearning, technological infrastructure investment and the involvement of public servants in the conceptualization and adoption process of eLearning for worker in-service training within the Nigeria public service.

The study's findings showed that educators positively perceive the benefits of eLearning in Nigeria and that organizations in Nigeria can implement eLearning successfully. Elements that are selected as indices of success in eLearning, which fall under educators and learners variables and pedagogical variables, enjoy decent help from the respondents. Furthermore, there is no considerable difference in perception of eLearning feasibility and prospects across age and gender based on the investigation. Generally, the study recommends eLearning to address emerging organizational challenges relating to the capacity development of public servants in

Nigeria as eLearning is acquiring acceptability in higher education institutions in Nigeria. The formation of the National Open University of Nigeria in 2002 marked a critical imprint on open and distance learning in Nigeria. Even further, seven universities, namely Obafemi Awolowo University, Ile-Ife; University of Lagos, Akoka; University of Ibadan, Ibadan; Adama Maddibo University of Technology, Yola; University of Maiduguri, Borno; Ladoke Akintola University, Ogbomoso; and the University of Abuja have been licensed to operate dual-mode of face-to-face and online delivery informative mode with more establishments coming onboard.

In conclusion, the advantages of eLearning for the transfer and acquisition of knowledge within the public service are enormous, especially in this frequent change caused by global technology trends. The lockdown experience driven by the COVID-19 pandemic has further bolstered the importance of accepting technology-enabled platforms in carrying out activities virtually. Training and capacity development programs were actions carried out by many organizations during the lockdown. eLearning has been demonstrated to be an effective tool in crisis as it offers platforms for continuous learning. Despite the challenges associated with eLearning and the experience of the pandemic crisis, public servants are becoming open-minded, flexible, and interested in acquiring capacity through eLearning. Responses gathered from participants revealed that eLearning as a means of training is acceptable as it mitigates some of the challenges presented by conventional classroom training, not also minding a blended learning approach. The study showed that eLearning allows better assimilation, is self-paced and provides access to many resources. The study recommends that all public servants should be equipped with relevant technological skills, provide reliable information communication technology infrastructure in public institutions, develop policy to support eLearning in public service, and develop



strategies and techniques to implement for now and future activities and also in preparation for unforeseen crisis and natural disasters.

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## APPENDICES

## APPENDIX A: UREC Provisional Approval



## UREC's Decision

Name of Participant:

Adesoji Olukayode Adesugba

Title of the Research project:

Adoption of eLearning for worker in-service training in  
the Nigerian Public Service

Date:

05/12/2019

Approved without revision or  
comments.

☒ **V**

Approved with comments for  
minor revision.

☐

Not approved with guidance  
comments for moderate revision and  
resubmission.

**Comments**

1. Make sure that the interviews are lengthy enough as the number of participants is just 20. At least double it that it aims at 40.
2. Possibly add more institutions.

**Not approved** with guidance

comments for major revision and

resubmission.

**APPENDIX B: UREC Final Approval****UREC's Decision**

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Student's Name: Adesoji Olukayode Adesugba

Student's ID #: R1805D5269336

Supervisor's Name: Dr Chrysa Tamisoglou

Program of Study: UUZ: EdD Doctoral of Education

Offer ID/Group ID: O21413G21408

Dissertation Stage: 3

Research Project Title: Adoption of eLearning for worker in-service training in the Nigerian Public Service

Comments: REAF: 5c - low number of participants

**Decision: B.** Approved with comments for minor revision

Date: 17-Dec-2020

**APPENDIX C: Informed Consent**UU IC - Version 2.1 ☒

## Informed Consent Form

Student's Name: ADESOJI ADESUGBA

Student's E-mail Address: adesugba@yahoo.com

Student ID#: R1805D5269336

Supervisor's Name: DR CHRYSA TAMISOGLOU

University Campus: Unicaf University Zambia (UUZ)

2

Program of Study: EdD-Doctorate of Education

Research Project Adoption of eLearning for worker in-service training in the

Date: 21/11/2020

Provide a short description (purpose, aim and significance) of the research project, and explain why and how you have chosen this person to participate in this research (maximum 150 words).

In developing the program for the training and retraining of public officers, it is necessary to consider the ever-changing trends in national development and as such, ensure that a well-designed and cost-effective in-service training strategy is employed. The rationale for study is to discover the advantages of eLearning to public servants capacity development, hence its adoption that will lead to effective capacity development and service delivery by public servants while saving time, reducing high cost of travelling expenses for attending capacity development programs and avoiding absenteeism in duty post. The study is to provide information backed with theories and evidence to convince the policy makers on adopting eLearning as an effective form of learning to enhance capacity development in public service. Participants of the study are public servants with not less than 5 years of experience, participated in capacity development programs including decision makers within the organization. The study adopts qualitative research with face to face audio recorded interview sessions with

each participant.

The above named Student is committed in ensuring participant's voluntarily participation in the research project and guaranteeing there are no potential risks and/or harms to the participants.

Participants have the right to withdraw at any stage (prior or post the completion) of the research without any consequences and without providing any explanation. In these cases, data collected will be deleted.

All data and information collected will be coded and will not be accessible to anyone outside this research. Data described and included in dissemination activities will only refer to coded information ensuring beyond the bounds of possibility participant identification.

I, , ensure that all information stated above is true and that all conditions have been met.

Student's Signature: \_\_\_\_\_





### **Informed Consent Form**

#### **Part 2: Certificate of Consent**

This section is mandatory and should be signed by the participant(s)

---

Student's Name: ADESOJI ADESUGBA

Student's E-mail Address: [adesugba@yahoo.com](mailto:adesugba@yahoo.com)

Student ID #: R1805D5269336

Supervisor's Name: DR CHRYSA TAMISOGLOU

University Campus: Choose from the list

Program of Study: EdD- Doctorate of Education

Research Project Title: Adoption of eLearning for worker in-service training in the Nigerian  
Public Service

I have read the foregoing information about this study, or it has been read to me. I have had the opportunity to ask questions and discuss about it. I have received satisfactory answers to all my questions and I have received enough information about this study. I understand that I am free to withdraw from this study at any time without giving a reason for withdrawing and without negative consequences. I consent to the use of multimedia (e.g. audio recordings, video recordings) for the purposes of my participation to this study. I understand that my data will remain anonymous and confidential, unless stated otherwise. I consent voluntarily to be a participant in this study.

Participant's Print name:

Participant's Signature: \_\_\_\_\_

Date:

If the Participant is illiterate:

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had an opportunity to ask questions. I confirm that the aforementioned individual has given consent freely.

Witness's Print name:

Witness's Signature:

Date:

## APPENDIX D: Data Collection Instrument

Research Tool - Adoption of eLearning for worker in-service training in the Nigerian

Public Service

### PART A

Demographics

Occupation.....

Age Range 30-40, 40-50, 50-60,.....

Gender (Male, Female)

Level of education

Undergraduate

Graduate

Post graduate

Number of years organization in operation.....

Years of experience in the organization.....

### PART B

1. Have you undergone capacity development training in the course of your service?  
If yes, how many? Describe their nature/scope
2. Have you participated in a conventional classroom training and eLearning form of training?  
What are your experiences?
3. In your opinion, has technology affected the way public servants are trained? How? Why?



4. What are the advantages and challenges you think are associated with conventional classroom training?
5. Does your organization support eLearning strategy for training employees? How? (give example)
6. In your opinion, what are the pros and cons of the adoption and selection of eLearning for capacity development?
7. Based on your experience, do you think the use of in-service eLearning programs among public service institutions improve the enhancement of the capacity of public servants or not? How? Why?
8. Have you felt any resistance or do you sense any barriers to eLearning adoption in your organization? Why? An example
9. Do you think eLearning will reduce or increase the cost of training public servants? Explain
10. What are the challenges you think eLearning can face in the public sector? Why?
11. If you could give some recommendations to the government regarding the adoption of eLearning system, what would you say?

#### **Additional Questions for Decision Makers in the organization**

1. Do you know the annual training budget allocated to your organization?
2. How do you think the training budget will be affected if eLearning is adopted for capacity development?
3. What do you think are the barriers to adopting eLearning in the public service? Explain

## APPENDIX E: Analysis Code Book

### Nodes

Name	Description	Files	References
Budget		0	0
Annual budget allocation for training		8	8
Perception on training budget		1	1
Capacity development training		0	0
Scope (Nature and number of trainings)		32	34
Type of Training		3	3
Conventional classroom training		0	0
Advantages of conventional classroom training		0	0
Better understanding		1	1

Name	Description	Files	References
More concentration		1	1
More interactive		4	4
Physical presence		1	1
Challenges of conventional classroom training		0	0
Absenteeism		1	1
Class distraction / interruption		3	3
Cost		6	6
Divided attention		2	2
Element of bias		1	1
False information		1	1
Inability to multitask		1	1
Lack of follow up / post training assessment		1	1

Name	Description	Files	References
Logistics		1	1
Not suitable to needs		1	1
Time consuming		2	2
Traveling risk (Distance)		15	16
Venue capacity		1	1
Experience (Nature, number of trainings, remarks)		20	21
eLearning adoption		0	0
Cons / barrier		0	0
Limited resources (Internet, phones etc)		1	1
Pros		0	0
Improved computer literacy		1	1
Knowledge enhancement		1	1
Reasons		13	13

Name	Description	Files	References
Continuous staff training		1	1
eLearning training		0	0
Experience with eLearning training (Nature, number of trainings, remarks)		19	21
Organization support for eLearning for capacity development		13	13
Effectiveness		3	3
In view		4	4
Increased participation		1	1
Lack of interest from staff due to restrained benefit		1	1
Not certain		1	1
Not practicalized		1	1
Saves cost		8	9

Name	Description	Files	References
Perceived effect of technology on public servant's training		0	0
Negative (How)		0	0
Conventional training more effective		1	1
Distraction / lack of concentration		1	1
Lack of interest		2	2
Taken for granted		1	1
Positive (How)		12	13
Convenience		1	1
Improved knowledge of Public Servant		5	5
Improves efficiency		4	4
Speed		1	1

Name	Description	Files	References
Reasons		4	5
Perception of eLearning programs		0	0
Access to repeated learning		2	2
Better quality		4	5
Elimination of distance barrier		12	13
Flexibility		9	11
Improved knowledge on computer use		1	1
Increased number of trainees		1	1
Reduced training cost		19	24
Reduces malpractices		1	1
Time saving		5	6
Barriers to eLearning in the public sector		0	0

Name	Description	Files	References
Inadequate eLearning tool (Data, Laptops, phones, internet connectivity)		15	18
Insufficient knowledge of eLearning tools		3	3
Maintaining status quo		4	5
No barrier		1	1
Challenge mitigation		0	0
Provision of eLearning resources		1	1
Sensitisation and orientation		5	5
Training benefits		4	4
Challenges in the public sector		7	7
Distraction / non participation		2	4
Inadequate / Lack of		6	6



Name	Description	Files	References
infrastructure			
Limited interaction		3	3
Low rate of technology acceptance		9	10
Reduced / lack of incentives for training		8	9
On enhancement of public servant capacity		5	5
Reasons for perception		0	0
Capacity building		2	2
Cost effective		2	2
Enhancement of knowledge		8	8
Less effective		1	1
Unmerited recruitment		1	1
Perception on cost of training		0	0

Name	Description	Files	References
Minimize cost		21	22
Recommendation		0	0
Acceptance of eLearning by policy makers		2	3
Change of environment		1	1
Compulsory Adoption of eLearning		1	1
Consistency		1	1
Enforcing eLearning programs		3	3
Flexibility in training		1	1
Infrastructure development		7	7
More Enlightenment		6	6
Policy on eLearning		9	9
Provision of attractive incentive		5	6

Name	Description	Files	References
Provision of budget for eLearning		3	4
Provision of eLearning infrastructure		7	8
Reduced cost of eLearning		2	2
Sensitization / Awareness on eLearning programs		8	8
Staff up to date with ICT knowledge		9	9