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University of the Witwatersrand, Johannesburg, South Africa

RESEARCHING GRADUATE EMPLOYABILITY AND GRADUATE EMPLOYABILITY SKILLS OF NON-TRADITIONAL GRADUATES IN NIGERIA

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A thesis submitted to the Faculty of Humanities, University of the Witwatersrand, Johannesburg in fulfilment of the conditions for the degree of Doctor of Philosophy

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September 2023

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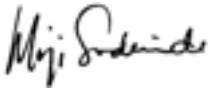
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Signature of Candidate

07 September 2023

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Date

Abstract

The outbreak of the coronavirus disease in 2019 (COVID-19) resulted in the global adoption of strict lockdown protocols implemented to curtail the proliferation of the virus. The Internet emerged as a leading tool for working remotely, e-teaching, online collaboration, gaming, and for video streaming and conferencing. This study aimed to investigate Nigerian employers' perceptions of hiring graduates who received their degrees from non-traditional modes of learning such as e-learning. The global pandemic became a transformational experience that opened the guardrails for innovative ideas on education and instruction, helping to accelerate the use of distance and virtual instructional tools at educational institutions such as universities during the lockdown. COVID-19 has thus changed how people work, teach, and learn worldwide.

The over-arching question of this research was: What understanding do employers have of graduate employability and employability skills, and how does the degree delivery mode factor into recruitment decisions in Nigeria? Furthermore, the subsequent sub-questions were formulated to guide the research process: (1) What perceptions do employers have of graduates who obtained their qualification through alternative modes of learning such as online or e-learning? (2) How does the course delivery mode affect employers' understanding of graduate employability, and employability skills in the Nigerian labour market? (3) What do employers of labour in Nigeria consider as key factors, with respect to competencies of e-learning and traditional classroom graduates, in recruitment decisions? (4) Using the USEM model of employability as an employability framework, how do the four key descriptors measure within the Nigerian labour market?

Explanatory sequential mixed methods were utilized in this doctoral research, collecting quantitative data from one hundred and ten (110) Nigerian human resource professionals and collected qualitative data in semi-structured interviews from five (5) human resource professionals. The doctoral study found that Nigerian employers are more concerned with the personal attributes of graduates than they are with the delivery mode for instruction and learning in the academic institution of the graduate. While employers overwhelmingly view e-learning as comparative to the traditional mode of instruction and thus agree that there is tangible difference between the two modes, about half of all employers prefer to recruit graduates from a traditional on-campus mode of learning.

Using USEM as the conceptual framework for employability and employability skills, personal attributes emerged as the most desirable set of skills for Nigerian employers, more important than subject matter knowledge. The consensus among employers indicates that there is no discernible distinction in the educational achievements between graduates who have completed their academic pursuits through conventional means and those who have opted for the virtual modality.

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I wish to express my sincere gratitude to Professor Emmanuel Ojo, who has guided me through this journey as a mentor. I extend my heartfelt appreciation for his unwavering support and motivation during the entire duration of my research endeavour. His priceless perspectives, productive input, and meticulous assessment have played an integral role in refining my concepts and elevating the quality of my undertaking. I am equally appreciative of the intellectual inspiration provided by the Faculty of Humanities, which has been pivotal in shaping the trajectory of my research journey.

I want to thank my family and friends for their support and encouragement throughout the challenging stages of my doctoral research. Their care and inspiring words have played a crucial role in maintaining my resolve and focus. As I conclude, I'd like to express my gratitude to the participants of the study who generously shared their time and invaluable experiences. Their involvement has been absolutely essential, and this research would not have been possible without their contribution.

Thank you all for your contributions to this thesis.

List of Acronyms and Abbreviations

AVU	African Virtual University
CAL	Computer-Assisted Learning
COVID-19	Coronavirus Disease 2019
DVD	Digital Versatile Disc
EFA	Exploratory Factor Analysis
GDP	Gross Domestic Product
HE	Higher Education
HEA	Higher Education Academy
HEI	Higher Education Institution
ICT	Information Communication Technology
JET Model	Journey of Employment Theory Model
KMO	Kaiser-Meyer-Olkin
NGO	Non-Governmental Organization
QUAL	Qualitative
QUAN	Quantitative
RAW Model	Rewarding, Ability, and Willingness Model
SPSS	Statistical Package for the Social Sciences
SSA	Sub Saharan Africa
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USEM	Understanding, Skilled Practice, Personal Qualities and Efficacy Beliefs and Metacognition
Windows CE	Windows Embedded Compact

Contents

COPYRIGHT NOTICE I

DECLARATION II

ABSTRACT III

ACKNOWLEDGMENTS V

LIST OF ACRONYMS AND ABBREVIATIONS VI

CONTENTS VII

LIST OF FIGURES IX

LIST OF TABLES X

1. INTRODUCTION 1

1.1 Background of the Study 1
1.2 Statement of the Problem 4
1.3 Aims of the Study and Research Questions 5
1.4 Summary of Research Design 6
1.5 Significance of the Study 7
1.6 Definition of Terms 8

2. REVIEW OF THE LITERATURE AND THEORETICAL FRAMEWORK 13

2.1 Demand and Supply of University Higher Education in Nigeria 13
2.1.1 Prospects and Challenges in the Provision of Tertiary Education *15*
2.1.2 Funding *16*
2.1.3 Gender equality *18*
2.1.4 Quality of education *19*
2.2 Distance Education 20
2.2.1 Prevailing Views on Distance and Online Education, Prospects and Challenges *24*
2.2.2 Diploma Mills *25*
2.2.3 Cheating *26*
2.3 Graduate Employability and Employability Skills 26
2.4 Nigeria's Labour Market 30
2.5 Conceptual Framework 31

3. RESEARCH DESIGN AND METHODOLOGY 36

3.1 Research Design 36
3.1.1 Research Expectations *37*
3.1.2 Reliability *38*
3.1.3 Potential Research Bias *38*
3.1.4 Description of Materials and Instruments *38*
3.1.5 Sampling *40*
3.2 Data Collection Procedures 42
3.3 Data Analysis 44

4. RESULTS 47

4.1 Quantitative Data Analysis 48
4.1.1 Link Research Questions and Questionnaire Questions *48*
4.1.2 Distribution of responses according to demographics *53*
4.1.3 Frequencies on Respondent perceptions *57*
4.1.4 Correlation Analysis between the USEM measurement scale *60*
4.1.5 Cronbach Alpha Test of the USEM Measurement Scale *61*
4.1.6 Validity Analysis of the USEM measurement scale *63*
4.1.7 Inferential Statistics: Test for Significant Mean Difference *64*

4.1.8 Descriptive Statistics of Skills and Competencies *65*
4.1.9 Exploratory Factor Analysis *72*
4.1.10 Conclusion *76*
4.2 Qualitative Data 77
4.2.1 Participants *77*
4.2.2 Research Questions and Interview Questions *78*
4.2.3 Research Question 1 ..... *79*
4.2.4 Research Question 2 ..... *84*
4.2.5 Research Question 3 ..... *87*
4.2.6 Research Question 4 ..... *89*

5. MIXED RESULTS **93**

5.1 Research Question 1 93
5.2 Research Question 2 95
5.3 Research Question 3 97
5.4 Research Question 4 101

6. DISCUSSIONS **105**

6.1 Graduate Employability and Employability Skills 105
6.2 Future Plans 106

7. CONCLUSIONS AND RECOMMENDATIONS **107**

7.1 Conclusions 107
7.2 Recommendations: 108
7.2.1 Infrastructure Development: *108*
7.2.2 Quality Assurance: *108*
7.2.3 Accreditation and Recognition: *109*
7.2.4 Employer Engagement: *109*
7.2.5 Student Support Services: *109*
7.2.6 Curriculum Relevance and Flexibility: *109*

8. REFERENCES **111**

9. APPENDICES **132**

Appendix A - Survey Questionnaire and Informed Consent 132
Appendix B - Interview Guide 147
Appendix C – Human Research Ethics Committee Clearance Certificate 149
Appendix D – Ethics Application for HREC Non-Medical 150

List of Figures

Figure 1	USEM Graduate Employability Model	34
Figure 2	Explanatory sequential mixed methods design	36
Figure 3	Mixed Methods Design – Sequential Explanatory	37
Figure 4	Industries represented by survey respondents	56
Figure 5	Fields of study from which Nigerian employers recruit Graduates	57
Figure 6	An online degree approved by the National Universities Commission is acceptable in our organization	58
Figure 7	We prefer not to hire applicants with an online degree *	58
Figure 8	Online degree programs are not as good as traditional university degrees.	59
Figure 9	There is no significant difference between online degrees and traditional	60
Figure 10	Personal Attributes of Online Graduates	66
Figure 11	Word Cloud of Personal Skills for Traditional Graduates	67
Figure 12	Core Skills of Online Graduate as Perceived by Employers	68
Figure 13	Word Cloud of Core Skills for Traditional Graduates	69
Figure 14	Word Cloud of Process Skills for Traditional Graduates	72

List of Tables

Table 1. Demand and Supply of University Higher Education in Nigeria.....13
Table 2. USEM Employability Skills Influencing Employers' Hiring Decisions.....35
Table 3 Link Research Questions and Questionnaire Questions.....48
Table 4: Demographics distribution of sample (N=110).....53
Table 5: Breakdown of respondents (N=110).....55
Table 6 Pearson Coefficient of Skills and Competencies.....61
Table 7 Cronbach alpha values for each of the scales. 62
Table 8 KMO and Bartlett's Test 63
Table 9 Non Parametric Tests of the demographics variables.....64
Table 10 Descriptive Statistics of Personal Attributes for Online Graduates.....65
Table 11 Descriptive Statistics of Core Skills for Online Graduates 68
Table 12 Descriptive Statistics of Process Skills for Online Graduates.....70
Table 13 Process Skills of Online Graduates as Perceived by Employers.....71
Table 15 Final factor structure of the Graduate Employability Measure (N=110) 74
Table 16 Independent Sample Test of the Graduate Employability measure 75
Table 17 The roles and responsibilities of the participants 77
Table 18 Linking Interview Questions to Research Questions 78
Table 19 The specific attributes that sector representatives look for in participants..91

1. Introduction

1.1 Background of the Study

At the start of the twenty-first century, when technological innovations have become an intrinsic part of our lives, post-secondary education in Sub-Saharan Africa (SSA) remains largely inaccessible to most aspirants (Darvas, 2017; Dodds, Gaskell, & Mills, 2008). The challenges of obtaining education and ensuring high-quality instruction are consistently similar across the African continent (Asamoah, 2015). William Saint (1999, p.1) summed up the phenomenon produced as "overcrowded classrooms, poorly equipped learning facilities, brain drain of academic staff, declining research output, frequent strikes and campus closures, outdated and irrelevant curricula, and high graduate unemployment." These views are echoed in the works of Omogbadegun (2014) and Odediran, Gbadegesin, and Babalola (2015). The level of funding required to establish new universities in the traditional brick-and-mortar style is not within reach of many African countries. And for countries that have such means, the political will to support an increased budget for high infrastructural spending on education is usually not present (World Bank, 2010). Consequently, the number of African students unable to gain admission into tertiary institutions will continue to grow (Mohamedbhai, 2008).

Education researchers widely concur that harnessing Information and Communication Technology (ICT) for distance education has the capacity to provide an enduring answer to the difficulties associated with access and the quality of instruction (Ajadi, Salawu, & Adeoye, 2008). Currently, the electronic delivery of instructional courses for teaching and learning (e-learning) ranks among the fastest-growing segments of the education sector (Allen, Seaman, Poulin, & Straut, 2016). This growth is also evident in Nigeria, where a stable population of students in various fields is attending and earning degrees from online universities and distance learning institutions (Oladipo, 2017). Thus, there is a steady population of graduates from non-traditional educational institutions with degrees in various fields in Nigeria. This makes measuring and collecting data on how employers perceive online educational institutions and the holders of online degrees exceedingly timely and imperative (Oladipo, 2017).

The doctoral study will explore the outcomes of online education because it is becoming more popular among students worldwide, and it has the potential to address the issue of limited access to higher education in Nigeria. In addition, collecting and understanding this data will allow for the development of more effective online education, and a better response to the workforce requirements of the Nigerian economy.

Given the increased popularity of online education, and the continued growth in the number of those graduating with online degrees (Oladipo, 2017), it is crucial to determine how employers in Nigeria perceive graduates of online programmes. These perceptions will have an impact on the employment prospects of graduating students. Therefore, it is important to examine employers' perceptions from a diverse range of industries across the country and by sector of the economy.

Education, in all its many forms, has generally been associated with higher levels of life achievement. Attaining an academic credential from a university typically enhances an individual's prospects for success in the global economy (Baum, 2014). Education from an accredited university is generally viewed as a greater advantage, in contrast to the absence of a degree. This has been true for the last several decades. From a hiring perspective, employers generally look for more qualified and experienced people according to their individual achievements in higher education (HE) (Hannifin, 2014). Thus, attaining a university degree seems to be the continuing pathway toward greater success for both employers and potential employees.

According to Yorke and Knight (2006), there are three stakeholders in the graduate employability process: the graduate, the employer, and the higher education institution (HEI) the graduate attended (Yorke & Knight, 2006). The HEI is a stakeholder because of its reputation among continuing and prospective students, among employers, through their support and placement services, and the academic environment they provide students. The graduate’s employment market outcomes make the individual graduate a stakeholder. Finally, the outcome of the employer’s hiring process and evaluation of employee contributions are elements that also make the employer a stakeholder.

The number of students enrolling and graduating from online education environments is rising, as is the number of institutions offering online degree programmes **(**Oladipo,

2017)**.** This growth has made the online education option more accessible to students in Nigeria, resulting in employers facing a broader range of job applicants who have completed their education online, as well as those who are graduating from the traditional face-to-face university environment.

This research is timely, considering the significant growth of online education in Africa, particularly in Nigeria (Oladipo, 2017). Traditional universities offering online options, and online institutions of higher learning continue to drive this growth, as does the continued development of internet network infrastructure in Nigeria and the drop in the price of personal computing and communication devices. This implies that online education will increase enrolment in Nigeria and the rest of Africa, increasing the output of graduates from online institutions of higher learning (Mohammed, 2013). This growth makes it crucial to have an accurate sense of the perceptions of employers regarding the employment prospects of these graduates and how this could help drive policy formulation and education planning in the country.

The popularity of online education can be attributed to various structural factors, and why it offers a strong opportunity for Nigerian students to access university education and, consequently, better opportunities in the employment market. Researchers have found that online education allows individuals to advance their careers and augment their salaries (Derrick, 2003). This method of education is flexible for those with children, having no need to commute to a campus or a learning facility (Kotouna, Ilkan, & Kilic, 2015, p. 2409). The argument put forward by Kotoua et al. (2015, p. 2410) stating that Africa "a continent of more than one billion people, has become the world's fastest-growing market for mobile communications and the internet" highlights the importance of conducting this research and justifies the relevance of the research questions.

Considering today's competitive global environment, higher education in SSA continues to face relentless pressure to increase access and improve quality (Asamoah, 2015, p. 8). A major disequilibrium exists between the demand and supply of higher education opportunities, exacerbated by the steady growth in population and greater availability of primary and secondary school education (Asamoah, 2015). For decades to come, the number of African students applying for admission into tertiary institutions will continue to rise (Asamoah, 2015). With the foundational understanding, the study advances the

thesis that SSA employers are more concerned with the personal attributes of graduates, than the teaching and the delivery models used to teach. The key focus is on a blend of personal attributes and hands-on skills and abilities to enhance the employability of a potential candidate in Nigeria.

1.2 Statement of the Problem

The persistent disparity between the provision of and demand for higher education in Nigeria has been fuelling the progressive expansion of distance learning (Oladipo, 2017). This gap has widened in recent years as a result of increased availability of primary and secondary education (Gandhi, 2018; Darvas, Gao, & Bawany, 2017), just as the growth in the information and communication technologies sector is driving the increased adoption of e-learning by Nigerian universities (Olatunbosun, Olusoga, & Samuel, 2015). #The belief that university education is imperative for economic progress, for national development, for personal growth, and self-fulfilment further exacerbates this gap (Cloete, Maassen, & Bailey, 2015; World Bank, 2009).

The global implementation of stringent lockdown measures implemented to curtail the transmission of the coronavirus disease (COVID-19) such as social distancing and quarantine disrupted traditional classroom education. This disruption has also contributed to the growth of distance education in Nigeria as an alternative to traditional learning methods (Ajayi, 2020; Bassey, 2020; Zheng, Bender, & Lyon, 2019).

The growth in online education affords students the chance to actualise their dreams of a university education and secure a decent livelihood (Derrick, 2003; Kotouna, Ilkan, & Kilic, 2015). While e-learning offers many advantages for students (Derrick, 2003), the understanding or impact of what it offers is currently unknown amongst the different stakeholders (for example, employers and graduates). While there is substantial research and theory on distance education, the emphasis has been mainly on the comparative analysis of distance education and campus-based education (Burton, Cross, & Lockee, 1999; Gunawardena & McIsaac, 2004; Gunawardena & McIsaac, 1996; Muthukumar & Ravi, 2016) and on integrating ICT to face-to-face education (Leach, 2005; Patzold, 2005; Richards, 2002; Zare & Haghighi, 2018). Despite numerous studies demonstrating comparable learning outcomes between e-learning and traditional

modes of education and instruction, the existence of significant disparities remains inconclusive (Asgari & Pasha, 2020; Donkor, 2010; Gunawardena & McIsaac, 2004; Ho & Chan, 2020; Kishore, Tabrizi, Nassehzadeh, Ozan, Aziz, & Wuensch, 2009; Koenig, 2010; Russell, 1999; Russell, Carey, Kleiman, & Venable, 2009), the question of the efficacy of e-learning is still unsettled.

Studies conducted on employer acceptance of e-learning have been mostly outside Nigeria and with mixed results (Chase, 2016; Larson, 2013; Narisi, 2009). While some studies outright confirm public distrust of e-learning (Adelman, 2020; Bennett, 2020; Boeckh, 2014), others see its distributive potential and pedagogical benefits (Brown & Haney, 2020; Brown, 2005; Peachey, 2020; Schittek, Mattheos, Lyon & Attstron, 2001). The challenge for e-learning acceptance in Nigeria is that the higher education sector, and particularly graduate student outcomes, have been subjects of intense criticism in recent years (Adesina & Agunbiade, 2019; Pitan & Adedeji, 2012; Ogbuanya & Ofonmbuk, 2015). Nevertheless, the steady growth of online education in Nigeria makes this doctoral study a timely endeavour to fill a knowledge gap and investigate its value to Nigerian employers of graduates at the industry level.

1.3 Aims of the Study and Research Questions

The principal purpose of this tailored doctoral research is to investigate the perceptions of Nigerian employers towards hiring graduates who received their degrees from non-traditional modes of learning such as online education. The overarching question is, *'What is the impact of degree delivery mode on Nigerian employers' understanding of graduate employability and employability skills, and how does it factor into their recruitment decisions?"*. The question lays a foundation for exploring Nigerian employees' perception of graduates' employability and employability skills after taking e-learning as an alternative to traditional classroom education. In the hiring, selection, and recruitment of talent processes, how does the degree delivery mode factor into recruitment decisions in Nigeria?' Furthermore, the study will identify sectors of the economy that are more likely to be concerned with the employability of graduates based on their degree delivery mode (traditional or e-learning).

With the foundational understanding, the following research questions serve as a roadmap for the doctoral investigation:

1. How do Nigerian employers perceive the qualifications of graduates obtained through alternative modes of learning such as online or e-learning?
2. To what extent does the course delivery mode impact the understanding of graduate employability and employability skills among Nigerian employers in the labour market?
3. What are the key factors employers in Nigeria consider when making recruitment decisions, with regard to the competencies of e-learning and traditional classroom graduates?
4. How do the four key descriptors of the USEM model of employability measure within the Nigerian labour market as a framework for employability and employability skills?

1.4 Summary of Research Design

The research employed Creswell and Plano Clark's (2011) "explanatory sequential mixed methods" design, with an emphasis on prioritizing the collection of quantitative data as the first step in the investigation. During this phase, this doctoral study collected survey data over a period of four months from one hundred and ten (110) Nigerian human resource professionals to explore the attitudes of employers towards recruiting graduates who obtained their degrees from non-traditional modes of learning, specifically online education. In the second step of this research, the qualitative data was obtained from semi-structured interviews of five (5) human resource professionals representing the top five emerging sectors obtained from the quantitative data analysis of the first step, over the course of one month.

This doctoral research employed an iterative process of mixed methods analysis that involved examining quantitative and qualitative indicators to gain comprehensive understanding of the research outcomes. The study utilized a broad range of advanced data analysis methods, including correlation analysis, employing the USEM measurement scale as described by Cramer and Howitt (2004), Rencher and Schaalje (2012), and Razali and Wah (2011). To ensure the internal validity of the constructs suitability tests were performed, utilising the KMO Index as well as the Bartlett's Test of Sphericity (Gravetter & Wallnau, 2000), as well as conducting the Cronbach Alpha Test of USEM. The

research analysis also incorporated integrated data analysis following the approach suggested by Creswell and Plano Clark (2011).

1.5 Significance of the Study

The principal contribution this study has made is to underscore the significance of e-learning, distance learning, and online learning in reconciling the disparity between the demand and the supply of talents in the Nigerian labour landscape. More importantly, it will affirm to Nigerian employers that classroom (traditional) learning does not determine the effectiveness and experience of the graduate; instead, it would be crucial to pay attention to the skills and abilities that the graduate possesses. A university degree offers the holder an opportunity for socioeconomic advancement (Baum, 2014; Cloete et al., 2015; World Bank, 2009); however, it is crucial to know whether all degrees have this effect. due to the considerable demand for higher education in Nigeria (Oladipo, 2017), and the steady growth of e-learning as a potentially viable option to help meet the demand (Olatunbosun, 2015), this doctoral research is timely. The findings on the perceptions of Nigerian employers towards e-learning degrees can be used by e-learning institutions to improve programme structures and to develop institutional outreach towards employers of labour. Similarly, the findings can serve as a resource for prospective students to make informed choices on their post-secondary education options. Employment outcomes for e-learning graduates are important for determining the value of a degree, or the value of the institution granting the degree (Gedye, Fender, & Chalkley, 2004). The government can make decisions on the accreditation policies of relevant agencies, and on sensitising the public and the business community to the accreditation status of all degree-granting institutions, including those offering e-learning degree programmes. The data could be used by hiring managers and other human resource professionals to develop recruitment policies and make long-term hiring plans.

The findings of this doctoral research have the potential to bring about substantial changes in both distance education and e-learning, leading to their enhanced effectiveness and efficiency in addressing the demands and requirements of the current educational practice. The study will contribute to existing research on distance education and graduate employment. The data will enhance our understanding of employer perceptions of university education in Nigeria and provide insights into the elements of graduate

employability that hold the greatest significance for employers, by industry, and by sector of the economy.

1.6 Definition of Terms

To ensure consistent interpretation and comprehension of the terms employed throughout the study, the following definitions have been included to provide clarity and enhance understanding:

Graduate Employability: Graduate employability is the ability of a university graduate to obtain and sustain a job that is commensurate with their level of education (Hillage & Pollard, 1998). It involves the acquisition and utilization of a blend of skills and attributes that increase the probability of graduates obtaining employment and attaining success in their selected careers. These skills can be personal attributes, communication abilities, technical skills, and a readiness for work. In essence, the term "graduate employability" encompasses the following:

1. Subject-specific knowledge and understanding: This is often discipline-dependent and can vary significantly from one field to another.
2. Generic or 'soft' skills: These include communication, critical thinking, ICT, teamwork, and problem-solving skills that are often transferable between different jobs and industries.
3. Personal attributes: These are the personal qualities valued by employers such as reliability, motivation, initiative, customer focus, and personal presentation.
4. Career development learning: The capacity to manage one's career development, including skills in self-awareness, recognizing opportunities, making informed decisions, and adapting through learning during transitions, which enable individuals to navigate the employment market.
5. Work readiness: The degree to which graduates are ready to enter the workforce. This often requires practical experience, which can be gained through internships, cooperative education, or work-integrated learning.

Online Degree: An online degree is a form of higher education credential obtainable mainly or entirely by utilizing an internet-connected computer, as opposed to physically attending a traditional educational institution or face-to-face course of study on a campus

(Allen & Seaman, 2013). Online degree programmes are designed to offer students the chance to pursue their academic studies without the need to attend traditional, on-campus classes. The courses in online degree programmes are taught through various means, including recorded or live video lectures, videoconferencing, direct independent study, or through reading and written assignments. Many programmes also offer interactive forums for learners to communicate with other learners as well as their instructors. This award results from taking the majority of credit hours in an online learning environment.

Human Resource Professionals: are defined to include managers, executives, and department heads that develop and manage hiring and human resource processes. It also includes those specializing in recruitment, managing the application process, and making employment decisions. According to Society for Human Resource Management (2023), human resource professionals are individuals who work within the human resource department of an organization and tasked with overseeing the management of the organization's personnel related activities. Human resource professionals' roles and responsibilities often vary according to the size and type of the organization. hu roles often include the following:

a. Recruitment and Hiring: HR professionals are often responsible for attracting, screening, and hiring candidates. They may also design job descriptions, post job advertisements, organize and conduct interviews, and help decide which candidates to hire.
b. Training and Development: They may arrange professional development courses, training programmes, and workshops to improve employee skills.
c. Performance Management: HR professionals often organize and manage employee performance reviews, providing feedback and helping to implement performance improvement strategies.
d. Compensation and Benefits: They develop and manage the compensation and benefits packages offered to employees. This can include salaries, bonuses, health insurance, retirement plans, and other incentives.
e. Employee Relations: They handle any issues or conflicts that arise among employees, and ensure a positive, equitable work environment. They might also facilitate communication between employees and management.
f. Legal Compliance: HR professionals need to be aware of labour laws and employment standards in their location, and ensure that the company's practices comply with these laws.
g. Strategic Planning: In larger organizations, HR professionals may also be involved in strategic planning, working alongside senior executives to determine how the workforce can best support the organization's goals and objectives.
h. HR professionals act as a bridge between the employer and the employees, ensuring that both parties are working effectively towards the success of the organization.

Distance Education: can be defined as a form of formal education in which the students are not gathered in a group setting. Rather than conventional classroom methods, modern educational practices rely on interactive resources and telecommunication devices to facilitate the connection between learners and instructors, as proposed by Keegan (1980) and by Simonson, Smaldino, Albright, and Zvacek (2011).

The key characteristic of distance education is that the students are not required to gather in the physical location as the instructor or other students. Instead, students can conveniently study at a location of their own choosing, in their own time, and without

having to congregate with other students to access learning materials or receive instruction from a teacher. In distance education, technology plays a crucial role.

Online Education: Online education is a form of distance education offered by both traditional institutions as well as virtual institutions. For this type of online learning environment, credit-granting education is provided via the internet. An online degree is a degree that results from taking the majority of credit hours in an online learning environment (Allen & Seaman, 2013). Online education, also known as e-learning or distance learning can be categorized into different types based on the extent of online learning integrated into the course, spanning from traditional face-to-face instruction to blended learning to fully online courses.

Traditional Graduate: A traditional graduate is awarded a university degree typically by completing more than 70 percent of their course content in a classroom environment (Allen & Seaman, 2013). Enrolled in a campus setting, traditional graduate, or a traditional student, is typically an individual who enters college or university directly after completing high school, or secondary education. These students usually fall in the age range of 18-22 years and engage in a full-time study schedule. They typically engage directly with professors, classmates, and campus resources. They follow a generally prescribed path of study, often completing their degree programmes in a set timeframe.

Their experience can be described as real-time, physical interactions, teaching and learning, participation in campus activities, clubs, and sports, as well as the utilization of physical facilities like libraries, laboratories, or study rooms. For many, the traditional student lifestyle includes living on campus or nearby and experiencing a substantial amount of their social development and networking in tandem with their academic growth. This model of education stands in contrast to non-traditional or online (e-learning) educational models.

Online Graduate: According to Allen and Seaman (2013), an online graduate can be described as a student who took 80% or more of their degree programme coursework through an online learning platform. Online graduates can come from various backgrounds and circumstances. Many online graduates are considered "non-traditional" students, they might be adults who are resuming school after a break from work or other

life experiences, individuals who are pursuing their education while also working full-time, or students who have family responsibilities that make a traditional, on-campus programme less feasible.

E-Learning: is the electronic delivery of instructional courses for both teaching and learning. E-learning, also known as electronic learning, is an educational approach that utilizes digital technologies and platforms to facilitate learning. This method allows individuals to learn outside of a traditional classroom setting and, instead, learn online at their own pace and in their own environments. E-learning can encompass a variety of educational experiences, such as: online courses, learning management systems (LMS), webinars or live online classes, interactive software and programmes, and Massive Open Online Courses (MOOC).

Limitations and Assumptions: The web-based survey presents the possibility of incomplete data and duplicate submissions (Schmidt, 1997). The *Google Forms* platform allows the user to guard against multiple submissions by selecting 'Allow only one response per computer.' However, one individual could submit multiple surveys if they used different computers for each survey. This doctoral study doubts that this will significantly influence the study. To reduce the incidence of incomplete questionnaires, this doctoral research has endeavoured to present the least number of questions to shorten the time required for completing the online survey to eleven minutes.

2. Review of the Literature and Theoretical Framework

This doctoral research delves into the concepts of graduate employability, employability skills, the delivery modes of higher education (HE) in Nigeria, and the Nigerian labour market. In particular, the study explores employers' perceptions of graduate employability, comparing those who obtained their degrees from traditional classroom environments to those who completed their studies through online learning platforms. This literature review defines employers as human resource professionals, including managers and recruitment officers. The doctoral study investigates four sub-topics: first, the demand and supply of HE in Nigeria; second, distance education and the growth of e-learning programmes; third, graduate employability and employability skills; and fourth, the Nigerian labour market.

2.1 Demand and Supply of University Higher Education in Nigeria

Nigeria faces huge challenges in the provision of HE due to the great disparity between demand and supply, where the demand exceeds the supply. The demand for tertiary education can be quantified as the population of youths applying for admission to enter tertiary-level educational institutions (Duru, 2017; Odia and Odia, 2017; Uzochukwu, 2017). It can also mean the number of students who have finished secondary education and are qualified to enter tertiary level education (Chukwuma & Ozurumba1, 2015). For this literature review, this doctoral study uses the first definition and sheds light on the second group of youths.

Table 1.

Demand and Supply of University Higher Education in Nigeria

Year	Demand (# of Applications)	Supply (# of Admissions)	% Admitted
2010	1,256,465	346,605	27.50%
2011	1,434,704	360,170	25.12%
2012	1,436,473	397,067	27.60%
2013	1,685,084	392,559	23.30%
2014	1,479,513	361,400	24.60%

Source: Ukpali et al., (2016) as cited in Odia and Odia (2017, p. 114)

In Nigeria, less than 30 percent of all secondary school leaving students that apply each year for entry into tertiary institutions gain admission as indicate in Table 1. However, according to a study by Johnstone (2014) and extensive research by Hatch (2015), there is a growing need for tertiary education in SSA. The study focuses on the rising cost of tertiary education and cost-sharing by families as an indication of the demand. While the government and other public institutions had traditionally funded education, Johnstone found that parents, students, and other private entities were increasingly bearing the cost (Johnstone, 2004; Hatch, 2015). With the increased participation of families in funding education, there is also an increased expectation that students will graduate and find gainful employment (Chukwuma & Ozurumba1, 2015).

Historically, many tertiary institutions in SSA commenced operations in the 1960s, but only a few have survived to become universities or colleges (Hinchliffe, 1987). The Hinchliffe study serves as a historical representation of the educational institutions' morphology from the time of establishment to the time of the Hinchliffe study. There has been a notable increase in the number of universities in Sub-Saharan Africa over the recent years, as highlighted by Bateman (2008), who noted a drastic increase from only six universities in 1960 to 97 in 1992. Additionally, according to UNESCO's projections, this number is expected to further increase to 156 by 2002. Despite the fact that the combined number of public and private universities has now surpassed 1,500, this development in the educational system has not kept pace with the increasing demand created by higher enrolment in primary and secondary school education. This situation has been exacerbated by the growing population of young people, as well as by the shift in employment from agriculture to manufacturing and services, as noted by Gandhi (2018, para. 2).

The National Universities Commission’s requirements for establishing a private university in Nigeria include the acquisition of 100 hectares of land, a stumbling block to many would-be investors (Davis, 2017). In addition, replicating the traditional teaching and learning environment where professors and students interact demands substantial investments in physical facilities. However, the arrival of Information

Communication Technology has opened new opportunities for students to sit at their computers, while geographically separated from their professors, and communicate with their learning communities across the internet (Souter, Adam, Butcher, Sibthorpe, & Tusubira, 2014).

2.1.1 Prospects and Challenges in the Provision of Tertiary Education

The changes happening in the world today explain the increasing importance of post-secondary education. The era of globalisation, characterised by competitiveness and economic development, requires people to have quality tertiary education. The changes experienced today because of the emergence of an economy driven by knowledge have also helped establish a need for higher skill levels in most occupations (Souter, Adam, Butcher, Sibthorpe, & Tusubira, 2014). The requirement for new sets of skills and abilities, such as adaptability, working in teams, strong communication skills, and the driving force for the continual search for learning, have become very important. Countries aspiring to develop toward the knowledge economy are challenged to make reforms to increase the quality of education. Recent studies show that HE is important to the development process in developing countries as a "catch-up" mechanism that helps accelerate the rate of growth toward the achievement of the country's productivity potential (Jacob, Abigail, & Lydia, 2020). In 1995, the World Bank presented its action plan for Africa, with education playing a key role in skills development as a vehicle for growth in low and medium-income economies. The Action Plan's primary goal from 2007 to 2009 includes developing and implementing support programmes for post-secondary education institutions (World Bank, 2020).

The core development issues such as engineering, health, agriculture, and technology can best be addressed by educated people, who can shape national and international policies (World Bank, 2020). Therefore, quality tertiary education is vital to society, especially for improving lives in developing economies. However, achieving quality education at the tertiary level is not easy, as there are challenges to improving tertiary education in SSA. To effectively tackle the challenges faced by tertiary education, as recommended by the World Bank (2020), it is imperative to analyse and address the apparent obstacles and complexities involved.

Tertiary education in Sub-Saharan Africa is recognised as a relatively young and nascent phenomenon. Formal education in the region was introduced through the direct influence of the various colonial administrations. Education in SSA has made significant progress, but it has also faced, and is still currently experiencing, major challenges (Khaled, 2022). Six decades ago, university education in SSA was virtually non-existent, but it has developed into a viable sector that caters to several millions of students and can employ thousands of faculty and staff (Mohamedbhai, 2015). During the 1960s, there was an observable increase of over half a dozen institutions in SSA. The declaration of independence of most countries in the region characterised the period. Nevertheless, despite the impressive developments that the region has achieved in tertiary education, the education systems and institutions still face numerous problems and challenges (Lebeau & Oanda, 2020).

2.1.2 Funding

Accessibility to funds is one of the most important factors in almost all endeavours. In the same manner, the field of HE requires adequate funding to establish quality education and improve accessibility to an increasing population of learners (Simson and Harris, 2020). However, funding is difficult to get, especially for poor developing countries. McCowan (2018) notes that funding tertiary education institutions continues to be key issue worldwide, especially in SSA. Additionally, McCowan emphasises that economic factors, such as inflation, general economic downturns, civil unrests, natural disasters, and structural adjustment programmes, can negatively impact the development and progress of African institutions. Critically, McCowan (2018) strives to showcase that higher education is an expensive enterprise, requiring more funds than other forms of education because it involves knowledge dissemination as well as the highest level of knowledge creation.

With regard to funding, McCowan (2018) and Simson and Harris (2020) added that external stakeholders, like the World Bank, have contributed to the challenges that SSA is experiencing in post-secondary education. His arguments are based on the supposed rates of return on investment that made a case against university education but in support of elementary education and diverted the lending programme of the World Bank and other international financial agencies away from tertiary education. Furthermore, he contended

that the determination made by the World Bank to modify its lending policies against university education had a ripple effect, prompting other agencies to follow suit. As a result, most of the education funding in SSA was diverted towards primary education.

According to the research conducted by Darvas, Gao, Shen, and Bawany (2017), the World Bank and the other financial organisations have contributed to shaping the landscape of tertiary education in SSA. Specifically, their study undertook a critical analysis of the World Bank's attitude to financing post-secondary educational institutions in the region. This doctoral study explained that the part played by the World Bank and other financial organisations became quite evident during the economic crisis that SSA experienced in the late 1980s, especially the oil shock crisis. The region's declining economy has been the primary reason for the countries becoming debtor countries to the World Bank. However, the assistance from the World Bank came at a price, and that is through their authority to dictate the economic policies of the debtor countries. As a result, SSA countries have difficulties repaying these debts, which has a detrimental effect on social programmes in the countries. Among the programmes that are greatly affected by this problem is the field of education.

Hornsby and Osman's (2014) research findings indicate that funding constitutes a paramount challenge facing post-secondary education in Sub-Saharan Africa. (SSA). The authors traced back the insufficient budgetary allocations for tertiary education to the weakening economic condition in many African countries as the massification of classes is witnessed. The exploration agrees with a study by Oketch (2003) that paid attention to the insufficiency of resources in HE. As a result of low funding levels, the problems in many African universities can be described as:

> "the dilapidation of residence halls, the collapse or decline of services such as water and electricity (usually provided by the municipal council to the universities at a special nonmarket rate), crowded lecture halls, teaching reduced to mere chalk and talking, frustrated faculty who must hustle for additional income, libraries whose acquisition votes have been nominal or simply deferred each year in and out, and impoverished research output." (Oketch, 2003, p. 93)

Also, the political turmoil that many SSA countries experienced has had debilitating effects on the region's economy. Thus, the revenue base of the region was greatly affected, which caused the inadequacy of funds for social services like the establishment

of quality HE. The lack of funds forced many SSA governments to borrow from external sources, which put them in a more fragile financial situation because of the high interest on loans, and the interference of lenders on government policies. The poor economic condition of these countries has had a detrimental effect on tertiary education, undermining the quality and accessibility of higher education in Sub-Saharan Africa (Bhorat, Naidoo, Odusola, Cornia, and Conceição, 2017).

2.1.3 Gender equality

Moreover, in conjunction with the insufficient funding and quality issues, gender inequality represents a major concern in HE in Sub-Saharan African countries, as noted by Koissy-Kpein (2019). Shaw and Hernandez-Gantes' (2021) research findings suggest that women's participation in post-secondary institutions at senior levels is limited in SSA. While women's participation rate in tertiary education has improved, it predominantly pertains to the fields of humanities and social sciences. The study underscores the necessity for proactive and constructive steps to promote increased equity and recommends the implementation of gender equality programmes in HE in SSA to facilitate significant transformations across the educational structure of the region.

According to the study conducted by Mwagiru (2019), the lack of equal opportunities for women in the education sector, including at the tertiary level is among the challenges faced in SSA. The study traced the unequal opportunities between men and women in the history of the sub-region, with these genders playing different roles in society. Aside from that, the different needs of men and women also affect the cultural, institutional, physical, and economic constraints that they experience. These differences are the main causes of the inequality that women experience, preventing them from reaching their full potential; this is also observable in the realm of education. The limited engagement of women in the educational sector, particularly in tertiary education, where skills development and employment training occur, places them at a remarkable disadvantage in competing in the labour market, as highlighted by Mwagiru (2019).

2.1.4 Quality of education

The establishment of competent and efficient educational institutions is important because of their responsibility to educate people and help them become productive citizens (David & Amina, 2021). Nevertheless, there are various difficulties in providing quality education. Based on the study by Drape, Rudd, Lopez, & Radford (2016), the curricula of many HE institutions in SSA have deficiencies and do not reflect the needs of the 21st century. Drape et al. (2016) explained that the twenty-first century is recognised as the age of information and knowledge. As such, modern tertiary education systems should be consolidated to adapt to the demands of the present time.

Furthermore, there is a preference for versatility and innovation in this post-industrial age with greater competition in the world. Thus, employers are not simply looking for graduates or employees that have linear skills and are trained only in their field of concentration; rather, they prefer employees who can enhance growth in the workplace through their talents and ability to innovate (Drape, Rudd, Lopez, & Radford, 2016). In addition, employers need people who can effectively use information technology to change the old methods. This doctoral study concluded that outdated curricula used by tertiary institutions in SSA could be among the reasons for the poor job performance of university graduates.

Guàrdia, Mancini, Jacobetty, & Maina (2021) supported Drape et al. (2016) findings and results, as their research also shows that university graduates lack sufficient preparation for productive self-employment. The study was based on anecdotal evidence and generalisations about the employability of secondary and university graduates. In this doctoral research, tracer surveys were employed to provide a time-series overview of both secondary and university graduates' profiles in various African countries, including Malawi, Tanzania, Uganda, and Zimbabwe. The study highlights a crucial issue concerning the level of preparedness of these graduates to enter the labour force, given that the formal sector has limited capacity to absorb new entrants. Consequently, there is an urgent need for improvements in education quality to align with the labour market demands, the survey's outcomes underscored concerns about education's quality and relevance within the employment market. (Awad, 2020).

2.2 Distance Education

Sub-Saharan African countries can benefit from technology-driven distance education in addressing problems of accessibility and quality in tertiary education (Kotoua, Ilkan, & Kilic, 2015). Currently, there are major problems in the Nigerian educational system; it cannot provide quality university education to meet the demand (Jiboku, 2018). It would benefit from technology-driven distance education to help meet the demand for quality tertiary education. However, various barriers prevent the effective utilisation of technology-driven distance education in Nigeria (Baba, 2021).

Technology is considered one aspect that can help developing countries respond to the high demand for quality HE. The Rwandan project entitled "Twese Hamwe" is an example that portrays such benefits. This project uses the blended cooperative learning methodology, which utilises the blend of modern technology and traditional learning (Parmar, 2013). The main benefit of this project is that it helps answer and accommodate the increasing need for education in a time of social and political reconstruction. The project is also decreasing the current educational gap between rural and urban areas of Rwanda. Furthermore, Twese Hamwe, as a technology-driven learning, provides innovative teacher training programmes (Parmar, 2013).

The use of modern technology, such as ICT, has great impact and benefits in effectively implementing teacher training programmes and enhancing the educational systems in Africa. Having more competent and motivated teachers is significant to keep the steady pace of improvement and change in African educational systems (Murithi & Yoo, 2021). Without the help of effective teacher training programmes, it will be more difficult to guarantee that all students will receive the quality education they deserve. The main benefit of using ICT in teacher training is that teachers learn about technology first-hand (Piper, Jepkemei, Kwayumba, & Kibukho, 2015).

The founding of the African Virtual University (AVU) is considered as one of the most evident benefits of technology in improving the quality and reach of tertiary education across Africa. The AVU was established in 1997, with 27 educational institutions signing

up to offer AVU courses across Africa. Sponsored by the World Bank, the AVU utilizes modern technologies to resolve the common problems and barriers in delivering tertiary education (Munene, 2020).

In the book written by Magdallen Juma (2001), Director of African Virtual University at Kenyatta University, she stated that HE had experienced tremendous growth in the decades since independence. Most of the countries in Africa have witnessed a huge increase in enrolment at the college or tertiary level. Kenya is one of the countries that has witnessed enormous growth in university enrolment over the decade. Though additional universities are built around the country, these are not enough to accommodate the growing need for tertiary education. These are the types of problems and issues that Nigeria faces; the AVU serves as a model and the way forward in delivering quality HE to Nigeria's growing population (Munene, 2020).

As technology continues to advance at a rapid pace, with particular emphasis on Information Communication Technology, computer usage has also rapidly progressed, new avenues for expanding the accessibility and delivery of education to students have emerged. According to Coman et al. (2020), online education represents one of the latest technological innovations in the delivery of education that provides increased access to formal education, particularly in higher education.

Online learning is now regarded as a practical and economical means of extending access to quality post-secondary education, and educational institutions worldwide are adopting this approach to reach a broader audience. This shift is evident in the significant growth in student enrolment in online learning programmes, indicating the acceptance and recognition of this mode of education delivery (Coman et al., 2020).

Online learning is delivered through the help of modern technologies such as that of the internet and computers. Major educational institutions that have adopted this form of education are utilising the internet and computer technologies to send educational instructions being disseminated online. Thus, online learning is about applying and implementing a repertoire of well-designed cognitively oriented

instructional structures and strategies within the education sector. The establishment of collaborative and constructivist learning environments necessitates the use of distinct structures and approaches that leverage the resources and infrastructure of the World Wide Web. The Covid-19 global lockdown presented an opportunity to leverage online audio and video conferencing channels, such as Google Meet, Microsoft Skype, Teams, and Zoom to enhance online education. Equally, social media platforms such as Twitter, Facebook, and YouTube helped to sustain academic communication between teachers and learners (Sobaih, Hasanein, & Abu Elnasr, 2020).

One of the most practical technologies for distance education is mobile devices. Although, according to Tom Brown of Telematic Learning and Education Innovations at the University of Pretoria, m-learning is characterized as a subset of e-learning, it renders more flexibility, mobility, and convenience compared to conventional online learning (Brown, 2005). It is often delivered through mobile devices such as tablets, Windows CE Machines, and smartphones. Equally, the findings have been supported by Raheem & Khan (2020), who outlined the influence of e-learning and innovation in enhancing performance and productivity in education during the Covid-19 pandemic (Raheem & Khan, 2020).

Mobile devices are more convenient than other electronic devices used to provide access and quality HE. For instance, the mobile phone is a device that has more convenient features than most personal computers, and can allow a steady interaction between students and instructors (Zare, Sarikhani, Salari, & Mansouri, 2016). Furthermore, this device is designed to send and receive audio as well as to listen and even talk to another person, which can make the delivery of specific learning information probable and more accessible. Furthermore, through this same technology, students who are always on the go and working will be given a chance to have formal HE that would best fit their lifestyle. More so, mobile devices provide educational access for all at a much lower cost. Likewise, in terms of access and support, m-learning makes the process of acquiring knowledge more accessible because of its capability to transmit messages that could be received through audio, images, and video (Zare, et al., 2016).

Computer Assisted Learning, also known as CAL, is another technology that is utilised to deliver quality education among students. This type of technology is delivered using various presentation methods, which include pictures, videos, sounds, simulations, and animations. In distance education, CAL is considered as one of the most effective technologies that help provide access and quality, HE. For instance, in a review written by Shamsideen (2015), modern web-based CAL renders more effective and economical distance education available to all types of dental students as well as professionals. From tests to case studies, interactive patients, and online tutorials, the growing number of internet-based Computer-Assisted Learning programmes have helped develop an effective means of providing oral health education. (Shamsideen, 2015).

In a sense, web-based CAL provides access, quality education, and effective teaching and learning for most students. Web-based CAL educates the student using text, 2D and 3D images, and personal interactions. In most of the survey studies done during the 1980s, results show that CAL has numerous advantages and is more convenient. Likewise, students who utilize Computer-Assisted Learning experience improved outcomes and a more positive learning experience compared to those relying traditional methods (Shamsideen, 2015).

However, the implementation of these technologies is deemed to be difficult across SSA. In an article by Oluyinka Oludolapu Osunkunle of the University of Limpopo, South Africa, one of the main barriers to implementing these technologies is that many students have minimal access to modern ICT devices (Osunkunle, 2006). Many university students in Nigeria still have difficulties accessing modern ICT facilities, including computers and internet connection. Due to inadequate ICT infrastructure, proper instruction in the utilization of such digital tools and platforms is one of the barriers to a technology-driven tertiary education. Many students in Nigeria do not own a computer and do not know how to connect the computer to the internet, let alone operate it. The cost of acquiring ICT tools is also cited as one of the barriers to implementation (Stephen, 2013).

2.2.1 Prevailing Views on Distance and Online Education, Prospects and Challenges

Online and distance learning are increasingly becoming essential components of the modern educational environment blending effortlessly with the traditional modes of learning and teaching. It is more so in the American educational system, where 'Ivy League' universities also offer fully online degree programmes. The traditional dichotomy between online education and campus-based modes is progressively eroding. In the United States, a vast majority of degree programmes provide students with the flexibility of taking some courses online. In recent times, online education is no longer met with the same degree of apprehension or scepticism as it may have encountered a decade ago. However, there are still many places within and outside the US where people have doubts about the credibility of e-learning (Boeckh, 2014). Hence, there are divergent opinions regarding distance and online education's prospects and future development. The experiences gained during the Covid-19 global lockdown and the increasing popularity of remote work have drastically contributed to the growth of online education programmes. It is agreed that online instruction is expected to remain popular because of the instructional focus on student learning. More students, parents, and teachers will accept distance and online modes as viable means of learning and teaching. Many researchers are concluding that the best online programmes are those that combine some elements of classroom instruction. These are called blended or hybrid programmes. Traditional universities are reviewing their business models in order to compete effectively with online universities. Many researchers agree that distance and online education will continue to grow.

Online education has suffered reputational setbacks since its inception, from the public as well as from within academia. The academic staff that is engaged in designing and providing online courses knows that it requires advanced methodologies and cutting-edge designs to attract and focus student attention on learning (Mohammed & Yarinchi, 2013). While some universities are trying to develop more e-learning programmes, employers still look unfavourably at graduates with online degrees. There are two major reasons for public suspicion of, or discomfort with, online education in general – "diploma mills" and "cheating."

2.2.2 Diploma Mills

Technological advances and the internet have made it possible to set up a virtual university on the internet overnight, and it can be moved to different web addresses frequently to avoid detection. Because the internet is largely unregulated, websites advertising degrees are everywhere. The promise of a university degree without the requisite coursework is attractive to a certain population segment. The integrity of online learning is not only in question at the employer level; it is also of much concern for the educational systems of many countries that have declined to accredit non-residential degree programmes, effectively creating a barrier for legitimate virtual universities. The introduction of the online university in Pakistan, the Virtual University of Pakistan is one the example of a home-grown public online university with an enrolment of over 50,000 students (Din & Jabeen, 2014). Video lectures are recorded in Urdu to improve course content understanding and to supplement course texts. In addition, video lectures are aired on local television channels and further distributed on DVDs and YouTube channels. Exams are face-to-face and proctored at different locations across the country.

A recent study found that online learning has increased credibility, with about 90 percent of organisations ready to recognise online credentials. Nevertheless, everything being equal, 63 percent of employers in the study would prefer to employ a person from a traditional university rather than a person with an online degree (Larson, 2013).

The widespread prevalence of diploma mills has played a substantial role in undermining public faith in the efficacy and reliability of online education. The willingness of such institutions to grant degrees without adequate academic rigor has prompted many to question the credibility and legitimacy of online education. This has been particularly concerning in the wake of the increased popularity of online learning. In a study by S.D. Krashen (2008), it was found that diploma mills can be detrimental to the credibility of online education programmes, and the individuals who have received degrees from them. Krashen argued that employers and graduate schools may not recognize degrees from diploma mills, and thus diploma mill graduates may not be able to find jobs or gain access to postsecondary education. This can lead to a decrease in the perceived value of distance learning.

Another study by P.A. Schuller and C.M. Ritchie found that organisations, employers, and universities often consider degrees from diploma mills as invalid and that employers are often disinclined to hire someone who has graduated from such an institution. This doubt in the legitimacy of online degrees can lead to a decrease in the perceived value of such programmes and create a stigma against those holding such degrees.

2.2.3 Cheating

Cheating in e-learning education is a growing problem in the digital age. Garcia (2018) highlights the findings of a study undertaken by the US Department of Education, which indicate a notable increase in cheating among students utilizing online learning platforms. This increase in cheating is attributed to the lack of direct supervision and the ease of access to online resources (Garcia, 2018). Despite efforts made in the past decade by online education programmes to enhance security and authentication of students' online identity, including the utilization of proctored examinations and measures such as webcam usage, through analysing their keystrokes, authenticating their photo identification, and conducting tests in person at designated centres, scepticism remains prevalent among some stakeholders (Boeckh, 2014). The perception of the public is that cheating is much easier in the online environment. More still needs to be executed to improve online coursework's credibility and gain public trust.

2.3 Graduate Employability and Employability Skills

Graduate employability and employability skills have been topics of significant interest for many decades, primarily because of their direct implications on economic growth, societal well-being, and personal prosperity. As global economic dynamics shift, the variables influencing job readiness and employability are also undergoing transformation, necessitating continuous research. The landscape of research studies on employability conducted by African scholars and more specifically in the Nigerian context is quite robust. Research on approaches towards employability skills (Okolie, U. C et al., 2020; Akeke, M. et al., 2022; Aboagye, B. & Puoza, J., 2021), with heavy emphasis on specific subject area skills (Igwe, P. et al., 2022; Nwajiuba, C. A. et al., 2020), on the curricular-industry disconnect (Otache I., 2022; Chukwuedo, S. O. et al., 2023) and on employer perception of university graduates, (Agboola, M. B., 2022; Adebakin, A. B. et al., 2015). However, given the intrinsic focus of this research, the

perspective of employers of e-learning graduates is a crucial one, as they are the primary evaluators of graduates' employability, particularly non-traditional graduates.

Youth employment is an issue of great concern for many African countries, where unemployment and underemployment are causing widespread poverty (Baah-Boateng, 2016). Pitan and Adedeji (2012) assert that Nigerian families make substantial investments in education to enhance their children's prospects of securing employment and enhancing their socio-economic status. However, Bessen's (2014) research shows that employers of labour are raising concerns over the lack of adequate preparedness of university graduates for the job market, and some of the employees studied also agree. Pitan and Adedeji (2012) further report that employers claim a serious discordance exists between university education and the skills required to be effective in the workplace.

Owing to the "massification" of university education in the SSA region, hundreds of thousands of fresh university graduates join the labour market seeking employment (Lee, 2016). The result is fierce competition among job seekers for available jobs. According to Lourens (2016), academic qualifications are not enough to ensure employability (Lourens, 2016). Employers anticipate that university graduates would come into the job market with employability skills and would be immediately functional in the workplace (Singh, & Sharma, 2014).

The conversation on the theory of employability has been going on for some time. Baldry (2015) presents a historical retrospective of the idea of graduate employability, tracing its development from rudimentary conceptualization attempts to the creation of tools aimed at integrating graduate employability attributes into higher education (HE) curricula. The exploration links to Cotton's (1993) theoretical framework based on several graduate skill sets. He categorised these employability skills into basic, higher order, and affective skills needed in the workplace. Cotton's framework was one of the first employability models to view individual graduate skills levels as a determinant of employability. The exploration affirms that qualification should not be the only metrics for graduate employability (Baldry, 2015).

Hillage and Pollard's (1998) seminal work encompassing the prevailing ideas about employability identified a model comprising four principal factors: assets, deployment, presentation, and contexts. However, their work did not address the subject of the employability skills of university graduates, which later became the focus of subsequent studies because of its simplicity (Gedye and Beaumont, 2018). Furthermore, these frameworks make no distinction between online and traditional learning environments, thereby assuming there are no substantial differences in the employability outcomes of graduates from both modes of instruction. This needs to be verified, and a study conducted to investigate the assumption. An important breakthrough was introduced by Yorke and his associates at the Higher Education Academy (HEA) when they developed a definition of employability that has assisted in laying a stable foundation for modelling of employability skills and its infusion into the curriculum (Gedye and Beaumont, 2018).

The model developed is called USEM "Understanding, Skills, Efficacy beliefs, and Metacognition" (Teng & Yang, 2022). Meanwhile, Yorke and Knight (2006) define employability as:

> "A set of attainment and achievements, including and not limited to personal attributes, skills, and understanding. The unique features make the individual more likely to acquire employment and succeed in the specifically chosen occupation, which benefits the individual, the team, the community, and the overall economy" (Yorke & Knight, 2006, p. 3).

The USEM framework is complex and not easily accessible for use by students and parents (Teng & Yang, 2022). Nevertheless, the framework is the basis on which many research studies on employability rest, due to the significance of the framework in conceptualising employability in relation to other constructs, particularly the individual graduate's personal attributes, skills, subject matter understanding, and meta-cognition.

Pool and Sewell (2007) developed an alternative model combining and simplifying the USEM model and other employability skills models called the CareerEDGE model. The model seeks to operationalise the employability concept through quantitative testing, advancing the possibility of generalising research findings. The key limitation

of this model is that it is considered to present only a glimpse of employability at the point of the study (Smith, Ferns, & Russell, 2014). Notwithstanding this limitation, the CareerEDGE employability model is generally accepted and used for its simplicity.

Harvey (2010) presented the employability development model, which delineates the roles of HE institutions, individual graduates, and employers of labour. The study concludes that employment is the result of an individual graduate's employability and that academic institutions have little to do with it. Copps and Plimmer (2013) contested Harvey's conclusion by asserting that the process of securing employment is nonlinear and that many different dynamics influence it. They proposed the Journey of Employment (JET) model, which maintains that every individual graduate's journey is unique and that no single factor can ensure employability for everyone.

Wellman (2010, p. 921) developed the integrated competence model presenting the relationships between "knowledge, skills and personal attributes" to improve graduate employability. The increasing number of constructs in employability research (Hogan, Chamorro-Premuzic, & Kaiser, 2013) necessitated a simpler interpretation of the key ideas of employability. The RAW (Rewarding, Ability, and Willingness) model was introduced to bring clarity to the field without compromising the essential attributes of employability. According to the RAW employability framework, employers should evaluate the employability of individual graduates by assessing three crucial elements of their profile, which are: (a) is s/he rewarding to interact with, (b) does s/he possess the ability to complete tasks effectively, and (c) is s/he showing a willingness to put in significant effort (Hogan et al., 2013; p. 13).

The call for employability skills development at HE institutions in developed economies, where studies indicate that perceptions are changing rapidly concerning the quality of online education, is not making a distinction between the two learning modes. For Nigeria, the missing link is empirical data on employers' interactions with online education and various employability skills dimensions as they play out in the labour market (Teng & Yang, 2022).

2.4 Nigeria's Labour Market

Ajakaiye et al. (2016) highlight that from 2000 to 2014, Nigeria's economy experienced significant expansion, registering an average GDP growth rate of 5% to 6% over the period, positioning it as one of the most rapidly growing economies in Africa. However, the reported growth within this period occurred without reducing the unemployment rate, the so-called 'jobless growth.' The failure of the Nigerian government and the private sector to create adequate employment in response to the growing population is causing serious shortfalls in the labour market, making it difficult to absorb the annual cohort of graduating students. According to Kazeem (2016), 47% of Nigerian university graduates are unemployed. This phenomenon has led to high unemployment and underemployment, particularly among the Nigerian youth.

In addition to inadequate job creation in the Nigerian economy, employers report that university graduates lack the requisite skills required for gainful employment. As higher education and labour market factors converge, there is a rising apprehension that graduates in Nigeria do not possess the skills required to fulfil employability requirements. The interconnection of HE, labour market, and graduate employability has been the subject of discussion among education stakeholders and policymakers for decades, without an effective strategy to address this growing problem. In the competitive Nigerian labour market, the employer is faced with a disproportionate supply of labour compared to the demand, and must make recruitment decisions based on key employability factors (Favara & Appasamy, 2015).

2.5: The Impact of Coronavirus Disease

The outbreak of the coronavirus pandemic in 2019 has exerted a profound influence on university education in Nigeria. According to a recent report by the Nigerian Universities Commission (NUC), the pandemic has caused a significant decrease in student enrolment in Nigerian universities, resulting in a loss of income for the universities and a decrease in educational opportunities for students (Nmeribe, 2020). Furthermore, the pandemic has presented challenges to the delivery of face-to-face classroom instruction, leading to the emergence of e-learning as a viable alternative (Nwachukwu et al., 2020). Online education is an increasingly popular form of teaching and learning due to its flexibility, cost-effectiveness, and accessibility.

The Covid-19 pandemic has presented an exceptional opportunity for Nigerian universities to embrace e-learning as an effective means of improving students' readiness for the future. Nigerian universities have risen to the occasion by implementing various e-learning initiatives, such as virtual classrooms, online lectures, web-based resources, and other digital learning tools (Iheokwuruba et al., 2021). These initiatives have enabled students to continue their studies in a secure and convenient environment while imparting the requisite skills and knowledge to succeed in the digital realm. Nonetheless, the adoption of online education in Nigerian universities is not without its challenges. There exists a paucity of infrastructure and resources in many universities to effectively implement e-learning (Onwuegbuchulam et al., 2020). Furthermore, students and faculty in Nigeria have limited awareness and understanding of e-learning, resulting in low uptake and utilization of e-learning platforms (Mbarika et al., 2021).

Overall, Nigerian universities have been significantly affected by Covid-19, presenting both challenges and opportunities. The emergence of e-learning has provided a viable alternative to traditional teaching and learning, but there are still considerable obstacles to its effective implementation. It is therefore essential that universities in Nigeria continue to improve the infrastructure and resources required to ensure that students can benefit from the opportunities presented by e-learning.

2.5 Conceptual Framework

This doctoral study examines how employers perceive the suitability of e-learning graduates for employment. The conceptual framework which emerged from the literature review on factors influencing graduate employability and how those factors interconnect with the labour market to produce employment outcomes is the USEM model (Teng & Yang 2022; Knight and Yorke 2003; Yorke 2006), and it is used in this study. The high demand for HE in Nigeria, with distance education and online programmes becoming increasingly viable options for students and professionals (Oladipo, 2017), has raised the issue of employer perceptions towards distance and online degree holders compared to the perceptions towards traditional degree holders. Distance education and online programmes have become increasingly attractive for students who are unable to secure admission into traditional universities owing to insufficient capacity of the university

system. The foremost goal of families in funding post-secondary education is to increase their children's chances of obtaining gainful employment when they graduate.

The USEM model represented in Figure 1 is used to unpack the several factors that influence graduate employability (Yorke & Knight, 2006) and to investigate employer perceptions of the employability skills that are the most significant, particularly for e-learning degree holders. Moreover, the methods to be applied in this research focus on establishing the effects of employability, as they impact interactions in the labour market to produce employment results. Hence, this study seeks to identify which of the employability skills in Table 2 are the most highly rated by employers of labour in Nigeria. The study further aims to examine employer perceptions towards hiring graduates who received their degrees from the online learning environment.

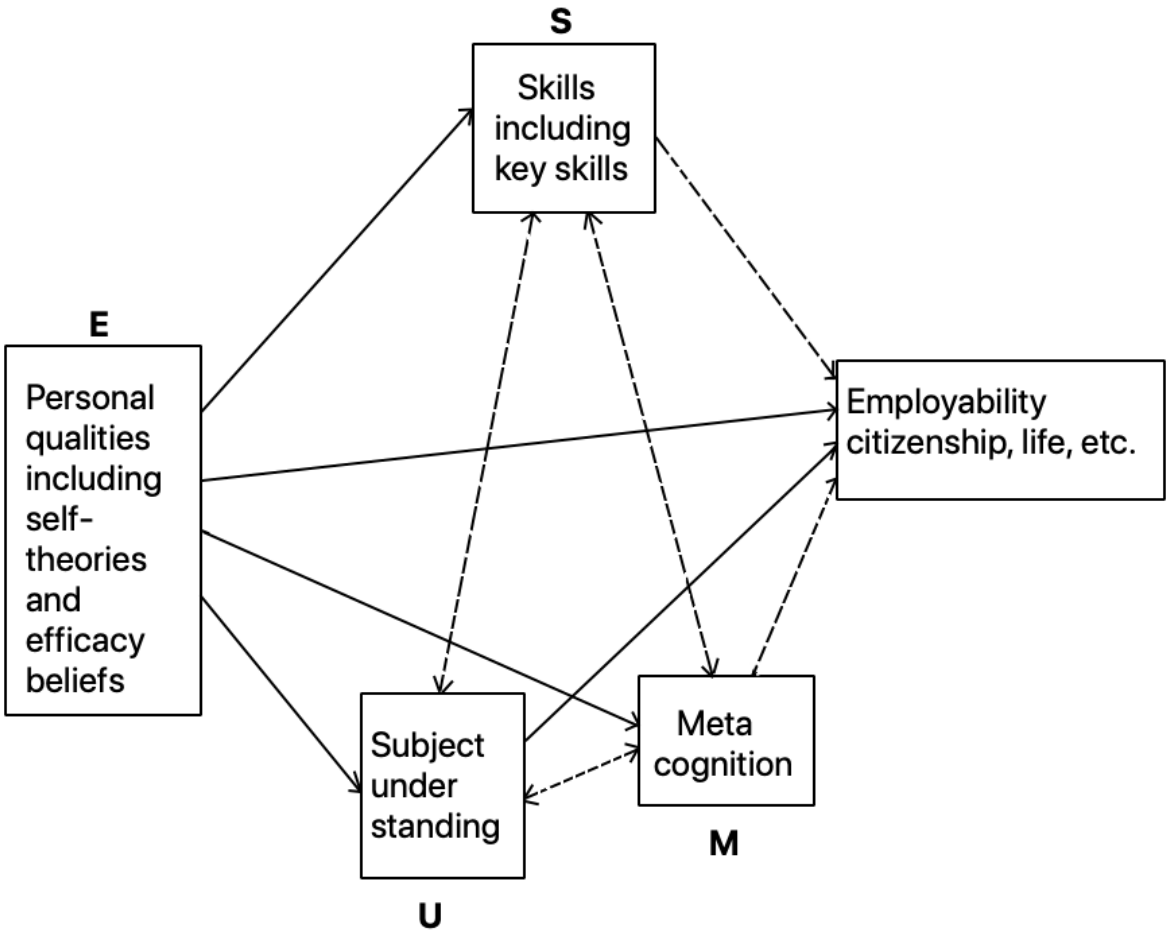
The USEM model is a conceptual framework developed by Yorke and Knight (2006) which proposes four components of graduate employability: efficacy, skills, metacognition, and understanding. 'E' Efficacy is the confidence one has, to take action and be successful in obtaining a job. 'S' Skills refer to the technical, social, and interpersonal capabilities that are necessary for performing a job. 'M' Metacognition is the capacity to observe and adjust one's own thinking and learning processes. 'U' Understanding is the capacity to make sense of complex work situations and to respond flexibly to changing contexts. These four components are interconnected and form the basis of the USEM model.

The USEM model is applicable to the employability of online graduates by examining how each component of the model is relevant to this demographic. Efficacy involves the confidence that e-learning graduates have to take action and be successful in obtaining a job. This can be enhanced by providing e-learning graduates with support and feedback while they are studying, and by giving them opportunities to network and gain experience in their chosen field. Skills refer to the technical, social, and interpersonal capabilities that e-learning graduates need to perform a job. These can be developed through engaging in activities such as online forums, webinars, and virtual team projects. According to Yorke and Knight (2006) metacognition signifies the ability to monitor and regulate one's own thinking and learning processes. This can be improved through activities such as

reflective writing and self-assessment. Finally, understanding involves the capacity to make sense of complex work situations and to respond flexibly to changing contexts. This can be improved by engaging in activities such as reading industry trends and news, and participating in professional development and continuing education. Through building these four components, e-learning graduates can increase their employability and be better prepared for entering the job market.

Figure 1

USEM Graduate Employability Model



Source: Yorke and Knight (April, 2006, p. 5). Conceptual framework.

Table 2.

USEM Employability Skills Influencing Employers' Hiring Decisions

A. PERSONAL QUALITIES
1 Malleable self-theory: belief that attributes [eg intelligence] are not fixed and can be developed.
2 Self-awareness: awareness of own strengths and weaknesses, aims and values.
3 Self-confidence: confidence in dealing with the challenges that employment and life throw up.
4 Independence: ability to work without supervision.
5 Emotional intelligence: sensitivity to others' emotions and the effects that they can have.
6 Adaptability: ability to respond positively to changing circumstances and new challenges.
7 Stress tolerance: ability to retain effectiveness under pressure.
8 Initiative: ability to take action unprompted.
9 Willingness to learn: commitment to ongoing learning to meet the needs of employment and life.
10 Reflectiveness: the disposition to reflect evaluatively on the performance of oneself and others.
B. CORE SKILLS
11 Reading effectiveness: the recognition and retention of key points.
12 Numeracy: ability to use numbers at an appropriate level of accuracy.
13 Information retrieval: ability to access different sources.
14 Language skills: possession of more than a single language.
15 Self-management: ability to work in an efficient and structured manner.
16 Critical analysis: ability to 'deconstruct' a problem or situation.
17 Creativity: ability to be original or inventive and to apply lateral thinking.
18 Listening: focused attention in which key points are recognised.
19 Written communication: clear reports, letters etc written specifically for the reader.
20 Oral presentations: clear and confident presentation of information to a group [also 21, 35].
21 Explaining: orally and in writing [see also 20, 35].
22 Global awareness: in terms of both cultures and economics.
C. PROCESS SKILLS
23 Computer literacy: ability to use a range of software.
24 Commercial awareness: operating with an understanding of business issues and priorities.
25 Political sensitivity: appreciates how organisations actually work and acts accordingly.
26 Ability to work cross-culturally: both within and beyond the UK.
27 Ethical sensitivity: appreciates ethical aspects of employment and acts accordingly.
28 Prioritising: ability to rank tasks according to importance.
29 Planning: setting of achievable goals and structuring action.
30 Applying subject understanding: use of disciplinary understanding from the HE programme.
31 Acting morally: has a moral code and acts accordingly.
32 Coping with complexity: ability to handle ambiguous and complex situations.
33 Problem solving: selection and use of appropriate methods to find solutions.
34 Influencing: convincing others of the validity of one's point of view
35 Arguing for and/or justifying a point of view or a course of action [see also 20, 21, 34].
36 Resolving conflict: both intra-personally and in relationships with others.
37 Decision making: choice of the best option from a range of alternatives.
38 Negotiating: discussion to achieve mutually satisfactory resolution of contentious issues.
39 Team work: can work constructively with others on a common task.

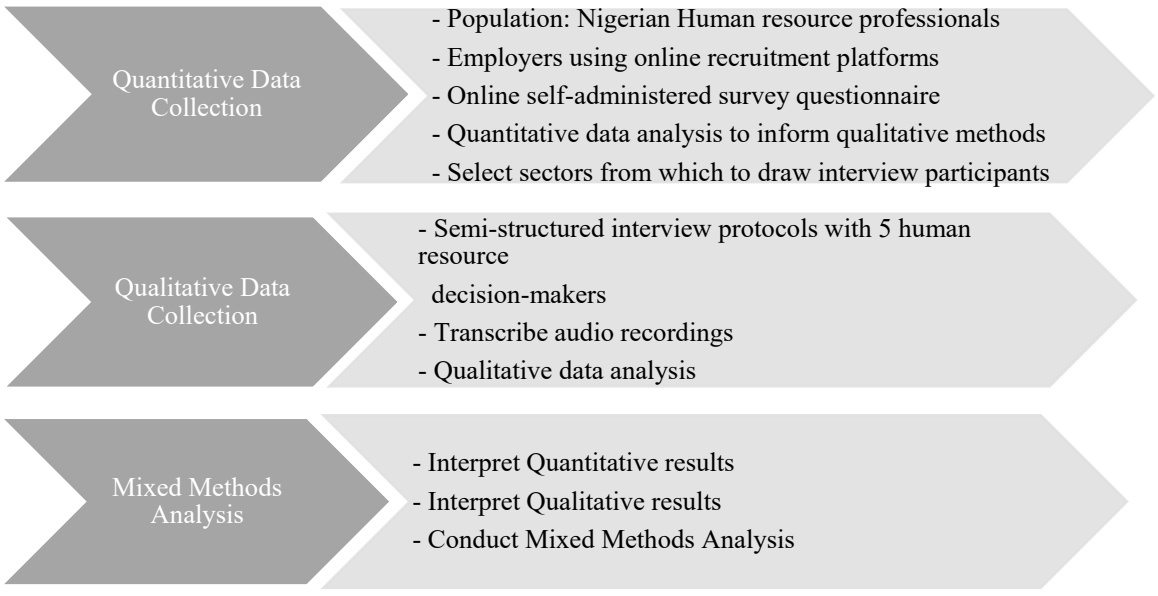
Source: Yorke and Knight (2006, p. 8). 39 Aspects of employability developed in the *Skills Plus* project.

3. Research Design and Methodology

The objective of this doctoral research is to investigate Nigerian employers' perceptions of hiring graduates who received their degrees from non-traditional modes of learning, using Creswell and Plano Clark's (2011) "explanatory sequential mixed methods design". This section focuses on the research design and methodology procedures applied in the investigation and in the analyses of employer perceptions towards hiring e-learning graduates. The research poses four questions: the first seeks to investigate employers' understanding of graduate employability and employability skills; the second explores key competencies of e-learning and traditional classroom graduates; and the third question assesses how employers view the job readiness of individuals with online degrees, and the fourth question measures the conventional degree employability graduates using the four (4) descriptors of the USEM model of employability (personal traits, process skills, core skills, and metacognition).

Figure 2

"Explanatory sequential mixed methods design" by Creswell & Plano-Clark (2011).



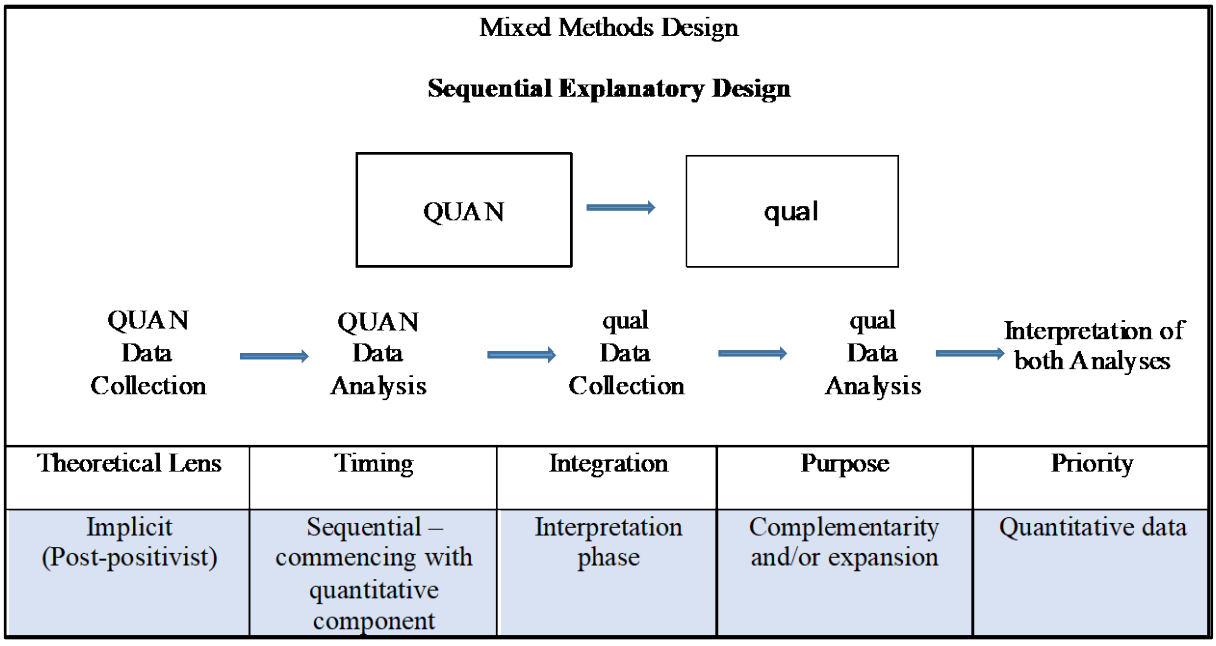
3.1 Research Design

This doctoral research employs Creswell's mixed methods approach, which adopts pragmatism as its philosophical worldview. Pragmatism prioritizes the use of all available

approaches to acquire knowledge on the research problem (Creswell & Plano Clark, 2011). The study utilizes an "explanatory sequential mixed methods design", as depicted in Figure 3, which entails first collecting quantitative data followed by collecting qualitative data. The survey design is used as the quantitative component of this study, which generates a report on the research participants' attitudes, opinions, or trends (Creswell, 2019). The qualitative component of the study utilises a phenomenological design giving voice to the human experience about the phenomenon as portrayed by the participants in the study (Giorgi, 2012; Groenewald, 2004). This study's qualitative component uses in-depth interviews to hear the voices behind the human experience distinctively. The two sets of data in the mixed methods are used to corroborate, cross-validate, or verify the study's findings. In so doing, this doctoral study was able to compensate for the limitations of one method with the strengths of the other (Creswell & Plano Clark, 2006).

Figure 3

Mixed Methods Design – Sequential Explanatory



Theoretical Lens	Timing	Integration	Purpose	Priority
Implicit (Post-positivist)	Sequential – commencing with quantitative component	Interpretation phase	Complementarity and/or expansion	Quantitative data

Source: Creswell, Plano Clark, Gutmann, & Hanson (2003).

3.1.1 Research Expectations

This doctoral study aims to determine the perception of Nigerian employers towards graduates with degrees obtained from online and distance learning programmes. The

research study analyses what employers perceive as factors affecting instructional quality and outcomes in e-learning, compared to the perceived factors affecting the quality and outcomes in traditional or conventional programmes. This doctoral study identifies the employability skills that are of most importance to employers by industry and by sector of the economy using the USEM framework.

3.1.2 Reliability

Reliability is an important aspect of the doctoral research for several reasons. Firstly, it ensures that the results obtained are consistent and accurate, which increases the confidence in the findings. Secondly, reliability is essential for the validity of a research study. According to Creswell (2014), validity refers to the extent to which a research study precisely measures the concept it aims to evaluate. Thirdly, a reliable study provides a strong basis for subsequent research. By establishing reliability, the thesis research ensures that the results can be applied to the larger population being studied.

3.1.3 Potential Research Bias

As stated by Neuman (2014), bias can manifest at various phases of research, spanning from initial planning stage to data collection and data analysis. In this study, this doctoral researcher is conscious of possible bias stemming from her personal experience with online learning in Nigeria. The researcher's company worked in close collaboration with the accrediting agency in Nigeria to introduce e-learning in selected Federal universities. In addition, this researcher interacted with the federal institutions approved to offer e-learning degree programmes, she interacted with the e-learning students and their lecturers, and with some of the parents of the students. This researcher acknowledges that biases are inherent in any research; however, steps have been taken to mitigate their potential impact. Standard procedures and protocols have been implemented to guide the research process, thus minimizing the impact of any biases that may arise. Additionally, there is little, or no direct interaction with the e-learning community since the study is focused on employer perceptions of e-learning graduates.

3.1.4 Description of Materials and Instruments

Quantitative Data:

This doctoral study used a purposive sampling method to identify human resource professionals who recruited graduates from online job platforms. To ensure only recruiters have access to the online survey questionnaire, participants had to log in to "Employer" accounts to see the option to participate in the survey. By using this sampling method, only people who fit the research criteria have access to and the option to fill out the questionnaire. This doctoral study developed a survey questionnaire using the USEM concept of graduate employability (Figure 1) and its inventory of employability skills listed in Table 2 that is self-administered by participants and web-based. The questionnaire employed in this doctoral study is organised into three distinct parts. The first part is designed to gather basic data on the survey participants and their organizations. The second part comprises a series of queries that explore employer perceptions of online programmes, with respondents providing ratings on a 4-point Likert Scale. The third part of the questionnaire asked respondents to rate which employability dimension is the most important to their organisation in terms of making hiring decisions for job applicants, whether applicants with traditional or online programme degrees. There are 39 dimensions of employability skills (Yorke & Knight, 2006) on which the respondent rated e-learning graduates against traditional classroom graduates. The survey instrument used rating instead of ranking; when a large set of objects are considered, respondents prefer the rating option (Elig & Frieze, 1979; Taylor & Kinnear, 1971). The third part of the questionnaire requested respondents to evaluate the significance of graduate employability skills of USEM for both online and traditional students.

Qualitative Data:

For the QUAL phase of this study, the key informants for in-depth interviews were purposefully selected from the top ten sectors identified in the quantitative data analysis, ensuring that a representative sample of different sectors of the economy was included. The top ten respondents represent employers from specific sectors of the Nigerian economy using online recruitment platforms to recruit new graduates. This doctoral study contacted human resource professionals working in each of the top ten industries to participate in the study. This doctoral study informed each prospective interviewee of the study's purpose. They were informed that their role as human resource professionals with decision-making responsibilities regarding hiring new graduates was important in participating in the study. Out of the ten (10) potential key informants contacted, five (5) agreed to be interviewed and recorded via the online video conferencing platform Zoom.

This doctoral study transferred five thousand Naira ($9) of mobile phone credit to the five (5) participants as an incentive to increase interest in participating in the study and as compensation for their own network data. The interviews allowed this doctoral study to probe employer feelings, perceptions, and opinions toward e-learning degree graduates to gain insight into how they make employment decisions (Laforest, 2009). The in-depth semi-structured interviews allowed respondents the opportunity to explore, in detail, ideas or views that shine more light into their perceptions, feelings, and opinions regarding e-learning. The interviews were audio recorded using the online meeting platform's recording option (Zoom) and by taking notes.

3.1.5 Sampling

The research population for this doctoral study consists of human resource professionals across Nigeria, specifically those involved in the recruitment of graduates via online job platforms. This population is highly relevant for examining the perceptions and decision-making processes regarding graduates from online and traditional educational programmes, given their direct involvement in hiring decisions.

Quantitative Sample Size

For the quantitative component of the study, the sample was achieved using a purposive sampling method. This approach was chosen to specifically target individuals who fit the study's criteria:

1. **Access and Eligibility**: Only recruiters with access to "Employer" accounts on the online job recruitment portal 'Hot Nigerian Jobs' were eligible to participate. This ensured that the participants were actively engaged in the recruitment of graduates, thus aligning with the study's objectives.
2. **Survey Distribution and Control**: The survey was distributed through a pop-up invitation on the job portal, which directed the recruiters to a Google Forms questionnaire. The design of the survey deployment ensured that only the target audience, i.e., recruiters with employer accounts, could access and respond to the survey.
3. **Incentives**: To encourage completion of the survey, tokens were provided as incentives, which could be redeemed for posting job vacancies on the portal. This

not only motivated participation but also ensured that the responses were thoughtful and complete.

The survey was conducted over a twelve-week period, allowing ample time for participants to notice and respond to the survey. Measures such as the 'One Response Per Computer' option were implemented to prevent multiple submissions from the same user, thus ensuring the integrity of the data.

Qualitative Sample Size

For the qualitative component, the sample size was more focused:

1. **Selection of Key Informants**: The study selected key informants from the top ten sectors of the Nigerian economy identified in the quantitative data analysis. This stratified purposive sampling ensured a comprehensive coverage of sectors relevant to the national economy and allowed for sector-specific insights into the hiring of graduates from online programmes.
2. **Recruitment of Participants**: Out of the ten potential key informants contacted, five agreed to participate. These informants were chosen based on their decision-making roles within their respective organizations and their potential to provide in-depth insights into the research questions.
3. **Data Collection Method**: Semi-structured interviews were conducted using the Zoom platform, allowing for a detailed exploration of individual perceptions and experiences. The interviews were recorded and transcribed, ensuring accuracy in data collection and subsequent analysis.

HR professionals who recruit from online platforms can be considered a representative sample for studying broader recruitment and employment trends, especially in the context of evolving educational qualifications. Their experiences reflect a cross-section of modern HR practices and are relevant to understanding how educational advancements align with market needs. In the contemporary job market, recruitment processes have increasingly shifted to digital platforms. This shift is especially pronounced in dynamic and economically significant environments. Human resource professionals who use online platforms are at the forefront of this shift and represent the evolving nature of recruitment practices.

Online recruitment is not confined to specific sectors but is widespread across various industries. This ubiquity means that HR professionals who recruit online are likely

involved in a diverse range of sectors, thereby providing insights applicable to a broad spectrum of the job market. Online platforms typically advertise a wide array of job roles from entry-level positions to senior management, encompassing different fields and specialties. HR professionals who recruit through these platforms are thus exposed to a wide variety of candidate profiles and job requirements, making them a representative sample for studying general trends in employment and recruitment criteria.

These platforms often attract candidates with varying educational qualifications, including those from traditional universities and online education programmes. This diversity in candidate background allows HR professionals to provide a well-rounded perspective on the employability of graduates from different educational settings. Online recruitment platforms typically have a national or even international reach, attracting candidates and recruiters from across different regions. This geographic diversity helps ensure that the sample reflects broader employment trends and is not biased towards specific local or regional practices.

Since these platforms are accessible to a wider demographic range, the recruitment practices observed through these platforms can provide insights that are more generally applicable to the larger workforce, including various age groups, genders, and ethnic backgrounds. The high adoption rate of online recruitment platforms among HR professionals suggests that those who use these platforms are not a niche or exceptional group but rather representative of mainstream recruitment strategies. With the growing reliance on digital tools for HR functions, these professionals' practices and preferences can be seen as indicative of broader trends.

Since the study specifically aims to understand the impact of online education on employability, then sampling HR professionals who recruit through online platforms is strategic and purposeful. These individuals are likely to have direct experience and informed opinions about the efficacy of online vs. traditional educational pathways, making their insights particularly valuable for the research objectives.

3.2 Data Collection Procedures

The procedures for conducting the research are influenced greatly by the strategies and approaches to be utilised in the gathering and analysing of data. According to Sutton and Austin (2015), when well-established procedures are followed, this

doctoral study optimises the activities of the research and avoids disruptions. Therefore, the assumption made in drawing up the procedure for the study is that preliminary preparations involving theoretical tools including the data collection tool and questions for the interviews and the survey would have been developed. Prior to conducting the survey, this doctoral study followed all processes enumerated by the "Human Research Ethics Committee (Non-Medical)" at the University of the Witwatersrand to secure its authorisation and consent to gather the data needed for the study.

The quantitative component of this research employed an internet-based self-administered survey using an online job recruitment portal called 'Hot Nigerian Jobs' (www.hotnigerianjobs.com). This website ranks highest in terms of traffic compared to other job portals in Nigeria while ranking 43 in Nigeria. Additionally, 93% of its visitors are reported as accessing the website from Nigeria-based IPs (Internet Protocols). This doctoral study deposited funds to buy tokens from the job portal to reward each fully completed questionnaire as an incentive that was redeemed to post one job vacancy. When the survey participants logged on to their employer account on the job portal, they were greeted by a 'pop-up' invitation to participate in the survey. The web link provided took participants to Google Forms, where the questionnaire resided. The survey was administered for at twelve (12) weeks to ensure adequate time for optimum participation. The *One Response Per Computer* option was selected to guard against multiple submissions by the same employer.

The first page of the questionnaire is an introduction consisting of the informed consent statement. In the survey, the first inquiry presented to the participant inquired about whether they have perused the Participant Information Sheet preceding their voluntary participation in the study. To signify their consent to participate, they selected the 'Yes' option, and if they chose to decline, they were able to exit the questionnaire. Survey participants were required to respond to all the questions on the questionnaire, as the form could only be submitted if it was fully completed. All participants had the opportunity to print the informed consent page through the web browser page options. When participants have completed the questionnaire, the 'Submit' button informs them that the link to their free voucher will be revealed after successful submission. A total of 110 participants

submitted fully completed questionnaires to be used for QUAN and mixed methods analysis.

In this study's qualitative component, semi-structured interviews were conducted to collect data utilising the Zoom online video and audio-conferencing platform. The recording option was activated after securing the interviewees' approval; they were allowed to approve or reject the recording request through the automatic Zoom pop-up question, which required participants to click ‘Yes’ or ‘No’ to consent or decline the recording request. The Zoom online videoconferencing's main activity was conducting the interviews that directly produced the research data.

The audio recordings which were saved in cloud storage were later transcribed using the online Microsoft Word function, while the data was analysed using MAXQDA 2020 computer application for qualitative data analysis. The analysis results are discussed in relation to quantitative data collected within the context of research’s literature review on the subject and within the theoretical frameworks.

3.3 Data Analysis

Analysis of data allows this doctoral study to create meaning from the information collected from research activities (Suresh, Thomas & Suresh, 2011). Data gathered from the survey and from the interviews are analysed thoroughly to draw similarities and patterns that present this doctoral study with a chance to make new insights into the topic. Due to the similarity of some of the research questions used to collect information, analysis mostly pertains to the examination of data for consistently held views among employers on hiring online education graduates.

An essential step in data analysis, one that comes before, during, and after analysis, is the involvement of participants (Sutton & Austin, 2015). Since the interpretation of data comes from their insights, it is important to remain true to their views and not misrepresent them to meet research objectives or for any other reason. Analysis of data should only include information that is directly attributable to the collection process, without interference from personal views or theoretical frameworks developed beforehand.

In the qualitative component of this research, transcribing was used to extract text from audio recordings for improved analytics. With the transcripts at hand, the next process involved using both manual and digital resources to break down the bulky data into simple concepts. Coding is the process through which the data acquired from interviews are categorised, labelled, and organized to identify different themes and relationships. Computer analysis was essential to the study as it is neutral, unbiased, and more capable of drawing meanings by connecting different concepts. The topics, issues, parallels, and variances were used as the formats for classification and comprised the subtopics through which the interpreted findings are represented. Coded information was inserted into the MAXQDA 2020 computer software for analysis. The process is conducted in accordance with the theoretical approaches this doctoral study used to gather information since it is the format in which data is recorded. It involved critical evaluation of data, to understand its relationship to the aims of the study and its application to the research objectives.

An important process of the interpretation of data calls for critical evaluation of data to understand the relationships between facts and the research topics. According to Suresh, Thomas and Suresh (2011), this process generates meaning to data in different ways from those identified in interpretation. For example, activities such as evaluating field notes commentary and non-verbal cues to incorporate the participants' demeanour while discussing various topics may be conducted. In the event that a different researcher knowingly or unknowingly replicates the study and procedures carried out, critical evaluation of datasets and methods of gathering data allows the study to retain its relevance. Insights are generated for the research project during the critical evaluation of data.

In the quantitative segment of this research, data analysis is conducted utilising SPSS and Microsoft Excel to perform descriptive and inferential statistics. The analysis entails generating measures like means, standard deviations, frequencies, and percentages. Additionally, a "one-way analysis of variance" (ANOVA) is employed to evaluate dissimilarities between groups.

After critical evaluation and discovery of insights, the research then brought together the findings and arrange them in the format most suitable to represent, as accurately as possible, the participants' views (Sutton & Austin, 2015). Therefore, writing a report is the last process of the research and aims to create as accurate a picture of the research as

possible. All procedures carried out in the course of the research are recorded, coded, and themed with report titles and subtitles to create an easier reading experience.

Presentation of findings is the last and most important activity of data analysis as it involves arranging codes and insights in an easily understandable way. Reporting on the findings is a significant step in the research process, and a necessary adherence to research procedures of conveying the findings increases the credibility of the research and its findings. In keeping to practices in case study strategies, parallels to the whole online education industry is inferred from the study.

4. Results

This study investigates how Nigerian employers view graduates who acquired their degrees through non-traditional modes of learning like e-learning or online learning, in the framework of the literature review presented in chapter two. The research employs an "explanatory sequential mixed methods design", which comprises of collecting quantitative data first, and then qualitative data. The survey component of the study collects demographic data on the respondents and examines their attitudes towards hiring graduates from non-traditional modes of learning. The primary question this research is asking is concerned with the employers' understanding of graduate employability skills and their consideration of the mode of degree delivery in their recruitment decisions. The qualitative component of the study utilised a phenomenological design that gives voice to the human experience about the phenomenon as portrayed by the participants in the study. This study's qualitative component used in-depth interviews to hear the voices behind the human experience distinctively. In this mixed methods research, the use of both quantitative and qualitative data sets aimed to provide a comprehensive and rigorous analysis by mutually corroborating, cross-validating, and verifying the findings. The integration of these two data sets helped to address the limitations of one method by leveraging the strengths of the other.

The data from Google Forms was imported into IBM SPSS to present statistical data from a quantitative point of view. The data was analysed using the analytical methods explained in Chapter 3. Table 3 shows the linkages between the questionnaire and the research questions. In other words, Table 3 below indicates which specific questions in the survey questionnaire relate to each of the research questions. It serves as a guide to identify which responses from the questionnaire are important in analysing and answering each research question.

4.1 Quantitative Data Analysis

4.1.1 Link Research Questions and Questionnaire Questions

Table 3

Link Research Questions and Questionnaire Questions

DEMOGRAPHICS	1. How many employees does your organization have?
	2. Did your organization recruit fresh university graduates in the last five years?
	3. What is the ownership structure of your organization?
	4. Which of the following aspects best describes the principal industry of your organization?
	5. Of all the employees in your organization, what percentage are university graduates?
	6. What is the geographic location of your organization's headquarters in Nigeria?
	7. What is your age bracket?
	8. What is your gender?
	9. What is your highest level of education?
	10. What is your current position?
	11. We recruit graduates from the following three (3) field(s)
	12. Has your organization employed any staff with an online degree?
RQ4 Labour Market Sectors	Which of the following best modalities describes the principal industry of your organization?
RQ1 What perceptions do employers have of graduates who obtained their qualification through alternative modes of learning such as online or eLearning?	13. An online degree approved by the National Universities Commission is acceptable in our organization
	14. Online degree programs are not as good as traditional university degrees. What do you think?
	15. There is no significant difference between online degrees and traditional face-to-face degrees. What do you think?

RQ2	18. An online degree from a prestigious university is better than a traditional degree from an unknown university. What do you think?
How does the course delivery mode affect employers' understanding of graduate employability and employability skills in the Nigerian labour market?	26. Online courses and physical classroom courses offer the same learning experience
	19. Whether an applicant obtained his or her degree online or in a traditional university is of no consequence to our organization.
	17. We prefer graduates from prestigious universities
	23. The rigor in online degree programs is equal to the rigor in traditional degree programs
	22. Our organization considers online degrees the same as traditional university degrees.
	16. If selecting between two equally qualified candidates, we would likely select the candidate with the following:
	21. Graduates with online degrees are not successful in our organization
	14. We prefer not to hire applicants with an online degree
	24. Our organization sometimes works directly with tertiary institutions to recruit fresh graduates
	25. What should higher institutions do to improve the employability of their graduates?

	Which skills and competencies are the most important for fresh university graduates to succeed in your organization? Please choose the five (5) most important ones:	RQ4 Using the USEM model of employability as an employability framework, how do the four key descriptors measure within the Nigerian labour market?
	Which skills and competencies are the most important for fresh university graduates to succeed in your organization? Please choose the five (5) most important ones:	
	Which of these skills and competencies are the most important for fresh university graduates to be successful in your organization? Please choose the five (5) most important ones:	RQ3 What do employers of labour in Nigeria consider as key factors, with respect to competencies of e-learning and traditional classroom graduates, in recruitment decisions?

PERSONAL QUALITIES	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Ability to develop new attributes]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Self-awareness]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Self-confidence]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Independence]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Emotional intelligence]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Adaptability]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Stress tolerance]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Initiative]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Willingness to learn]	
	How do you think graduates who earned their degrees online rate on the following skills and competencies? [Reflectiveness]	

CORE SKILLS	How do you think online degree holders rate on the following skills and competencies? [Reading effectiveness]	
	How do you think online degree holders rate on the following skills and competencies? [Numeracy]	
	How do you think online degree holders rate on the following skills and competencies? [Information retrieval]	
	How do you think online degree holders rate on the following skills and competencies? [Language skills]	
	How do you think online degree holders rate on the following skills and competencies? [Self-management]	
	How do you think online degree holders rate on the following skills and competencies? [Critical analysis]	
	How do you think online degree holders rate on the following skills and competencies? [Creativity]	
	How do you think online degree holders rate on the following skills and competencies? [Listening]	
	How do you think online degree holders rate on the following skills and competencies? [Written communication]	
	How do you think online degree holders rate on the following skills and competencies? [Oral presentations]	
	How do you think online degree holders rate on the following skills and competencies? [Explaining]	
	How do you think online degree holders rate on the following skills and competencies? [Global awareness]	
UNDERSTANDING	How do you think online degree holders rate on these skills and competencies? [Applying subject understanding]	

PROCESS SKILLS	How do you think online degree holders rate on these skills and competencies? [Computer literacy]	
	How do you think online degree holders rate on these skills and competencies? [Commercial awareness]	
	How do you think online degree holders rate on these skills and competencies? [Political sensitivity]	
	How do you think online degree holders rate on these skills and competencies? [Ability to work cross-culturally]	
	How do you think online degree holders rate on these skills and competencies? [Ethical sensitivity]	
	How do you think online degree holders rate on these skills and competencies? [Prioritising]	
	How do you think online degree holders rate on these skills and competencies? [Planning]	
	How do you think online degree holders rate on these skills and competencies? [Acting morally]	
	How do you think online degree holders rate on these skills and competencies? [Coping with complexity]	
	How do you think online degree holders rate on these skills and competencies? [Problem solving]	
	How do you think online degree holders rate on these skills and competencies? [Influencing]	
	How do you think online degree holders rate on these skills and competencies? [Arguing for and/or justification of a particular point of view or a specified course of action.]	
	How do you think online degree holders rate on these skills and competencies? [Resolving conflict]	
	How do you think online degree holders rate on these skills and competencies? [Decision making]	
	How do you think online degree holders rate on these skills and competencies? [Negotiating]	
	How do you think online degree holders rate on these skills and competencies? [Team work]	

4.1.2 Distribution of responses according to demographics

Table 4 presents an overview of the survey participants by gender of the population, which participated in this study had 48.2% female and 51.8% male. From the age perspective, the sample consisted of 54.5 % respondents that were of age 30-44 years, 31.85 were of age 45-49 and 13.1% were between 18-29 years of age. Out of the 110 respondents that completed the questionnaire, 60.0% had a bachelor's degree, 33.6% had a master's degree, 4.5% had earned their doctoral degree, whilst 1.8% had taken some university courses but had not earned a degree. An analysis data distribution by respondent's job position as presented in the Table 4 below, showed that 70% of the 110 respondents were either a HR Manager or HR Director while 24.5% were either General Manager or Managing Director

Table 4:

Demographics distribution of sample (N=110)

		Frequency	Percentage
Gender	Female	53	48.2
	Male	57	51.8
Age in Years	18-29	15	13.1
	30-44	60	54.5
	45-59	35	31.8
Education	Bachelor's Degree	66	60.0
	Doctoral or Professional	5	4.5
	Master's Degree	37	33.6
	Some College	2	1.8
Position	General Manager/ Director/ Managing Director	27	24.5
	HR Manager/HR Director/Head of HR	77	70.0
	Other	6	5.5

Source: Source: Survey data (2021), SPSS Analysis

The present research comprised the collection of data pertaining to various aspects of the respondents' organizations, including their geographic location, organizational structure, industry, and the proportion of graduate employees, with the aim of creating a comprehensive organizational profile. The data was analysed utilising descriptive statistics, specifically percentages and frequencies, to present a clear and concise representation of the gathered information. The findings are presented in Table 5, which outlines key factors of the employer profile, including size of the organization, ownership structure, geographic location, business sector, and the proportion of the employees with graduate degrees. This information is crucial for gaining a deeper understanding of organizational attributes, and may be utilized in various contexts, such as comparative industry analyses, regional or sectoral studies, or workforce studies.

As presented in Table 5, respondents are a diverse group of employers representing all regions of Nigeria with 57.3% from the Southwest, 19.1% from Northcentral, about 10.9% from the Southeast, 6.4% from the South-South, 4.5% from the Northeast and 1.8% from the Northwest. The ownership structure of their organizations shows that 78.2% of the respondents identified as coming from the private sector and 12.7% were from the public sector. When asked on the percentage of employees, which are university graduates, 30.9% of the respondents indicated that their organization has 81-100% graduates and whilst 27.3% indicated 41-60% of the graduates and only 4.5% have between 0-20% graduates. The information indicated that 19.1% of the respondents are working for Telecommunication & Technology industry, 15.5 % for Non-profit organizations, 9.1% for Food and Beverages, 8.2% for Education and the rest as shown on Table 5.

Table 5:

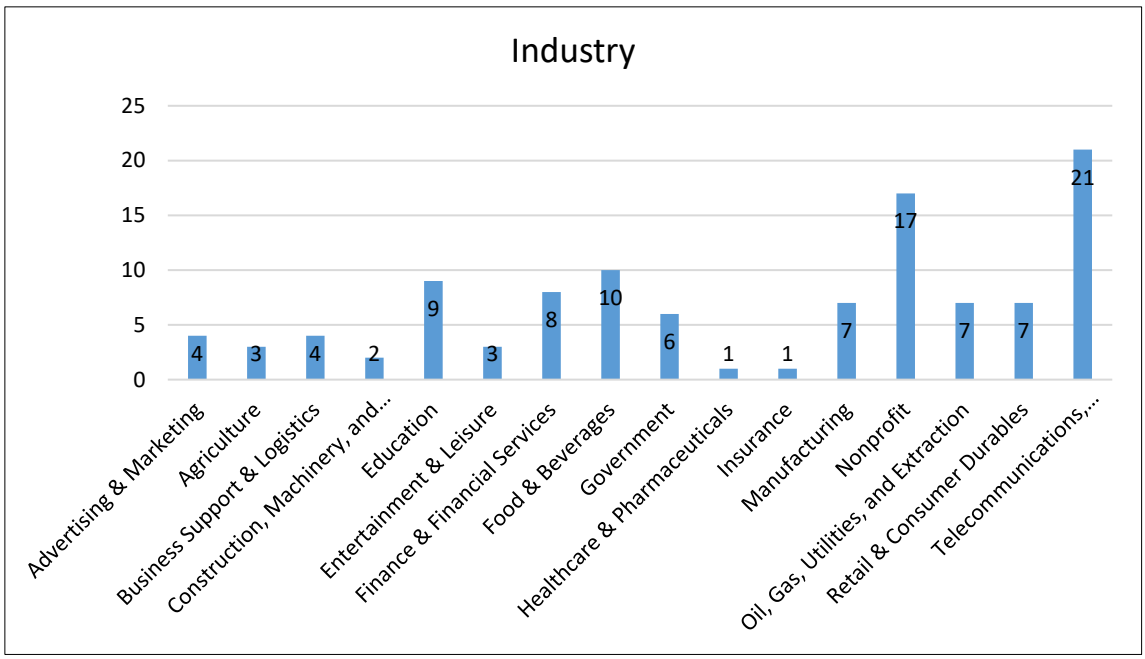
Breakdown of respondents (N=110)

		Frequency	Percentage
Geographical Location	North-central	21	19.1
	North-east	5	4.5
	North-west	2	1.8
	South-east	12	10.9
	South-south	7	6.4
	South-west	63	57.3
Ownership Structure	Private	86	78.2
	Public	14	12.7
	I don't know	10	9.1
University Graduates	0-20 percent	5	4.5
	21-40 percent	19	17.3
	41-60 percent	30	27.3
	61-80 percent	22	20
	81-100 percent	34	30.9
Industry	Advertising & Marketing	4	3.6
	Agriculture	3	2.7
	Business Support & Logistics	4	3.6
	Construction, Machinery, & Homes	2	1.8
	Education	9	8.2
	Entertainment & Leisure	3	2.7
	Finance & Financial Services	8	7.3
	Food & Beverages	10	9.1
	Government	6	5.5
	Healthcare & Pharmaceuticals	1	0.9
	Insurance	1	0.9
	Manufacturing	7	6.4
	Non-profit	17	15.5
	Oil, Gas, Utilities, and Extraction	7	6.4
	Retail & Consumer Durables	7	6.4
	Telecommunications, Technology, Internet & Electronics	21	19.1
Organization Size	1,000+	1	0.9
	500 – 999	3	2.7
	200 – 499	16	14.5
	50 – 199	37	33.6
	Under 50	53	48.2

Source: Survey data (2021), SPSS Analysis

Figure 4

Industries represented by survey respondents

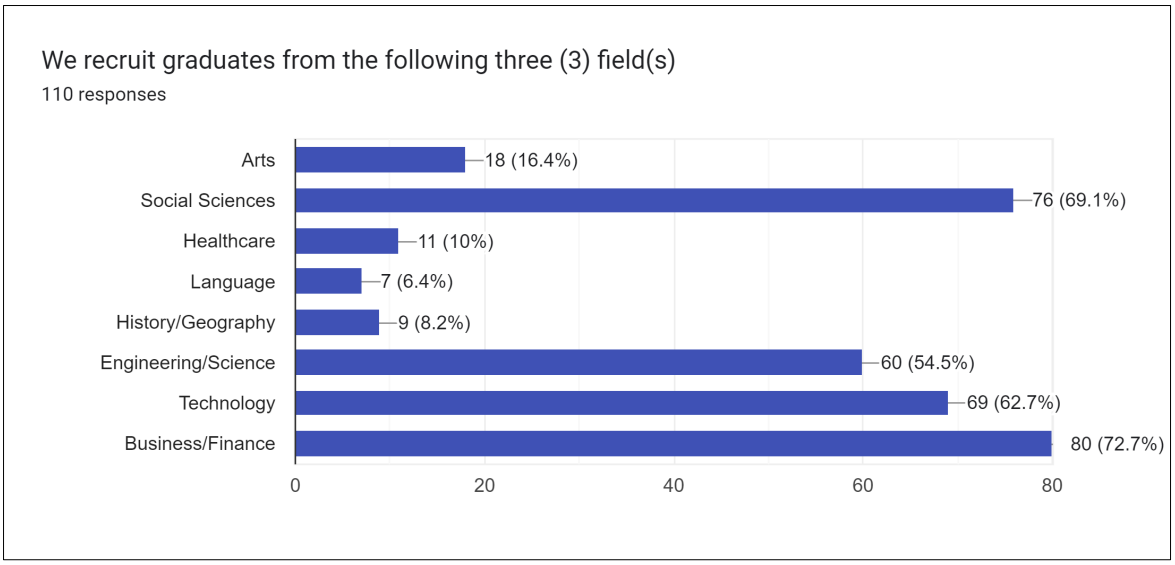


Source: Survey data (2021), SPSS Analysis

Employers were asked to select 3 fields of study from which they generally recruit fresh graduates. Figure 5 shows that Business and Finance is the most popular field selected by 80 employers, followed by Social Sciences selected by 76 employers, then Technology selected by 69 employers, Engineering and Science, 60. The least popular Language 7, History and Geography 9, and Healthcare 11.

Figure 5

Fields of study from which Nigerian employers recruit Graduates



Source: Survey data (2021), SPSS Analysis

4.1.3 Frequencies on Respondent perceptions

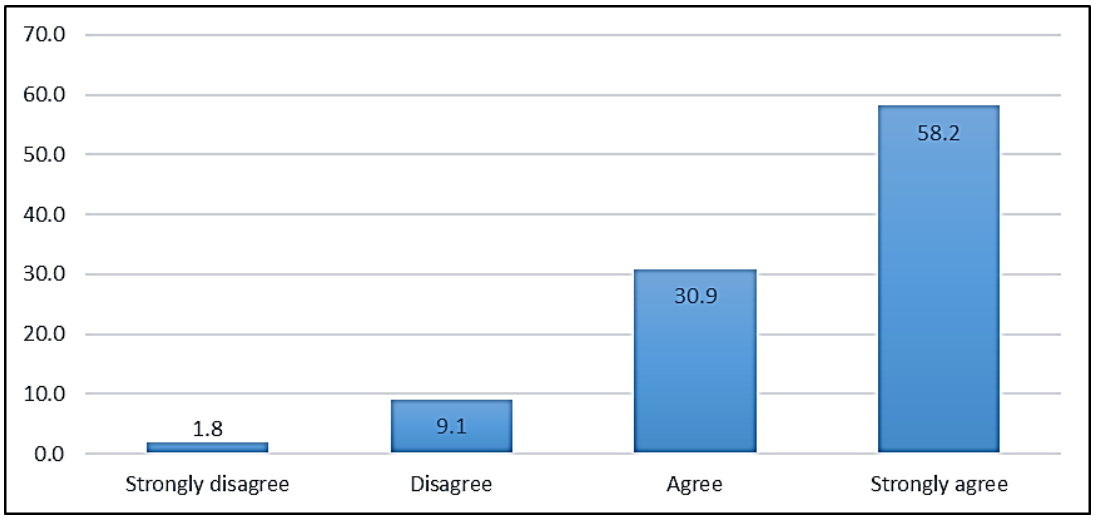
In order to gather insight into the attitudes of respondents towards the employment prospects of graduates who have earned their degrees through online education, the survey included a question that inquired whether a degree obtained through an online programme that has been approved by the National Universities Commission[1] was acceptable. The four-point scale ranged from 1 to 4, where 1 (one) = "Strongly disagree", 2 (Two) = "Disagree", 3 (Three) = "Agree", and 4 (Four) = "Strongly Agree". According to Figure 6, of those who responded (110), 58.2% “strongly agreed” with the statement and 30.9 percent “agreed” whilst only 10.9 percent “disagreed”. It is critical for potential online students to be aware that majority of employers in Nigeria would be willing to employ them upon their graduation if the educational institution that awarded their e-learning degree is accredited by NUC.

[1] National Universities Commission is the accrediting body for university education in Nigeria.

An online degree approved by the National Universities Commission is acceptable in our organisation.

Figure 6

An online degree approved by the National Universities Commission is acceptable in our organisation.

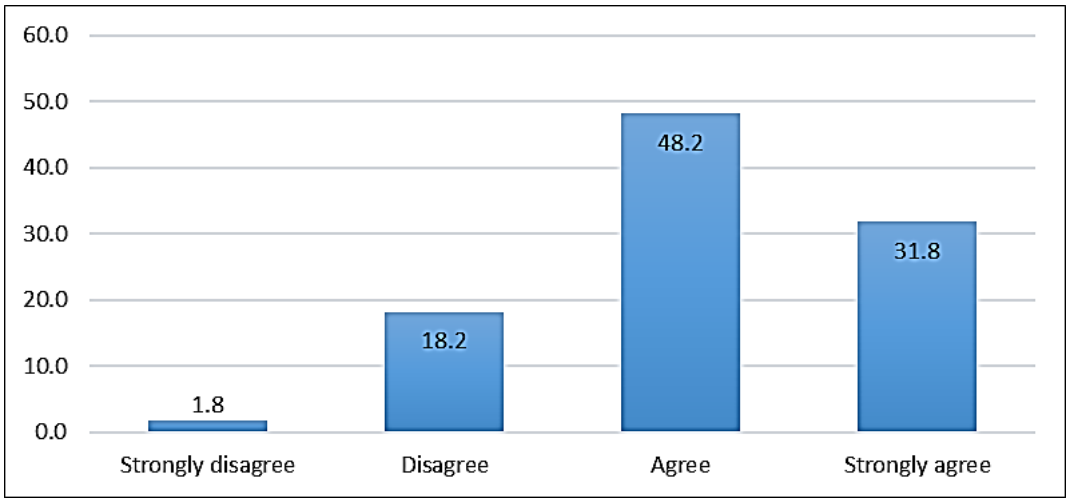


Source: Survey data (2021), SPSS Analysis

The statement regarding preference to recruit graduates with online degree "We prefer not to hire applicants with online degree" was confirmed by majority of the participants with at least 80 percent agreeing with the statement according to Figure 7.

Figure 7

We prefer not to hire applicants with an online degree

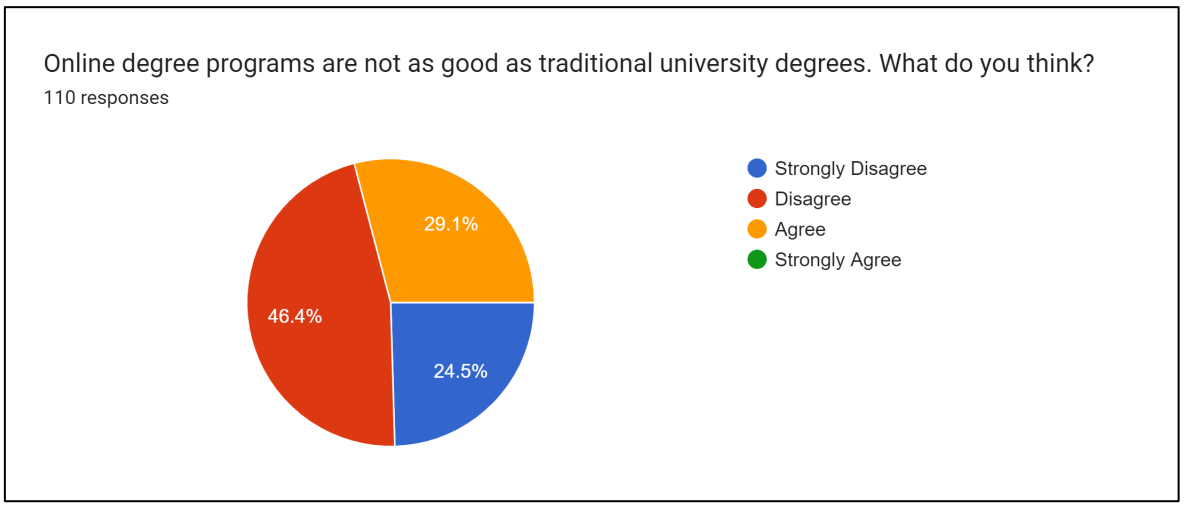


Source: Survey data (2021), SPSS Analysis

To compare the perceptions of employers regarding the quality of online degree against traditional degree, the question was reverse scored, and we see in Figure 8 that the majority of the participants (70.9 percent) disagree with the statement, thus they are of the opinion that the quality of the two degree certificates is as good as the other, whilst 29.1 percent agree with the statement.

Figure 8

*Online degree programmes are not as good as traditional university degrees. What do you think? **

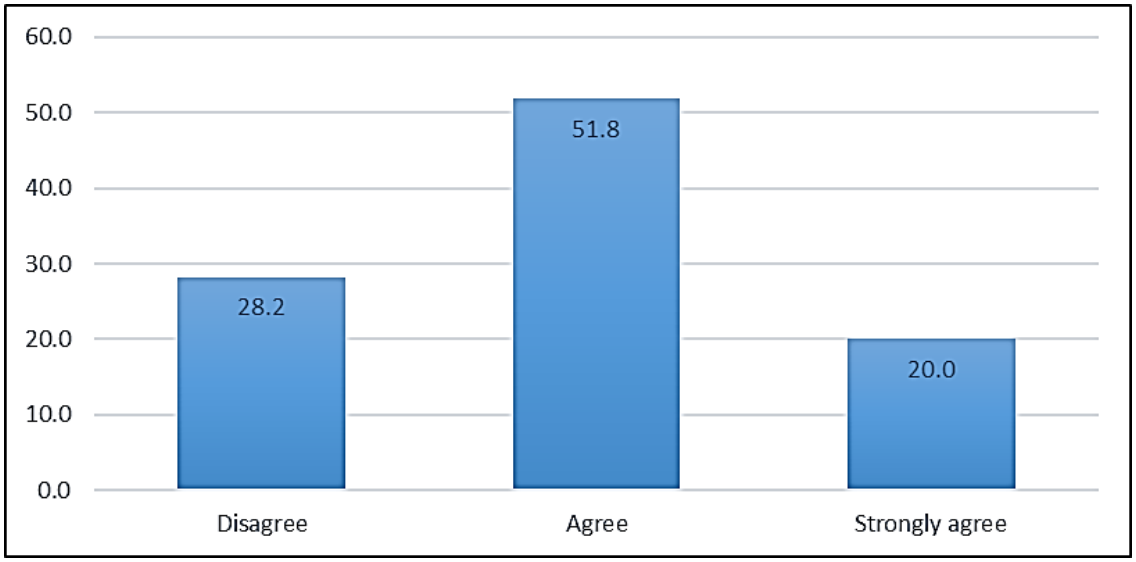


Source: Survey data (2021), SPSS Analysis

Nigerian employers were asked if they "agreed" or if they "disagreed" with the statement regarding difference between online and traditional degrees. Figure 9 shows that 71.8 percent of the respondents agreed that the difference between graduates with online degree and those with traditional degree if any, is not significant. However, 28.2 percent "disagreed" with the statement.

Figure 9

There is no significant difference between online degrees and traditional face-to-face degrees.



Source: Survey data (2021), SPSS Analysis

4.1.4 Correlation Analysis between the USEM measurement scale

In this doctoral research, a "Pearson product-moment correlation coefficient (r) test" (SPSS, 2021) was utilized to examine the extent of the relationship concerning the constructs, and to ascertain if there existed a linear relationship between them (Green & Salkind, 2011). Wong and Hiew (2005) provided an outline stating that the "Pearson product-moment correlation coefficient value (r)" varying from 0.10 to 0.29 are not strong, while values 0.30 to 0.49 are viewed as average, while values 0.50 to 1.0 are classified as strong. Given the focus of this study the correlation between USEM skills is of great importance.

The Pearson correlation between the key components of the USEM Framework is positive and significant. The relationship between Personal Skills and Core Skills has a coefficient of 0.798 and p=0.000 and we also confirm a high correlation between Process Skills and Personal Skills with a coefficient of 0.906 and p=0.000. Table 6 shows that Core Skills

are positively related with Process Skills with a coefficient of 0.803 and p=0.000. These results suggest that employers rate these three skills and competencies high when recruiting the online graduates.

Table 6

Pearson Coefficient of Skills and Competencies

		Personal Skills	Core Skills	Process Skills
Personal Skills	Pearson Correlation	1	.798**	.906**
	Sig. (2-tailed)		.000	.000
	N	110	110	110
Core Skills	Pearson Correlation	.798**	1	.803**
	Sig. (2-tailed)	.000		.000
	N	110	110	110
Process Skills	Pearson Correlation	.906**	.803**	1
	Sig. (2-tailed)	.000	.000	
	N	110	110	110

Source: Survey data (2021), SPSS Analysis

The doctoral study utilized the "Pearson product-moment correlation coefficient" (Ibid) to explore the association between the dimensions of the USEM Framework and to determine whether the factors measured the same underlying construct. Table 6 shows that the correlations among the factors varied between $0.798 \geq r \geq 0.906$. These high inter-correlations indicate that the elements being measured share a common variance and could be measuring the same underlying construct, which is employability.

4.1.5 Cronbach Alpha Test of the USEM Measurement Scale

Delport (2002:166) argues that measurement is a useful approach to increase the professional knowledge base with empirical evidence. According to Ghiselli, Campbell, and Zedeck (1981:2), the purpose of measurement is to offer quantitative assessments of how individuals demonstrate specific attributes. To evaluate the internal consistency of the measures in this study, an analysis of Cronbach's alpha coefficient was conducted.

According to Creswell and Plano (2011), for evaluating the inter-item consistency reliability of rating or Likert scaled measures, Cronbach's alpha is the most reliable test. In Table 7, the alpha coefficients for the variables of each sub-scale in the questionnaires were computed separately to determine the reliability of multi-item opinion items. Pallant (2005:90) noted that Cronbach's alpha coefficient is a widely used metric for evaluating internal consistency. Whitley (2002:127) explained that Cronbach's alpha coefficient is a correlation coefficient that signifies the average correlation between all the items on a scale. DeVellis (1991:85) stated that Cronbach's alpha coefficients varying from 0.65 to 0.70 are considered minimally satisfactory, those from 0.70 to 0.80 are regarded as respectable, and those from 0.80 to 0.90 are considered exceptionally good. Additionally, Hair, Black, Babin, Anderson, and Tatham (2006) suggest that correlations ranging from 0.70 or higher are sufficient, even though, alpha correlations ranging from 0.60 may be satisfactory in exploratory research.

Table 7

Cronbach alpha values for each of the scales.

	Cronbach Alpha Coefficient			
	Raw	Standardised	Mean	Number of Items
Personal Skills	0.901	0.911	2.732	10
Core Skills	0.911	0.920	2.678	11
Process Skills	0.958	0.962	2.736	17

Source: Survey data (2021), SPSS Analysis

Table 7 shows that all the measured indicators achieved the desired degree of reliability within the construct, as assessed by Cronbach's alpha coefficients exceeding 0.90. Among them, Process Skills exhibited the highest alpha value of 0.958, followed by Core Skills at 0.911, and Personal Skills at 0.901. The calculated Cronbach's alpha values indicates the instruments' reliability for the study. According to Mohamad, Sulaiman, Sern, & Salleh, (2015), Sürücü, & Maslakci, (2020), and Creswell (2014), a factor above 0.8 is considered excellent, 0.7–0.8 is considered highly reliable, 0.6–0.7 is viewed as satisfactory reliability, and below 0.6 is seen as inadequate reliability. Consequently, it

can be inferred that the instrument utilized in the study exhibited satisfactory consistency in inter-item reliability.

4.1.6 Validity Analysis of the USEM measurement scale

The study's internal validity was assessed by conducting tests of suitability utilising the "Kaiser-Meyer-Olkin (KMO)" to measure sampling sufficiency, and "Bartlett's Test of Sphericity", as detailed by Gravetter and Wallnau (2000). These assessments were administered to the survey data corresponding to each skill and competency scale, with the outcomes outlined in Table 8.

Table 8

KMO and Bartlett's Test

Sub-scale	Kaiser-Meyer-Oklin (KMO index)	Bartlett's Test for Sphericity		
		Approx. Chi-Square	**df**	**Sig.**
Personal Skills	0.878	717.796	45	0
Core Skills	0.871	972.836	66	0
Process Skills	0.883	2250.824	136	0

Source: Survey data (2021), SPSS Analysis

To evaluate the internal validity of each sub-scale in the questionnaire, both the KMO and the Bartlett's Test were utilized. The KMO index exists on a scale of 0 to 1, with a value approaching 1 shows that the correlation arrangement is comparatively compact, suggesting that the variables assess the underlying constructs. Field (2005) and Howell (2007) recommend KMO values within the range of 0.5 to 0.7 as acceptable, within 0.7 to 0.8 as suitable, within 0.8 to 0.9 as highly favourable, and surpassing 0.9 as excellent. As shown in Table 8, every KMO index value exceeded 0.7, indicating good internal validity. For sound internal validity, Bartlett's test for sphericity should yield a value lower than 0.05., as recommended by Field (2005). The results showed in Table 8 that Bartlett's test for sphericity yielded notably significant results ($p < 0.05$) across all sub-scales supporting the questionnaire's adequate internal validity.

4.1.7 Inferential Statistics: Test for Significant Mean Difference

Inferential statistics are employed to make inferences about a population based on a selected sample, (Salkind, 2006:165). The conclusions derived from the chosen sample can be extrapolated to the broader population through the application of inferential statistics (Struwig & Stead, 2001:159). These inferential statistics can be categorized into two groups: parametric and non-parametric statistics. Non-parametric statistics do not make assumptions about specific distributions or parameters while establishing relationships between variables, however, each specific method relies on distinct criteria. Conversely, parametric techniques are favoured over non-parametric statistics due to their higher statistical potency and increased likelihood of detecting statistically significant effects (Reber & Reber, 2001:470, 508-509).

Table 9

Non Parametric Tests of the demographics variables

Null Hypothesis	Test	Sig.	Decision
The Distribution of Personal Skills is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	0.25	Retain the null hypothesis
The Distribution of Core Skills is the same across categories of Gender.	Independent-Samples Kruskal-Wallis Test	0.34	Retain the null hypothesis
The Distribution of Process Skills is the same across categories of Gender	Independent-Samples Kruskal-Wallis Test	0.99	Retain the null hypothesis
The Distribution of Personal Skills is the same across categories of Age Group	Independent-Samples Kruskal-Wallis Test	0.02	Reject null hypothesis
The Distribution of Core Skills is the same across categories of Age Group.	Independent-Samples Kruskal-Wallis Test	0.07	Reject null hypothesis
The Distribution of Process Skills is the same across categories of Age Group.	Independent-Samples Kruskal-Wallis Test	0.02	Reject null hypothesis
The Distribution of Personal Skills is the same across categories of Structure.	Independent-Samples Kruskal-Wallis Test	0.96	Retain the null hypothesis
The Distribution of Core Skills is the same across categories of Structure.	Independent-Samples Kruskal-Wallis Test	0.29	Retain the null hypothesis
The Distribution of Process Skills is the same across categories of Structure.	Independent-Samples Kruskal-Wallis Test	0.01	Reject the null hypothesis

Source: Survey data (2021), SPSS Analysis

To determine if differences between groups were significant statistically at the 0.05 level, an "Independent Samples Kruskal Wallis test" was employed and the results were recorded in Table 9. The Gender dimension was found not to be-significant at the 5% level, with p-value 0.250. Therefore, the null hypothesis was retained, suggesting that the distribution of skills and competencies is similar across Gender categories. Equally, for Age Group, the test indicated a statistically significant disparity at $p<0.05$ level between the skills and competency scores and categories of employer age groups, therefore the null hypothesis was rejected. The distribution of skills and competencies was also tested based on the structure of the organization, and the results revealed that only Process Skills exhibited statistical significance at the $p<0.05$ level.

4.1.8 Descriptive Statistics of Skills and Competencies

In order to investigate the competencies that Nigerian employers consider important for recruitment decisions between e-learning and traditional classroom graduates, a descriptive approach was used to analyse the mean scores and standard deviations of the skills and competency scales. Descriptive statistics is a statistical method used to summarize data and provide an overview of the main features of a dataset in a simple and clear manner (Struwig & Stead, 2001:158).

Table 10

Descriptive Statistics of Personal Attributes for Online Graduates

	Mean	Std. Deviation
Ability	2.71	0.58
Self-Awareness	2.81	0.498
Self Confidence	2.76	0.557
Independence	2.8	0.587
Emotional _intelligence	2.39	0.637
Adaptability	2.84	0.46
Stress tolerance	2.72	0.509
Initiative	2.71	0.513
Willingness	2.93	0.351
Reflectiveness	2.65	0.582

Source: Survey data (2021), SPSS Analysis

Figure 10

Personal Attributes of Online Graduates

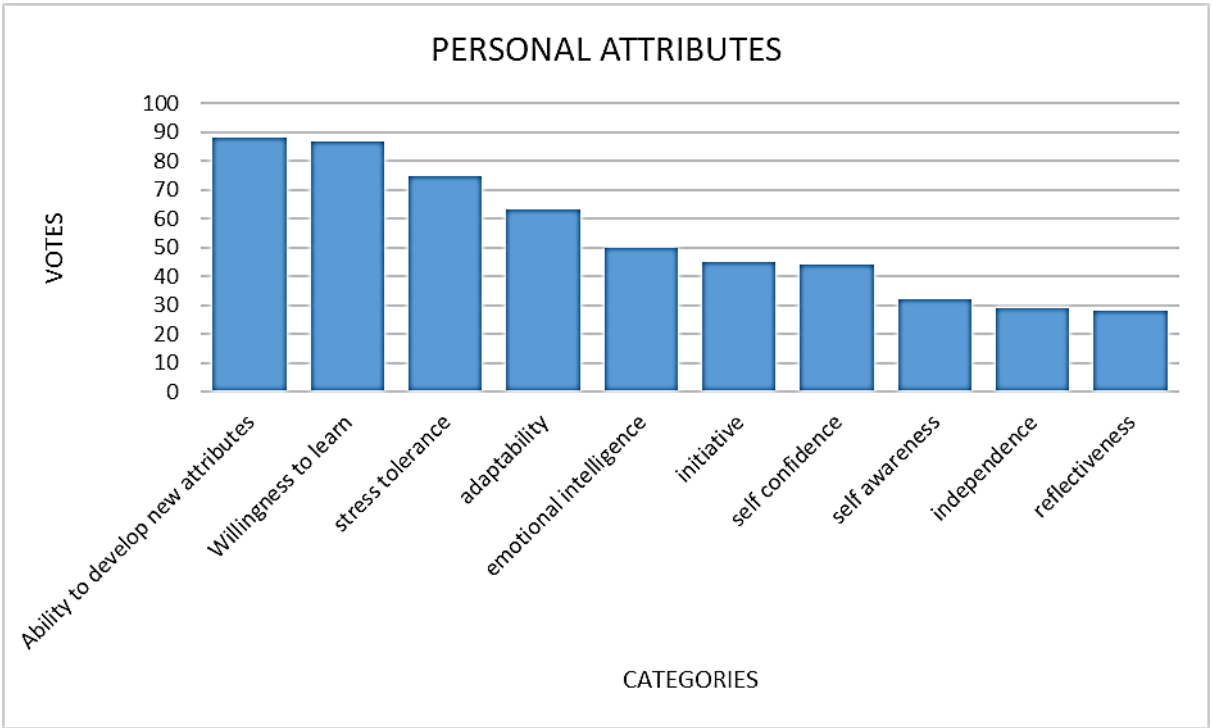


Table 10 shows that all the variables measuring personal skills of online graduates' employer perceptions have a mean score of above 2.5 with a high rating on Willingness (mean=2.93 and sd=0.351), Adaptability (mean =2.84 and sd =0.460) and Self Awareness (mean=2.81 and sd=0.498). Dimensions with higher mean scores in the USEM framework represent a greater preference among employers, while lower mean scores suggest a lower preference for the particular skill or competency. High mean scores suggest that employers view candidates that rank higher on these skills and competencies as more employable. Bowers and Mercalf (2008) argue that graduates with lower ranking may not possess the required skills to navigate the complexities of modern decentralized organizations.

In order to present the data that measures the skills and competencies for traditional graduates in a visually appealing and informative way, a word cloud approach was employed. This approach involved using natural language processing methods to

calculate the frequencies of the text data. Havley and Keane (2007) defined a word cloud, also referred to as a tag cloud, as a graphical depiction of a group of words, where characteristics like size, weight, or colour are employed to indicate attributes such as the frequency of related terms. The most frequently used words are displayed in different sizes and colors, making it easier to identify key words and patterns in the text data. The usage of word clouds permits a more intuitive and efficient understanding of the data, enabling researchers to pinpoint significant themes or trends.

Figure 11

Word Cloud of Personal Skills for Traditional Graduates



Source: Survey data (2021), SPSS Analysis

Fig 11 shows that employers highly consider the development of new attributes, emotional intelligence, and stress tolerance as key personal skills for traditional graduates as a measure of potential organizational success. Maher (2004) from Oxford Brookes University identifies a few key gaps between the proficiencies needed for graduate employability and the skills they actually possessed. These include the ability to cope with complex and ambiguous situations, "emotional intelligence, initiative, stress tolerance, and self-confidence" (Ibid).

Table 11

Descriptive Statistics of Core Skills for Online Graduates

	Mean	Std. Deviation
Reading_effectiveness	2.85	.446
Numeracy	2.79	.509
Information_retrieval	2.78	.565
Language _skills	2.44	.599
Self_management	2.85	.446
Critical _analysis	2.55	.629
Creativity	2.43	.598
Written_communication	2.75	.578
Oral_presentations	2.57	.627
Explaining	2.64	.631
Global_awareness	2.79	.490

Source: Survey data (2021), SPSS Analysis

Figure 12

Core Skills of Online Graduate as Perceived by Employers

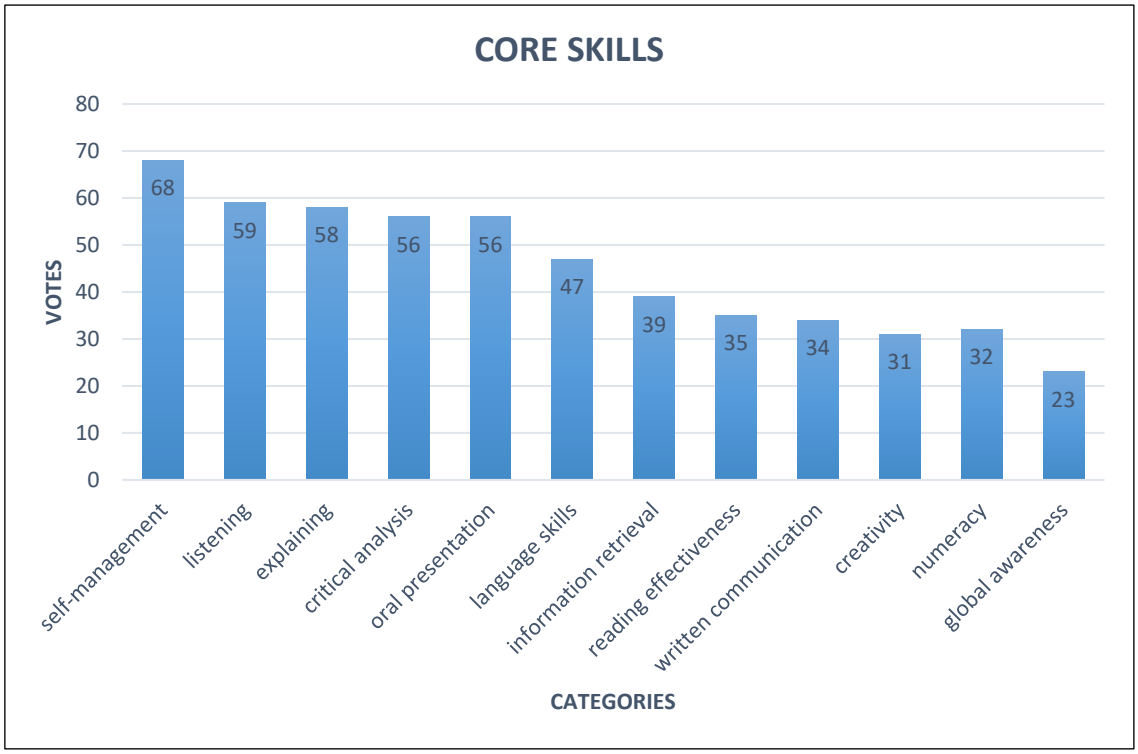


Table 11 shows that all the variables measuring core skills of online graduates have a mean score of above 2.5 with a high rating on Reading Effectiveness (mean=2.85 and sd=0.446), Self-Management (mean =2. 85 and sd =0.446) and Information Retrieval (mean=2.78 and sd=0.565). On the other hand, employers scored Informational Retrieval, Critical Analysis, Self-Management, Reading effectiveness and Language as key skills for traditional graduates. Ng et al. (2009) conducted a study that involved Business Graduates from the University of Curtin (Australia) and their employers, which revealed that the graduates were deficient in creative thinking and analytical problem-solving abilities.

Figure 13

Word Cloud of Core Skills for Traditional Graduates



Source: Survey data (2021), SPSS Analysis

Table 12

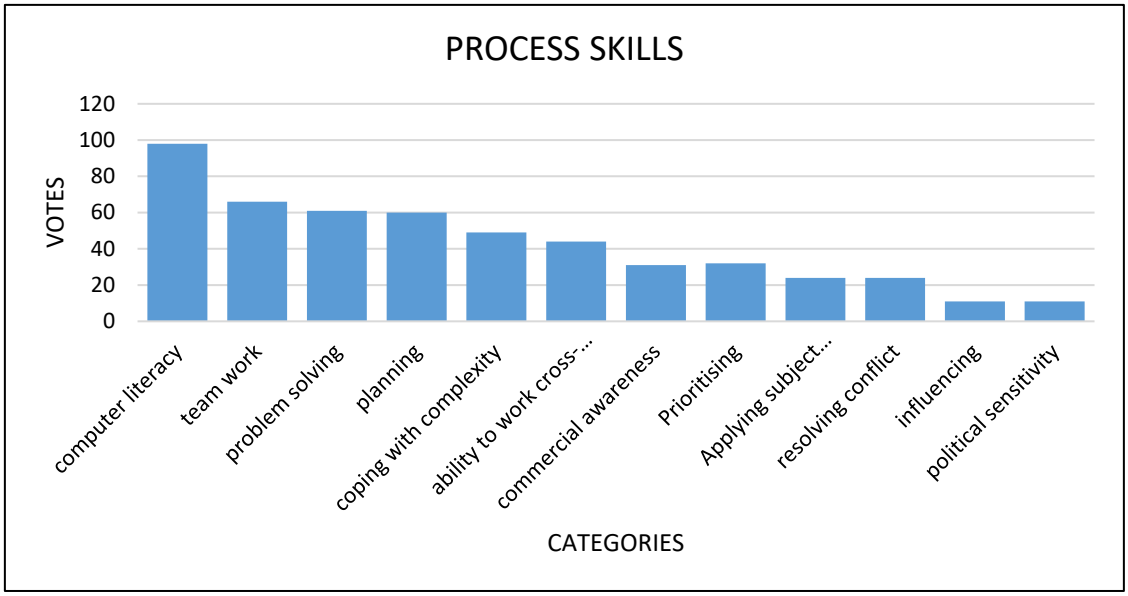
Descriptive Statistics of Process Skills for Online Graduates

	Mean	Std. Deviation
Computer_literacy	2.95	0.327
Commercial_awareness	2.69	0.52
Political_sensitivity	2.62	0.542
Cross_culturally	2.82	0.473
Ethical_sensitivity	2.76	0.523
Prioritising	2.87	0.409
Planning	2.87	0.409
Applying subject understanding	2.85	0.425
Acting_morally	2.68	0.605
Coping _complexity	2.8	0.485
Problem_solving	2.78	0.531
Influencing	2.39	0.607
Arguing	2.69	0.554
Resolving_conflict	2.74	0.519
Decision_making	2.81	0.479
Negotiating	2.57	0.582
Team_work	2.61	0.576

Source: Survey data (2021), SPSS Analysis

Table 13

Process Skills of Online Graduates as Perceived by Employers

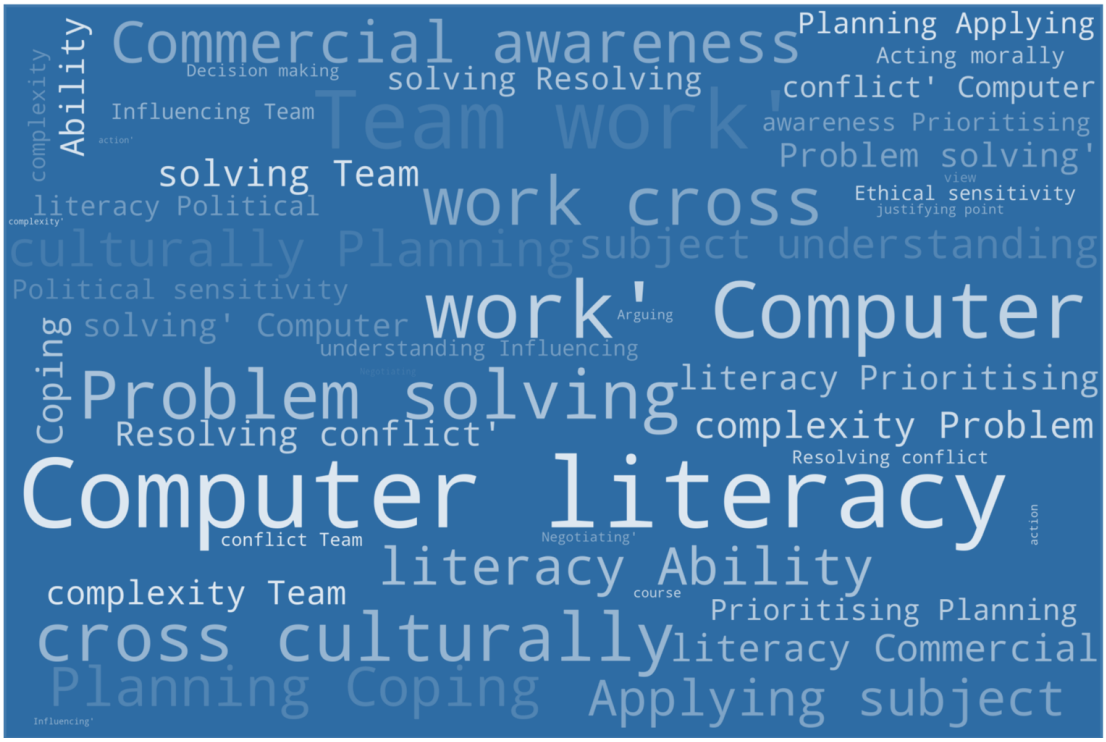


Source: Survey data (2021), SPSS Analysis

Table 12 shows that all the variables measuring process skills of online graduates have a mean score of above 2.5 with a high rating in Computer-Literacy (mean=2.95 and sd=0.327), Planning (mean =2.87 and sd =0.409) and Prioritising (mean=2.87 and sd=0.409). Figure 13 equally shows the Computer Literacy, Teamwork, Problem Solving rate high on the list of desired competences for online graduates. The word cloud shown on Figure 14 suggests that both online and traditional graduates must have good Computer Literacy skills.

Figure 14

Word Cloud of Process Skills for Traditional Graduates



Source: Survey data (2021), SPSS Analysis

4.1.9 Exploratory Factor Analysis

The study employed "Exploratory Factor Analysis (EFA)" to determine the core indicators of employability within the Nigerian labour framework. Factor analysis is a statistical technique that identifies underlying dimensions or factors among a larger set of independent variables. Factor analysis is used to reduce the complexity of large datasets by identifying underlying factors or clusters of variables that are interrelated, construct questionnaires, and condense a dataset to a practicable size. The study used EFA to examine the interconnections among variables at the onset of research into employability. It was considered suitable for the study's objective of creating and evaluating a gauge that quantifies the fundamental concept of employability.

To examine the appropriateness of “Exploratory Factor Analysis” for evaluating the factor structures of the model, several assumptions were examined. One such assumption, known as sampling adequacy, was measured utilising the Kaiser-Meyer-Olkin (KMO) model. The process entailed a comparison between the squared correlations of the designated variables and the squared partial correlation among them. The Kaiser-Meyer-Olkin (KMO) statistic has a scale from 0 to 1, with values above 0.9 indicating excellent sampling adequacy. A sampling adequacy measure of 0.781 was obtained in the current study, indicating a level of sampling adequacy considered as very good (values between 0.8 and 0.9). Similarly, the “Bartlett's Test of Sphericity” yielded a statistically significant chi-square value (Chi-Square = 6437.333, df = 741, $p < 0.001$), which suggests that there is a correlation between the variables being examined.

The Varimax method was chosen to examine the Graduate Employability Model since assumption can be made that the factors are correlated. Three factors were designated, and upon initial examination of the item loadings for each factor, it was observed that fourteen items, specifically those related to Independence, Language skills, Political Sensitivity, Adaptability, Work Cross Culturally, and Decision-Making exhibited factor loadings lower than 0.32 and/or displayed substantial loading on multiple factors. As a result, these items were excluded from subsequent analysis.

Table 14

Final factor structure of the Graduate Employability Measure (N=110)

Source: Survey data (2021), SPSS Analysis

	Factor		
	1	2	3
Ability	0.632		
Self-Awareness	0.656		
Self Confidence	0.662		
Emotional intelligence			0.652
Stress tolerance		0.52	
Initiative			0.558
Willingness		0.621	
Reflectiveness			0.738
Reading effectiveness		0.869	
Numeracy		0.678	
Information retrieval		0.716	
Self-management		0.805	
Listening			0.774
Written communication		0.71	
Explaining	0.635		
Global awareness		0.699	
Computer literacy		0.639	
Commercial awareness			0.515
Ethical sensitivity	0.672		
Prioritising		0.688	
Planning		0.741	
Applying subject understanding		0.7	
Acting morally	0.786		
Problem solving	0.74		
Influencing	0.649		
Arguing	0.718		
Resolving conflict	0.699		
Team work	0.781		
Critical analysis			
Creativity			0.508
Oral presentations			
Negotiating	0.604		

After the final factor rotation, factor one was responsible for explaining 54.266% of the variance, while factor two contributed to 7.080%, and factor three explained 6.196% of the variance. Collectively, these factors accounted for a cumulative variance of 67.542% in the measurement.

Table 15 indicates that Factor One primarily retained items measuring Process Skills such as Acting Morally, Problem Solving, Influencing, Arguing, and Teamwork, with factor loadings varying from 0.649 to 0.786. Though, it appears that the items underlying Personal Skills expanded Factor One to include Self-Awareness, Ability, and Self-Confidence. Factor two retained items measuring Core Skills, including Reading Effectiveness, Numeracy, Information Retrieval, and Self-Management, with factor loadings varying from 0.678 to 0.869. Finally, Factor three retained some items measuring Personal Skills, with factor loadings varying from 0.558 to 0.738.

Table 15

Independent Sample Test of the Graduate Employability measure

Independent Samples Test					
		Levene's Test for Equality of Variances	t-test for Equality of Means		
		F	t	df	Sig. (2-tailed)
Personal Qualities	Equal variances assumed	11.631	3.102	108	.002
	Equal variances not assumed		2.397	33.215	.022
Core Skills	Equal variances assumed	31.215	5.387	108	.000
	Equal variances not assumed		3.813	30.739	.001
Process Skills	Equal variances assumed	18.512	4.303	108	.000
	Equal variances not assumed		3.230	32.316	.003

Source: Survey data (2021), SPSS Analysis

The key components of the USEM framework measuring employability was also tested using T-Test method, the Levene's Test of equality on recruitment of the fresh graduates over the past five years and the results confirmed that those organizations who had employed graduates believed that their personal skills and competencies was higher in Table 15 with a significance level of $p<0.002$, core skills had a significance level of $p<0.00$ and process skills was $p<0.000$.

4.1.10 Conclusion

The principal aim of the research was to explore the perceptions of Nigerian employers towards hiring of graduates who completed their degrees through non-traditional modes of learning, such as online education. After performing exploratory factor analysis with direct Varimax rotation, three dimensions of the USEM Framework measuring skills and competencies emerged, namely personal skills, core skills, and process skills. After the conclusive rotation, Factor One explained 54.266% of the variance measured, Factor Two contributed to 7.080% of the calculated variance, and Factor Three is responsible for 6.196% of the overall variance. An assessment of the subscales of the USEM model through reliability analysis showcased highly commendable alpha values, signifying that the model's dimensions exhibited robust internal consistency and effectively gauged the identical underlying construct. The outcomes further demonstrated robust and positive correlations among all factors within the USEM model, indicating a substantial degree of shared variance among them, although some distinctions between the factors remained. Ultimately, the outcomes of this research provide a unique view into the perceptions held by Nigerian employers regarding hiring graduates who obtained their degrees through non-traditional modes of learning and the skills and competencies they value in potential employees. Employers felt that online graduate must have Willingness, Adaptability and Self Awareness as key personal skills to succeed in their organizations. The word cloud for personal skills indicated that employers felt that traditional graduates must have the ability to develop new attributes, emotional intelligence, and stress tolerance. Employers value Reading Effectiveness, Self-Management, and Information Retrieval as key core skills for online graduates whereas the success of the traditional graduates is driven by Critical Analysis, Self-Management, Oral presentation and Information Retrieval skills.

This analysis also revealed that online graduates must have Computer Literacy, Planning and Prioritizing as key process skills whereas employers felt that traditional graduates must have Teamwork, Commercial Awareness, Problem Solving skills and Computer Literacy skills.

4.2 Qualitative Data

4.2.1 Participants

Table 17 provides a synopsis of the roles and responsibilities of the five interviewees who participated in the study, representing five different sectors of the Nigerian economy. These participants were chosen due to their representation within the top ten sectors of the Nigerian economy. The purpose of presenting this information is to provide context for the perspectives and experiences shared by the interviewees through the in-depth interviews. Understanding the roles and responsibilities of the interview participants can help to shed light on how their experiences and perspectives may be shaped by their specific roles within their organizations and sectors. It can also offer a privileged view into the ways in which different sectors of the Nigerian economy may approach issues related to the modes of instruction and learning.

Table 16

The roles and responsibilities of the participants

	Sector	**Roles and Responsibilities**	**Length of Employment**	**Staff Supervised**	**Decision-Making Capacity**
1	Education	Recruiting staff Compensation & Benefits Documentation Training and Development The bridge between the staff and management	12 years	300	Member of the senior management
2	Finance	Recruiting staff Standardization Supervising adherence to operating procedures	6 years	12	Can make decisions concerning human resources
3	Government	Recruiting staff Documentation Training and Development Improving staff welfare	20 years	20	Can make decisions concerning

					human resources
4	Telecommunication, Technology, Internet and Electronics	Recruiting staff Training and Development Conflict resolution Compensation & Benefits	4 years	8	Can make decisions concerning human resources
5	Non-governmental Organizations	Recruiting staff Training and Development Supervising adherence to operating procedures	4 years	40	Member of the senior management

Source: Interview data (2021), MAXQDA Analysis

Table 18 provides a practical representation of how the interview questions used in the collection of qualitative data are linked to the research questions. This is important because it helps to demonstrate the relevance of the interview questions to the study objectives, and it provides a clear structure for analysing the data collected. By mapping the interview questions onto the research questions, researchers can identify which aspects of the research objectives were covered in the interviews and which areas require further investigation. This can also help to ascertain that the data gathered for the qualitative component of the mixed methods research design is relevant and valuable for responding to the overall research questions.

4.2.2 Research Questions and Interview Questions

Table 17

Linking Interview Questions to Research Questions

Interview Questions	***Research Questions***
• What is your experience with online education? • What role do you foresee online education playing in the future in Africa, particularly Nigeria? • How significant is the difference between the two modes of teaching and learning, (online and face-to-face)? • How would you compare traditional courses to online courses in terms of quality? Convenience? Cost?	1. What perceptions do employers have of graduates who obtained their qualification through alternative modes of learning such as online or e-learning?

• How would you improve online education, for it to be more attractive to employers? • What features of online education would you say are attractive to employers? • When interviewing job applicants, do you ask if their degrees were completed online? Does it matter to your company/organization?	2. How does the course delivery mode affect employers' understanding of graduate employability and employability skills in the Nigerian labour market?
• Which are you most concerned with, a graduate's personal attribute, their core degree knowledge, or their process skills (such as computer literacy, reading skills, etc.)? • What are the 5 most important attributes a fresh graduate should have to be employable, whether they studied online or face-to-face?	3. What do employers of labour in Nigeria consider as key factors, with respect to competencies of e-learning and traditional classroom graduates, in recruitment decisions?
• What are the 5 most important attributes a fresh graduate should have to be employable, whether they studied online or face-to-face? • Which are you most concerned with, a graduate's personal attribute, their core degree knowledge, or their process skills (such as computer literacy, reading skills, etc.)?	4. Using the USEM model of employability as an employability framework, how do the four key descriptors measure within the Nigerian labour market?

4.2.3 Research Question 1

What perceptions do employers have of graduates who obtained their qualification through alternative modes of learning such as online or e-learning? Interview Questions 2, 3, 4 and 5 were asked to in order to respond to the Research Question 1.

The responses of the participants showed that their attitudes towards online education were mostly positive. The positive comments centred on the usefulness of online education, convenience and accessibility for individuals who wanted to acquire new skills while still employed. In addition, two of the respondents contended that because online education does not require participants to commute, people from various countries could meet in the same virtual classroom. As a consequence, they believed that online education

was more likely to equip participants with a global perspective. In this vein, one participant added that this feeling of global exposure created networking opportunities among professionals who take e-learning courses. Finally, one of the participants indicated that her feelings towards online education shifted quite positively after witnessing that the performance levels of some of her colleagues increased drastically after taking online courses. The positive comments of the participants were also linked with their prior positive personal experiences with the short online courses they took. Three of the participants stated that they previously took online courses, and that they benefitted considerably from their respective courses.

Besides these positive comments, Respondent 1 expressed a somewhat negative perspective towards online education. She believed that online education was a stressful process for the learners because she believed there is no support mechanism for learners, which means they need to deal with all the challenges they encounter on their own. She also argued that she preferred traditional education because of the lack of interaction among classmates and believed face-to-face contact with lecturers significantly increases the quality of instruction. Respondent 3, who worked for the government, indicated that she was quite sceptical about the online degrees obtained in Nigeria. She believed that quite a handful of people she knew were able to obtain online certificates without attending the courses or completing the course requirements to a satisfactory level.

> I have personally been exposed to online short courses. I have taken some short courses and I will say they were actually effective and then it created this feel of global exposure, it gave me some form of international recognition, and that's on my personal..., well I've also worked with people who have studied online and then obtained their degrees by online education and their exposure and performance has been quite commendable. That's the extent of exposure and experience I would say I have with online education (Respondent 2, Finance Sector).

> You know for the online, you don't see any lecturers to interact with. You don't see any human being to interact with at most times you go online and do your courses there yourself. Print out your documents, anything you don't understand you have to find a way around it by yourself and then you don't have any physical location to visit. Unlike the traditional conventional universities there is face to face, it involves students, there is structure, interaction. There is real time like that, so that's the difference between the two (Respondent 1, Education Sector).

Further to their overall remarks about e-learning, the interviewees were asked about their views on the importance of e-learning for Africa at the regional level and Nigeria at the

country-specific level. All participants confirmed their beliefs that e-learning is expected to play a more critical role in the coming years, as indicated by the increasing prevalence of professionals presenting diplomas or certificates obtained from online education programmes. In addition, one of the participants stated that e-learning will play an undeniable role in responding to the education needs of the growing population in Nigeria:

> Well, from the human resources point of view, it is expected that in the next 10 to 20 years the number of youths we have in Nigeria, in particular, will increase. In Africa, it is estimated that we will have over 1 billion youths by 2050. Now that tells you that given the current infrastructure of education, the educational sector in Nigeria as a whole might not be able to meet up with this (Respondent 4, ICT).

> Okay well to start with, you know in the past few years online education has actually received global attention and acceptability in Africa as well as Nigeria. In the past it wasn't as accepted as it is, so I also think that, or I foresee that in the near future the accessibility will further increase because most people are being exposed to it and most people are embracing it, and so it will play a major role in decision making for most organisations and particularly organisations that appreciate the exposure that online education gives those who must have studied online. The global presence of the online education would actually further permeate the fabrics of our culture, and so in the area of employment, it will play a major role because I see that in the near future employers would embrace it more and we would get to see more of those who studied online doing so much and being given greater responsibilities in most organisations, I foresee that there will be an improvement in the performance and productivity of employees in organisations who have gained their degrees via online education. So, I think that's what I foresee (Respondent 2, Finance).

Underscoring the fast population increase in Nigeria and Africa, the respondents agreed that conventional schools would not be able to host the next generation of students and that online education would emerge as a useful solution to this problem.

The participants stated that online education had received more recognition from the relevant academic bodies in recent years. Whereas Nigerian higher education administrators were still hesitant about the reliability and validity of the degrees obtained through e-learning, they have now understood that an e-learning degree might be as good as a degree obtained from a conventional school. Moreover, the participants believed that online education was a safer option amidst COVID-19 concerns. They indicated that online education would grow even faster if the current situation with the pandemic is not resolved soon.

According to the participants, online education is a convenient track for Nigerians because it made studying and working at the same time possible. The respondents maintained that people have suffered from the recent financial turbulence in Nigeria, and many have had to miss their in-service training for professional development activities. However, because online education made studying and working at the same time possible, many professionals applied to online education programmes to benefit from the training services while retaining their employment status. Lastly, some of the participants indicated that online education was favourable in Nigeria because it made studying in foreign institutions more convenient and less costly and because online education is not influenced by political and social circumstances in Nigeria such as labour union strikes.

When asked to make a comparison between online education and conventional education in terms of quality, cost, and convenience, the interviewees gave mixed reactions. Some contended that each approach presented its unique advantages and disadvantages. One of the respondents believed that conventional education was less costly because students receiving online education are required to have personal computers and stable internet connection. Moreover, students will need to print handouts using their own printers or receiving this service from a business centre, which would significantly increase the costs involved. The respondents admitted that online education was more cost effective when you consider the cost of commuting and other costs. For those studying with foreign institutions, the tuition fees might be significantly higher due to unstable exchange rates across countries.

> The online are more costly than the traditional courses because you know, you have to go and download your handouts. Everything you need to do, you have to go online, and if you don't have access to a computer and if you don't have access to Internet, you will not be able to do that. And if you have to go out to go and be paying for it you know it will be more costly than the traditional universities. And also, for the quality, I feel that the traditional courses will be more quality. In terms of the convenience, it will be more convenient than the online because the online, you know there is nothing like you seeing the lecturers to explain what you need to do. But for the traditional, you can always see them, and if there's anything for further explanation like that, you can be there, but then for the cost, it will be more just as I have said because you have to pay more. Everything you have to do, you have to pay so it is more costly than the traditional universities (Respondent 1, Education Sector).

Overall, the analysis showed no significant disparity between the participants' perceptions of conventional education and online education based on the specific responses they gave to the questions concerning the convenience and qualities of these two education delivery

approaches. As for quality, some participants argued that conventional education provided higher quality because learners could interact with the lecturer face to face, whereas other participants believed that online education was of higher quality because the curricula in online education programmes were more up to date because they were constantly reviewed, evaluated, and refined based on scholarly research:

> … the curriculum [in online education programs] is always being improved over time. It does not just sit like the national curriculum that was taken by a group of people in the 1980s and by another set of people in 1990, the year 2000, and all that. We all went through the Nigerian educational system. I think the quality of education in online education will actually be a lot better [because the curriculum is always improved] (Respondent 4, ICT Sector).

> In my opinion there is no significant difference. The difference is just in the popularity and the world acceptance and the acceptance as per the region you are dealing with there are countries that are developed and have gone far in this in which online education is not a problem. So, but for a place like Nigeria, Well we are still coming up in this area. You know you will say there is significant difference, but on the average in my opinion there is not much difference between the two (Respondent 3, Government Sector).

The participants also believe that online education provided higher quality instruction because they made considerably better use of information technologies. In this sense, the interactive learning management systems offered students more opportunities to interact independently with the course content as well as with each other at their own pace, often eliminating the disadvantages posed by the absence of physical classroom attendance in online education contexts. As for convenience, the participants believed that online education programmes were usually more convenient because students do not have to commute from one place to another, the study hours and assignment due dates were a lot more flexible than those in conventional schools, and students could arrange their study and practice hours based on their availability. However, they also believed that conventional education was more convenient in some other circumstances. First, they believed that conventional education was more convenient because it is easier to monitor what students are doing during class time, which makes it easier and more efficient to make new decisions within the learning process to respond to students' emerging needs as soon as they start to appear. This also meant that it is more practical for lecturers to identify students who need support and understand the magnitude of support needed to encourage them. Finally, they argued that the learner is solely responsible for most of the

learning process in online education; however, most learners do not possess sufficient self-discipline to individually resolve some of the challenges they face in online education:

> [In an online class] you know you are not under any form of supervision by your tutor. You are not in any form of physical class. You are in your home, probably in your room, so it is left to you to put in your best or be there while the training is going on and listen and then improve yourself. However, if you are not disciplined, you can have the training going on, and then your attention is divided, so the difference is very significant there for online training there is more, or there is a high probability that the student will not grab what is intended, what the training is intended for (Respondent 5, NGO Sector).

Although the participants referred to these differences in costs, convenience, and quality, almost all of them believed that these differences were not fundamental differences with any significant impact on the efficiency of the two modes of learning. They all believe that conventional education and online education were two similar modes of education, and both modes can yield satisfactory results.

4.2.4 Research Question 2

How does the course delivery mode affect employers' understanding of graduate employability and employability skills in the Nigerian labour market?

The participants stated that there were certain aspects of online education that makes it more attractive than conventional education for employers. On the top of the list is the flexibility of online education programmes that allow course participants to arrange their class hours and make progress in the courses based on their own availability. This was a key area because the participants believed that online education programmes offered invaluable in-service professional development opportunities for the staff members because they were able to enhance their professional skills and knowledge while still maintaining employment with their organizations. They also argued that because the online education programmes are being acknowledged more commonly at an international level, both the organizations and the course participants were likely to enjoy international recognition. Moreover, the continuous development opportunities that are

presented by following up-to-date and research-based curricula were considered to be a valuable asset for employers.

Although they mostly believed that online education held certain characteristics that were favourable for employers, the participants also argued that there were some domains of potential improvement that would make online education programmes even more attractive for organizations. First, two of the participants believed that if the content of the programmes is to be designed more in line with the key competencies of staff members and if there is a greater focus on enhancing subject matter knowledge, the certificates obtained would be more credible:

> We would like online degrees to be more credible. We also want online degrees to be more competence-based so that they can help to improve the self-confidence of our employees. If they can do it, online education will be more attractive. Also, if online programmes teach the core courses that are related to what the employees need, they will be more attractive (Respondent 1, Education Sector).

> Okay in terms of quality, I would say that the traditional and online courses are basically about the same in quality as the modules in the courses, well they may differ, it would be minimal, but however, well for online courses which are more research based, I think it may present a slightly higher quality owing to the fact that those courses, if done online there would be wider access to online tools and resources against traditional courses. Well for traditional courses, the quality may be better or would definitely be better in my own perception where you're talking about courses which are more practical and technology based because such courses will require physical labs and you know workshops, and so it would obviously equip the students better as against online courses in such technological areas where all they may be doing is simulations. So that's my take on the quality. Okay, in terms of convenience. Yes, I would say online courses have a higher advantage over the traditional courses, as it is, the students can determine the schedules of their lectures too, well to a good extent. Yes, they can do that. It makes it very suitable. I would say for those who are employed and so it's kind of flexible, so it's a lot convenient as compared to traditional courses where you know students have to meet physically, the schedules are actually kind of regimented because timings are fixed for all lectures. You have to be physically present both lecturers and students. So for convenience I would say online courses stand or have a better or greater advantage over traditional courses (Respondent 2, Finance Sector).

Another participant argued that online education institutions must work towards increasing the awareness of employers and organizations on the affordances provided.

She believed that there was no major disparity between conventional campus-based education and online ICT facilitated education; however, most employers had negative attitudes towards online education because of credibility concerns. She further suggested that the government can also take active responsibility in increasing the awareness of the values of online education programmes:

> Just like you know, like in the past time when there was discrimination between those who went to the university and those who went to the polytechnic, but the government had to intervene to equalize them so that now they are accepted anywhere and treated as equal. I think the government can help us to achieve this by helping people be more aware, especially employers, to be more aware that as long as the person is educated, regardless of how they got the education, the most important thing is having the education in question (Respondent 3, Government Sector)

One other participant believed that a greater focus on internationalization and intercultural relationships would significantly improve the attitudes towards online education programmes because most companies have adopted a global outlook that encouraged them to offer their services beyond national boundaries. Lastly, one participant argued that another area of improvement for online education programmes would be working on exam security. She believed that employers wanted to ensure the credibility of online education programmes and that the only way to attain this would be to adopt testing and assessment measures that would reassure employers and organizations that the course participants were able to successfully achieve the learning objectives by performing well on reliable and valid measurements.

At the end of each interview session, interviewees were asked whether degrees obtained from online or conventional education programmes hold different values during the recruitment process. Four of the participants stated that online degrees have the same value as those obtained from institutions offering traditional face-to-face instruction. However, Respondent 1, who represented the education sector, argued that degrees obtained from online education programmes were welcome if the candidate had received his/her first degree from a well-established academic institution that adopts a conventional approach to teaching. The reason for this, she explained, conventional schools are more likely to be credible, reliable, and legal. However, there was consensus among the interviewees that the content of the education programme, the skills

participants acquire by taking part in the programme, and the extent to which they can utilize those skills to produce efficient processes in the workplace is more important than the type of the institution issuing the degree. Lastly, two of the interview participants stated that if they were to recruit staff for positions that required hands-on training, such as engineering and medicine, they would prefer candidates with degrees issued by conventional schools. The reason for this was that online education programmes have not yet developed the necessary techniques to prove that learners have acquired hands-on and practical skills to a satisfactory extent.

4.2.5 Research Question 3

What do employers of labour in Nigeria consider as key factors, with respect to competencies of e-learning and traditional classroom graduates, in recruitment decisions?

In order to understand what employers, look for when they review employment applications from online education graduates, the participants were first asked about the criteria based on which they evaluated potential employees. Three participants (from finance, government, and NGO sectors) stated that core degree knowledge is the most crucial criterion for their organizations. They argued that their priority was assessing the extent to which candidates possessed sufficient levels of knowledge and skills that would help them thrive during their employment. Respondent 2, who was from the finance sector, stated that they placed equal importance on personal attributes, which was suggested as the most critical criterion by two other participants (in education and ICT sectors). They believed that the skills and knowledge an individual indicates on his/her application could make him/her seem as though they were an ideal candidate on paper; however, those skills and knowledge listed would not be entirely meaningful if they were not demonstrated through appropriate behaviours. Therefore, they believed that some personal attributes such as integrity, honesty, willingness to learn, and interpersonal skills were often more critical than their achievement record. Finally, the participants from the finance and government sectors stated that they place immense importance on process skills like computer literacy because a significant amount of their everyday

responsibilities required the use of technical equipment, and possessing relevant skills was a key area of consideration for their organization.

> Well, as long as an employee or somebody who seeks employment at place is teachable and depending on the job role the person is coming to take up if it's something technical that will require your technical competence in that area then you will have to prove by presenting maybe a certificate or something to prove that you are trained in that area but if it's like a general kind of job where technical competence is not really the key thing, but just to get a job done. Then I think what is important is the person's attitude, the personal attributes you have, then your ability to learn on the job. Your ease of being taught, you know some people are not easily taught, while others pick up easily, so I'll be comfortable with employing someone who may not know the job that well. But in a short while, is able to pick up when we put them through as against somebody that will come with their certificates claiming they've been trained in this area yet there is nothing to show for it, so it's about service delivery (Respondent 3, Government Sector).

After receiving their insight about the key areas of competencies, the participants were asked to specify the specific attributes they would like to see in candidates. According to them, the most important skills were interpersonal skills, which were quite essential in building and maintaining healthy relationships within the organization. Computer skills appeared to be another vital area, especially for those working in finance, government, ICT, and NGO sectors. They argued that the advances in technology led to considerable changes in how they operate within their organizations and that they expected new members of the staff to possess the necessary skills to adapt to their working habits that required the use of internet facilities and electronic equipment. The third area was related to employees' being flexible, which means that they expected candidates to be ready to work beyond the regular working hours and be able to adapt to the working conditions and requirements of various positions in the same organization. The fourth skill was trainability, which indicated that employees should have the necessary skills and willingness to train for new skills or improve existing skills. This was in line with the fifth area, willing to learn, which referred to employees' enthusiasm for in-service training and continuous development. The other areas mentioned by the participants included possessing leadership skills, having a considerable amount of subject matter knowledge, teamwork, communication skills, multitasking, organization skills, language (English) skills, and problem-solving skills.

4.2.6 Research Question 4

Using the USEM model of employability as an employability framework, how do the four key descriptors measure within the Nigerian labour market?

As mentioned in the "Theoretical Framework" chapter, this study adopted the USEM model of employability as the analytical lens. The USEM model is based on the idea that the employers' hiring decisions are influenced to a large extent by how competent candidates are in terms of "personal qualities", "core skills", and "process skills". The response of the interview participants demonstrated that the significance of these skills varies depending on the sector of the employer's business (Table 2).

The data analysis revealed that "personal qualities" such as interpersonal skills and "willingness to learn" ranked highest on the list of Nigerian employers; these qualities being the most sought-after when hiring fresh graduates. Personal qualities is followed by process skills such as computer literacy, leadership skill, teamwork, and organization skills. In addition, problem-solving skills and multitasking were each mentioned by one participant as influential factors in their decision-making process for the recruitment of new employees.

> Well in my experience as a recruiter I would say I am personally now, and this is my personal take. I am personally more concerned with a graduate's personal attribute and more so in my industry you know we have found out over time that the personal attributes go a long way to determining success on the job. For instance, attributes like integrity, Honesty, discipline maybe how discreate this person would be and the likes. So, it's a key consideration most times in consideration for success of employees in the sector of ours and then well, it's noteworthy that yes and these personal attributes are behavioral, you know, and then if there's a lack of some of these attributes. You know it takes so much time and it's a Herculean task to be able to own it. So, for me, I'm more concerned with the graduate's personal attributes. The process skill is not so much of a concern. Well, it's a concern, but not as much as the personality attributes for me because if you find that a candidate or employee is deficient in some skills. It's something you could work on, and then if the person is quite serious in the course of time you know it can be improved by training and coaching to obtain the desired level of performance and then, for core degree well, it's a concern, but most especially where we are looking at a particular role where the key knowledge from the degree obtained would go a long way to determine how good you do on the job, particularly the application. So, I would say well, personally, even though I am concerned about all three, but I am most concerned about the personal attributes

> for me, I would say I'm more concerned about the personal attributes (Respondent 2, Finance Sector).

According to Nigerian employers representing different sectors, the analysis revealed that the most important attributes graduates should have are personal qualities, specifically interpersonal skills, willingness to learn and trainability. This result means that the other skills and competences in the USEM framework are less of a deciding factor as the 3 listed under personal qualities.

> Well, for me, first and foremost I would say interpersonal relations. Secondly, I would actually ask of their core knowledge of their area of specialisation. Yes, then I'll also be talking about their technical skills. Is it somebody who is going to be able to handle the equipment or even depending on their areas, then, of course, we would also look at neatness. Yes, when I say neatness not only in person but also within the work environment. Also, we would also be looking at somebody or we also normally take into consideration somebody who would generally be willing. The willingness to work, a lot of people just hears the amount that is being paid, and then you just say oh, it's a 9 to 5 job. But most times in reality jobs go beyond 9 to 5, so the willingness of that person to extend themselves as a fresh graduate to learn within that organisation (Respondent 4, ICT Sector).

Table 18

The specific attributes that sector representatives look for in participants

Sector	Desirable employability attributes' ranking
Education	1. Personal Qualities o Interpersonal skills o Willingness to learn 2. Process Skills o Leadership skills o Teamwork o Problem-solving skills 3. Core Skills o Communication skills
Finance	2. Personal Qualities o Trainability o Willingness to learn o Interpersonal skills 3. Process Skills o Computer skills 4. Core Skills o Communication skills
Government	1. Personal Qualities o Trainability o Willingness to learn 2. Subject Understanding o Subject matter knowledge 3. Core Skills o English skills 4. Process Skills o Computer skills o Multitasking
ICT	1. Personal Qualities o Interpersonal skills o Flexibility 2. Process Skills o Computer skills o Organization skills 3. Subject Understanding o Subject matter knowledge
NGO	1. Personal Qualities o Interpersonal skills o Trainability o Willingness to learn o Flexibility 2. Process Skills o Computer skills o Teamwork 3. Core Skills o Communication skills 4. Subject Understanding o Subject matter knowledge

Source: Interview data (2021), MAXQDA Analysis

From the qualitative results above, it is evident that employers in Nigeria generally think highly of online degree programmes. This is likely due to the flexibility and convenience that online programmes offer, as well as the increasing popularity of online learning in general. Furthermore, employers seem to appreciate the quality of online programmes, viewing them as comparable to traditional brick-and-mortar programmes (Bristow et al, 2011). Therefore, if you are considering an online degree programme in Nigeria, it is likely that you will be viewed favourably by potential employers.

The perception of employers towards online degree programmes has been changing over the years. In the past, there was a lot of scepticism about the quality of education that could be obtained through online channels. However, with the increasing popularity of e-learning and the improvement in technology, employers are now more open to hiring candidates who have obtained their qualifications through online platforms. There are a few reasons for this change in perception. Firstly, employers know that online learning is becoming more and more popular, and they recognize that it is an important mode of education. Secondly, employers appreciate the flexibility that online learning provides. Candidates who have obtained their qualifications through online channels often have the advantage of being able to work while they are learning, which is an attractive quality for employers. Finally, employers appreciate the technological skills that candidates who have obtained their qualifications through online channels often possess. Overall, employers perceive online degree programmes in a positive light, and they are increasingly willing to hire graduates who have earned their qualifications in this way.

5. Mixed Results

The coronavirus pandemic brought about unprecedented changes in education delivery and workforce requirements worldwide, pushing institutions and organizations toward non-traditional modalities such as online education and virtual collaboration. Against this backdrop, this study sought to uncover Nigerian employers' perceptions of graduates who attained their qualifications via alternative modes of education, particularly online programmes. The overarching question guiding the research focused on understanding how these educational delivery modes impact employers' views on graduate employability and the skills necessary for successful recruitment. To address this question comprehensively, this chapter presents the results obtained through an explanatory sequential mixed methods approach, combining quantitative survey data from 110 human resource professionals with qualitative insights from five semi-structured interviews. The chapter is organized to address the four key research questions.

5.1 Research Question 1

What perceptions do employers have of graduates who obtained their qualification through alternative modes of learning such as online or e-learning?

One of the main perceptions that have emerged from this research was that employers do value graduates who have obtained their qualification through alternative modes of learning, such as online education. This result corresponds with previous research on the topic which found that employers perceive alternative mode learners to be more independent, self-motivated, and adaptable than those who have followed traditional learning pathways.

Some of the employers that participated in the interview felt that graduates who had embarked on an alternative mode of learning were likely to be more up to date with contemporary work approaches and technologies, and thus better equipped to face the demands and requirements of the modern workplace. This finding is significant, because it highlights the growing recognition that e-learning helps to prepare students to join the 21st century workforce.

It is also worth noting that the employers who participated in this research were generally positive in their views as it pertains to the quality of e-learning courses, and felt that they

were at par with traditional campus-based education. This is an important endorsement of alternative modes of learning and suggests that employers are increasingly open to hiring graduates who have obtained their qualification in this way.

Overall, the study's findings suggest that employers are increasingly open to hiring graduates who have obtained their qualification through alternative modes of learning. The findings of this research align with existing research indicating that non-traditional learners are regarded by employers as possessing higher levels of independence, self-motivation, and adaptability in comparison to those who have pursued conventional educational routes.

Nigeria employers' understanding of graduate employability and employability skills has been researched in several studies. Nevertheless, there is a dearth of agreement on a common definition of employability skills. This study employed a qualitative methodology to explore how Nigerian employers understand employability skills and graduate employability. The findings revealed that Nigerian employers perceive employability skills as skills that empower graduates to obtain and maintain employment. Employability skills consist of those that are specific to a particular job, such as communication, interpersonal, and problem-solving skills. Employers believe that employability is determined by several factors, including the quality of the institution where the graduate studied, the graduate's grades, work experience, and extra-curricular activities. The findings of this research imply that Nigerian employers have a good understanding of employability skills and graduate employability. This understanding can be used to improve the employability of Nigerian graduates.

The results of the research align with findings from other studies that have investigated employers' understanding of employability skills. For example, a study by Williams and Burden (1997) found that employers in the UK perceive employability skills as abilities that empower graduates to attain and sustain employment. These skills include job-specific skills, communication, interpersonal, and problem-solving skills. Similarly, a study by Green and Hesketh (2004) found that employers in the UK perceive graduate employability as the capability of a graduate to attain and sustain employment. Employers believe that employability is determined by several factors, including the quality of the institution where the graduate studied, the graduate's grades, work experience, and extra-curricular activities.

The results of this research indicate that Nigerian employers have a good understanding of employability skills and graduate employability. This understanding can be used to develop the employability skills of Nigerian graduates. For example, universities could use these findings to design programmes that better prepare students for the workforce. In addition, employers could use these findings to identify the skills that they value in employees and to provide training on these skills. Finally, policymakers could use these findings to develop policies that improve the employability of Nigerian graduates.

The current study sought to understand how degree delivery mode may impact recruitment decisions. The results showed that those who study online are just as likely to be recruited as those who study offline. However, there were some critical variations between the two groups in terms of their reasons for pursuing their degree. Those who study online are more likely to do so because they feel it is a more convenient option. They are also have a higher likelihood of have children and/or being employed on a full-time basis. Those who study offline are more likely to do so because they feel it is a more traditional option.

The review of existing literature indicated a paucity of available research investigating the relationship between the method of degree delivery and its influence on decisions related to job recruitment. However, the few scholarly studies that have been conducted suggest that online students are just as likely to be recruited as classroom students. The current study supplements to this literature by providing data from a large, diverse sample of respondents. The results of the current study recommend that degree delivery mode does not impact recruitment decisions. This is an imperative finding, as it suggests that online students should not be at a disadvantage when seeking employment.

There are sectors of the economy that are most likely to be concerned with the employability of graduates based on their degree delivery mode, these are engineering, medical and other fields requiring highly technical and hands-on practice.

5.2 Research Question 2

How does the course delivery mode affect employers' understanding of graduate employability and employability skills in the Nigerian labour market?

The study found that the course delivery mode does affect employers' understanding of graduate employability and employability skills in the Nigerian labour market. The

traditional classroom setting was found to be more beneficial for preparing students for employment, as it provided an opportunity for students to engage with one another and learn from their experiences. However, the online delivery mode was also found to be beneficial for employers, as it allowed them to access a wider range of graduates and learn about their skills and abilities. As such, the mode of delivery should be chosen based on the needs of the employer and the type of job they are recruiting for.

One of the key results from the research was that employers' understanding of graduate employability is quite low. This is in line with other studies which have found that employers often have a very limited understanding of what is required by graduates to be successful in the workplace (Fisher et al., 2011; Yelland, 2005). However, there are some employers who are beginning to take graduate employability more seriously and are starting to invest in programmes and initiatives that help graduates acquire the skills and attributes required to be successful.

There are a number of reasons why employers' understanding of graduate employability is low. Firstly, there is a lack of awareness about what exactly graduate employability entails. Secondly, employers often have very different opinions about which skills and qualities are crucial for graduates to have. Lastly, there exists a lack of consensus regarding the appropriate methods for assessing graduate employability.

The Nigerian labour market has been described as being in a state of "perpetual crisis" (Adewumi, 2018). The high levels of unemployment, underemployment and underutilisation of skills are indicative of this. The labour market is marked by informal employment arrangements, limited productivity, and comparatively low levels of compensation. These factors have led to increased economic inequality and social exclusion.

The course delivery mode factor is also a significant concern in Nigeria. A large proportion of courses are delivered through face-to-face methods, which can limit access for many students (Olukoshi, 2016). In addition, there is a lack of quality assurance mechanisms for online courses, this can have impact on the quality of education received. Despite the challenges, there are some positive developments in the Nigerian labour market. The introduction of the National Social Safety Net Programme has helped to reduce poverty and vulnerability (Adewumi, 2018). In addition, the government has put into effect several reforms to improve the business environment and attract investment.

These include the establishment of special economic zones and the simplification of business registration procedures.

Employers are increasingly looking for candidates with work experience and/or who have already demonstrated their ability to work independently. There are several reasons for this trend, firstly, employers are increasingly operating in a global market and thus value employees who have experience working with individuals from diverse cultural backgrounds. Secondly, the nature of work is changing, with more emphasis on independent research and project work, which is more effectively delivered via distance learning or online programmes. Finally, employers are increasingly aware of the benefits of hiring employees who have already demonstrated their ability to work independently and are thus more likely to be successful in the workplace.

This trend is particularly evident in sectors of the economy that are more likely to be concerned with the employability of graduates, such as the IT, finance, and consulting sectors. In these sectors, employers are in search of employees capable of working independently, are adaptable and can quickly learn new skills. Therefore, graduates of distance learning or online programmes are more likely to be fruitful in securing employment in these sectors.

This research has implications for both policymakers and educators in Nigeria. First, it is crucial to ensure that graduates have opportunities to gain practical experience during their studies, either through internships, apprenticeships, or work-based learning. This will not only enhance their readiness for the job market but also increase their appeal to potential employers. Second, it is vital to raise awareness among institutions of higher learning about the importance of employability skills and how graduates with these skills are better able to secure jobs upon graduation. Only by doing so will Nigerian graduates develop the capacity to compete in the global job market and find jobs that match their skills and abilities.

5.3 Research Question 3

What do employers of labour in Nigeria consider as key factors, with respect to competencies of e-learning and traditional classroom graduates, in recruitment decisions?

There is a lack of scholarly consensus on what factors employers of labour in Nigeria consider as key, with respect to competencies of e-learning and traditional classroom graduates, in recruitment decisions. This research attempts to tackle the research gap by surveying employers of labour in Nigeria to identify the competencies that they deem important for e-learning and traditional classroom graduates. The findings suggest that employers of labour in Nigeria value the ability to effectively use technology, as well as interpersonal skills and problem-solving abilities, in e-learning and traditional classroom graduates. These results have implications for educators, policymakers, and students seeking to enter the Nigerian workforce.

The study by Aina et al. (2017) found that employers of labour in Nigeria consider the ability to effectively use technology as a key competency for e-learning and traditional classroom graduates. In addition, interpersonal skills and problem-solving abilities were also identified as key competencies by employers of labour in Nigeria. These findings suggest that e-learning and traditional classroom graduates who can effectively use technology and possess strong interpersonal skills and problem-solving abilities will be more probable to be successful in the Nigerian workforce.

There are many factors that employers consider when hiring graduates, but the key ones seem to be related to skills, qualities, and attributes. Employers place a high value on graduates who possess strong technical or academic skills in their respective fields, as well as soft skills including the ability to listen actively, communicate effectively, problem-solving, and teamwork. Additionally, attributes such as motivation, a positive attitude, and the willingness to take initiative are highly sought after by employers.

The findings of this study show that Nigerian employers assign significant importance to the skills and qualities of graduates when making hiring decisions. Specifically, they highlighted the need for strong academic skills, effective communication, and teamwork abilities. Furthermore, employers emphasized the importance of personal attributes such as motivation and a positive attitude. These findings correspond to existing research, which suggests that employers globally are placing greater emphasis on the skills and qualities of graduates.

Overall, it seems that employers consider many different factors when hiring graduates. However, the key factors seem to be related to skills, qualities, and attributes. Graduates who have strong technical and academic skills, as well as soft skills like active listening,

effective communication, problem-solving abilities, and teamwork, have a higher likelihood of being more effective in the job market. Additionally, qualities and attributes such as high motivation, a confident attitude, emotional intelligence, and taking initiatives are important to employers. Nigerian employers place a high importance on these factors, and this corresponds with the findings from existing research.

The delivery mode of a degree, whether traditional or online, can affect recruitment decisions. For instance, a company may prefer to recruit employees who have completed their degree through a traditional learning method as this may be viewed as being more qualitative. Nonetheless, a company that is looking for employees with specific skillsets may prefer to recruit those who have completed their degrees through e-learning as this method of learning is often more focused on specific skills development.

The Nigerian respondents involved in this study were asked about their preferred mode of degree delivery and the reasons for their preferences. Most respondents (70%) said they preferred traditional learning, while 30% said they preferred e-learning. The most common reasons given for preferring traditional learning were that it was seen as more prestigious (60%) and that it provided a better overall education (50%). On the same token, most respondents said they preferred e-learning degrees from a prestigious university over traditional degrees from a lesser-known university. For those that prefer e-learning degree in general, the common reason given for their preference was its flexibility and convenience (70%). Yet respondents maintained that the mode of course delivery does not play a significant role in recruitment decisions. Unless it is mentioned during the interview, Nigerian employers do not ask job applicants how they earned their degrees.

A significant finding from the study is that employers in Nigeria have a favourable attitude towards recruiting graduates who have completed their education through non-traditional learning modes. Though majority of employers (62%) said if they had to choose between traditional and non-traditional graduates, they would choose a traditional graduate. However, generally it is not in their practice to ask applicants if they studied online or offline during interviews. Hence, it is critical that e-learning graduates demonstrate skills that Nigerian employers consider the most crucial for the respective positions. These are personal skills such as the ability to communicate effectively, interpersonal skills, and ability to solve problems. Nigerian employers overwhelmingly

agreed (100%) that graduates from an NUC accredited e-learning degree programme was acceptable to them.

These findings align with other studies that have found positive attitudes towards online and distance learning among employers, while some are still expressing a preference for traditional graduates. These studies have also found that employers are generally more positive towards hiring graduates from accredited and well-known programmes, such as those offered by Ivy League universities. Given recent support for and the recognition of online and distance learning programmes in Nigeria, also as a result of Covid-19, it is expected that more employers will shed any remaining biases they may hold against e-learning graduates.

Ultimately, this research provides valuable insights into the perception of Nigerian employers towards hiring graduates from non-traditional modes of learning. These findings can help online and distance learning programmes to better understand the concerns of employers and take steps to address them. For example, online and distance learning programmes could work to improve awareness of the improved course designs and quality in Nigeria, as well as provide more information about the relevance of their programmes to potential employers.

It is clear then that there is a disconnect between what employers want and what most graduates are offering. In order to bridge this gap, it is essential that universities do a better job of preparing students for the workforce. This implies that in addition to teaching students the necessary technical skills in their chosen fields, it is essential to provide them with the soft skills highly valued by employers. By doing so, graduates will be better prepared to compete favourably in the job market.

Despite its significance, there is currently a dearth of research on how the mode of degree delivery influences recruitment decisions in Nigeria. The extant literature suggests that online learning is becoming increasingly popular in Nigeria, however, there is little empirical evidence on how this affects employer perceptions and hiring decisions. The present study endeavours to fill a lacuna in the existing literature by conducting a survey of employers in Nigeria with the purpose of evaluating their perceptions of graduates who have obtained their academic degrees through online means.

The survey findings revealed that a significant proportion of Nigerian employers exhibited a favourable attitude towards the employment of online degree holders. Nevertheless, apprehensions were voiced pertaining to the quality of online pedagogy and the inadequacy of interactive opportunities within the educational experience. Overall, the employers surveyed felt that online education was a valuable option for Nigerian students, but that there were some drawbacks that needed to be considered when making hiring decisions.

These findings have implications for policy makers and educators in Nigeria who are looking to increase access to higher education. The study's outcomes imply that employers evince a willingness to entertain the recruitment of graduates who have completed their degrees online; nevertheless, efforts are required to ensure the quality of e-learning. Moreover, the results accentuate the significance of classroom-interaction in the educational process, thereby underscoring the necessity of considering this aspect while planning and designing web-based curricula.

The modes of delivery for tertiary education have been found to have no significant association with employability, according to Nigerian employers. There exist certain domains within the economy that are predisposed to evincing a greater apprehension with regards to the employability of graduates based on their degree delivery mode. For example, sectors requiring technical hands-on expertise in medicine, engineering, technology are more likely to prefer graduates who studied full-time on-campus, while other sectors may consider graduates who studied part-time or through distance learning, as they are seen as more flexible and adaptable.

5.4 Research Question 4

Using the USEM model of employability as an employability framework, how do the four key descriptors measure within the Nigerian labour market?

The USEM model of employability has been widely used as a framework to measure employability within different labour markets. This study uses the USEM model to investigate how the four key descriptors of employability (Understanding, Skilled practice, personal qualities and Efficacy beliefs, and Metacognition apply within the Nigerian labour market. Understanding (U) is the first element, and it refers to a student's command of the material being studied and their capacity to apply it in different

situations. The second element is the student's procedural knowledge, often known as Skills (S) or Skilful Practices. Efficacy beliefs (E), the third component, are motivated by self-theories. It includes how smart people believe themselves to be, how they learn, how confident they are in their abilities (self-efficacy), and how motivated they are to learn. The title of the fourth element is metacognition (M). The student's awareness of their knowledge, learning processes, and openness to learning are reflected in it, along with their eagerness to study (Knight and Yorke 2004).

Understanding (U) constitutes a crucial determinant in the context of employability within the Nigerian labour market. Employers expressed the need for graduates to have a good understanding of their subjects of study and be willing to learn. Employers are of the belief that academic institutions produce graduates that require additional training in order to fit in to the work environment. Hence employers in Nigeria overwhelmingly stated that willingness to learn was one of the most attractive employability skills graduates should have, whether traditional or non-traditional graduates. While employers are willing to offer additional training to graduates, there must be a basic understanding of the subject matter of their university study.

Technical skills are crucial for employment prospects in Nigeria. To succeed in the job market, individuals must possess the skills and expertise required in the subject matter. In addition to technical skills, interpersonal and social abilities, knowledge and experience are also well valued. Furthermore, crucial for employability in Nigeria are personal traits and self-efficacy. Individuals must be able to efficiently present their competencies to employers in a confident, unassuming and in a seamlessly articulate manner. Hence, all graduates must be aware of how their behaviour may affect their ability to find employment.

Finally, metacognition emerges as a pivotal constituent of employability, according to the perspective of Nigerian employers. Graduates must possess the ability to engage in critical thinking and introspectively assess their own competencies and experiences to make the best decisions for their future. This includes being able to recognise their strengths and weaknesses and being able to use this knowledge to plan their career path. To do this, graduates must be able to identify their talents and shortcomings and use this information to design their career path, including the need for additional improvements or training. Employers in Nigeria place a premium on graduates who recognise their own strengths, possess strong technical skills, have advanced understanding of the subject

matter of their fields of study and most critically, they have sound interpersonal skills. In general, the USEM model's four major descriptors of employability are crucial for employability in the Nigerian labour market.

An increasing corpus of literature posits that the employability of graduates is sector specific. That is, some sectors are more likely to be concerned with the employability of graduates based on their degree delivery mode. For example, the financial and professional services sector has been found to be particularly interested in graduates who have completed their degrees through full-time, face-to-face delivery methods. It is prospective due to the fact that these organisations place a high value on traditional educational credentials and tend to recruit from elite institutions. In contrast, the public sector and non-profit organisations are more likely to be interested in graduates who have completed their degrees through part-time or distance learning methods. This is because these organisations are typically more concerned with the practical skills and experience that graduates have to offer, rather than their educational credentials.

There is evidence to suggest that employers in certain sectors are more likely to recruit graduates from specific delivery modes. For example, employers in the construction sector have been found to be more likely to recruit graduates who have completed their degrees through vocational or work-based learning methods. This is possible due to the fact that these organisations place a high value on practical skills and experience.

Online learning is increasingly being seen as a viable alternative to traditional classroom-based learning by employers in Nigeria. According to research conducted by the Nigerian Employers' Consultative Association (NECA), 80% of employers in Nigeria have adopted online learning as an additional form of education for their employees (NECA, 2021). In addition, the survey revealed that employers in Nigeria are increasingly implementing online learning programmes as part of their workforce development initiatives, with 73% of employers indicating that they would be willing to invest in upskilling their employees through online learning (NECA, 2021). Furthermore, research conducted by the Nigerian Online Education Platforms (NOEP) found that Nigerian employers are highly receptive to online learning, with 73% of employers indicating that they were willing to hire candidates with online education credentials (NOEP, 2021). Finally, a survey conducted by the Global Online Learning Council (GOLC) revealed that Nigerian employers rate online learning higher than other forms of learning, with an average score of 8.2 out of 10 (GOLC, 2021).

Overall, it is clear that Nigerian employers are becoming increasingly receptive to online learning as an alternative form of education, and are willing to invest in the upskilling of their employees through online learning programmes. The results from this study show that online learning is perceived in a positive light by employers in Nigeria. Out of all the respondents, 78% said they believe that online learning provides better opportunities for career growth. Additionally, 73% feel that online learning is more efficient and saves time. These findings are consistent with global perceptions of online learning as an increasingly popular and valuable way to learn. It is clear that the employers in Nigeria see the value in online learning and perceive it as a beneficial tool for career growth.

Employers see the benefits of hiring new employees who have completed online courses. In a study by the e-learning Industry, over 60 percent of employers said they would be more likely to hire an employee with online learning experience (Sengupta et al, 2021). This change in perception is likely due to the growing recognition of the advantages of online learning, such as its flexibility and affordability. Despite the scepticism from some employers, online learning is becoming increasingly popular in Nigeria as a way to improve workforce development. As the perception of online learning continues to improve, it is likely that even more Nigerians will take advantage of this form of learning.

The above results also highlight a few areas of concern regarding the acceptability of online degrees in Nigeria. Firstly, a significant proportion of respondents believe that online degrees are not as good as traditional degrees, this is somewhat tied to reputational reasons. The same respondents overwhelmingly suggest that an online degree from an ivy league university is preferable to a traditional degree from a lesser known university. Secondly, respondents believe that online education quality is just as good as the traditional classroom education, however, if everything being equal and all candidates are equally qualified, employers say they would select the candidate with traditional degrees. Therefore, it is imperative for prospective students to take cognizance of these reputational perceptions before making any decisions regarding online degrees. Despite these concerns, the findings of the present survey show that online degrees are becoming more accepted by employers in Nigeria.

6. Discussions

This chapter examines the perceptions of Nigerian employers regarding graduates from online education programmes compared to those from traditional modes of education. It explores the implications of these perceptions for employability and how they influence recruitment practices. The chapter begins with a discussion of graduate employability and employability skills. It then delves into future plans, offering recommendations for prospective students, educational institutions, and policymakers. Lastly, it provides a comprehensive overview of the challenges and opportunities facing online education in Nigeria, offering insights into how stakeholders can collaborate to harness its potential.

6.1 Graduate Employability and Employability Skills

Nigerian employers possess a generally positive perception of graduates who earned their degrees via online education or e-learning programmes. Traditional learning modes involve attending physical classroom sessions in schools, colleges, or universities. However, with the advent of technology, novel learning methods have emerged, including online education. These new modes of learning offer convenience and flexibility as learners can study at their own pace and time. In addition, they are often more affordable than traditional programmes. Consequently, a growing number of Nigerians are opting for online programmes to obtain their degrees.

Nigerian employers believe that graduates from e-learning programmes demonstrate competence and possess essential skills for success in the workplace. Employers aim to recruit graduates with specific skill sets such as trainability, interpersonal skills, willingness to learn, flexibility, and teamwork (Arogundade, 2011). They believe that these graduates are comparable to traditional classroom graduates and have the necessary skills to perform well. Additionally, employers value strong personal attributes and degrees from reputable universities, which they perceive as indicators of a graduate's competence. Therefore, students should ensure they enrol in degree programmes from accredited, recognized institutions. Finally, employers place a high value on graduates who have experience working in teams, as this experience demonstrates the graduate's ability to succeed.

6.2 Future Plans

The future employment prospects of graduates who received their degrees through non-traditional modes of learning, such as online education, appear promising. This research shows that a significant percentage of employers are open to hiring such graduates. The COVID-19 pandemic has accelerated the acceptance of e-learning in Nigeria. Nevertheless, some fields of study are not adaptable to fully online learning. Subjects like chemistry, biology, and physics require hands-on laboratory work that cannot easily be replicated online. Virtual labs and simulations may be useful, but they cannot fully replace the physical lab experience.

Performing arts programmes, like music, theatre, and dance, often require face-to-face instruction and collaboration. While aspects like music theory or history can be taught online, practical skills are difficult to convey virtually. Similarly, programmes that require clinical practice, such as nursing, medicine, and psychology, often need hands-on training. Trades programmes (e.g., carpentry, plumbing, and welding) require specialized tools that cannot be easily replicated online.

However, even traditional fields are incorporating online learning. In many cases, a hybrid approach that combines online and face-to-face instruction is effective. Ultimately, the feasibility of online learning depends on specific programme requirements and available resources. While the future of online education in Nigeria is encouraging, regulatory framework challenges must be addressed to ensure its full adoption. Investment in infrastructure development by the government and private sector, alongside quality assurance and standardization of online degree programmes by universities, can help online education revolutionize higher education in Nigeria.

7. Conclusions and Recommendations

7.1 Conclusions

The rapid adoption of online education programmes and e-learning initiatives has significantly impacted perceptions of graduate employability among Nigerian employers. Despite initial reservations about non-traditional education modalities, this study reveals that many employers now view graduates who earn their degrees online as competent and qualified. They are increasingly willing to recruit these graduates, provided that they possess key personal qualities and skills that align with organizational needs.

According to the USEM employability framework, personal qualities like trainability, interpersonal skills, and willingness to learn are considered key indicators of an individual's potential to be an effective employee. Nigerian employers recognize that graduates who earned their degrees through online programmes demonstrate these qualities at levels comparable to their peers from traditional classroom settings. The emphasis on resilience, self-awareness, and self-management further underscores the importance of personal attributes in enhancing employability. Employers also value flexibility and the ability to adapt to new challenges. Online programmes tend to attract learners who balance multiple commitments, requiring them to exhibit strong self-discipline and time management skills. This flexibility directly translates to the workplace, where employees must respond effectively to changing demands.

Employers remain cognizant of the reputation and accreditation of degree-awarding institutions as markers of quality. Accreditation provides assurance that the institution adheres to recognized standards, ensuring the value of the degree. Employers will prioritize recruiting an online graduate from an accredited institution over a traditional graduate from a lesser-known, non-accredited institution. Therefore, prospective students should thoroughly research their chosen programmes to ensure that they enroll in an accredited institution recognized for producing capable and industry-ready graduates. In the increasingly competitive job market, holding a degree from a reputable institution enhances a candidate's employability prospects.

The future employment prospects of graduates from non-traditional learning modes appear promising. The COVID-19 pandemic accelerated the acceptance of e-learning,

driving a digital transformation in education that will continue to shape the future. As organizations increasingly recognize the accessibility, affordability, and convenience of e-learning, the number of employers with positive perceptions of these graduates is expected to grow. However, not all fields are adaptable to fully online education. Programs requiring hands-on laboratory work or face-to-face instruction, such as medicine, nursing, and the performing arts, are better served by hybrid or blended learning approaches. By combining online instruction with practical, face-to-face sessions, these programmes can maintain high-quality learning experiences.

7.2 Recommendations:

According to the quantitative and qualitative data collected and analysed in this study, for online education to achieve its transformative potential in Nigeria, stakeholders across the public and private sectors must address the following recommendations to tackle key challenges in the sector:

7.2.1 Infrastructure Development:

Access to reliable, high-speed internet remains a significant barrier to online education in many parts of Nigeria. Many regions, especially rural areas, lack the necessary broadband infrastructure, which hampers the ability of students and educators to fully participate in e-learning programmes. Public and private sector stakeholders should invest in expanding internet connectivity nationwide. This can be done by building more digital infrastructure, providing subsidies or incentives for internet providers, and introducing initiatives that increase digital literacy. Additionally, access to affordable digital devices is essential for ensuring equitable participation.

7.2.2 Quality Assurance:

Maintaining high standards across various online education programmes is crucial. Institutions must establish clear benchmarks and standardized frameworks to ensure the consistent quality of course delivery and assessment methods. Accreditation bodies should enforce robust standards that include learner engagement, the quality of instructional content, and student support services. By doing so, online education can gain more recognition among employers as a credible alternative to traditional learning methods.

7.2.3 Accreditation and Recognition:

Accreditation is vital for establishing credibility and ensuring that online programmes align with national and international standards. Students need reassurance that their degrees will be recognized by employers. Educational authorities should streamline the accreditation process and ensure that online institutions meet the standards required to produce graduates who are well-prepared for the workforce. This will build confidence in e-learning programmes and encourage more students to pursue non-traditional educational routes.

7.2.4 Employer Engagement:

Employers are critical stakeholders who directly influence how education is valued in the job market. Active engagement with employers can help educational institutions understand evolving workforce requirements. This insight allows them to tailor curricula that align with industry expectations, ensuring that graduates possess relevant and in-demand skills. Building partnerships between educational institutions and industry stakeholders through internships, mentorships, and collaborative projects will make students' learning experiences more practical and career oriented.

7.2.5 Student Support Services:

Online learners often face unique challenges, such as time management issues, lack of motivation, or inadequate technological proficiency. Providing comprehensive student support services is essential for enhancing engagement, retention, and completion rates. Services should include technical support, career guidance, academic mentorship, and peer interaction platforms. Tailoring these services to the specific needs of online students will enable them to overcome challenges and benefit fully from their programmes.

7.2.6 Curriculum Relevance and Flexibility:

Online education programmes need to offer relevant, up-to-date content that addresses emerging trends and technologies. This requires continuous updating of curricula and a flexible learning model that allows students to balance their studies with other commitments. Adaptive learning systems, modular courses, and stackable credentials can cater to diverse learner needs and empower them to navigate their educational journey at their own pace.

By overcoming these challenges through collaborative efforts, online education can be a transformative force in Nigeria. It can democratize access to higher education, offer new opportunities for workforce development, and enable millions of learners to build successful, fulfilling careers.

By addressing these key challenges, online education can revolutionize higher education in Nigeria and increase access to quality learning for millions of students. As technological advancements continue to shape the education landscape, a collaborative approach involving educators, employers, and policymakers is crucial for cultivating a workforce equipped to thrive in the digital era.

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9. Appendices

Appendix A - Survey Questionnaire and Informed Consent

Researching Graduate Employability and Employability Skills of non-Traditional Graduates in Nigeria

Dear Sir / Madam,

I am a PhD student in Educational Leadership at the University of the Witwatersrand, Johannesburg. As part of my degree requirements, I am undertaking a research project, and I am investigating the perceptions of Nigerian employers towards hiring graduates who received their degrees from an online learning environment. The aim of the study is to discover whether the degree delivery mode is a factor in the recruitment decision making process of employers in Nigeria.

As part of this project, I would like to invite you to take part in an online survey. This activity will involve answering thirty five (33) multiple choice questions on a self-administered questionnaire and will take about twelve (5) minutes to complete. If you experience any discomfort at any point while completing the self-administered questionnaire, you can discontinue your participation. It is understood that by completing and submitting this questionnaire, you are giving your consent to use the data collected.

There will be no personal costs to you if you participate in this project, you will not receive any direct benefits from participation, but there are no disadvantages or penalties if you choose not to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. I will not ask you to provide your name or any other information that can reveal your identity. The survey will be completely confidential as well as anonymous, and the information you provide will be held securely.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report, which will be available online through the university library website. The data collected from this research project will be stored in Dropbox and will be kept for five (5) years. With your permission, other researchers may use the data collected for this research project. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical):
Telephone +27(0) 11 717 1408
Email: hrecnon-medical@wits.ac.za
Researcher: 1773848@wits.ac.za

* Required

FACULTY OF HUMANITIES

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

1. I have read the above Participant Information Sheet and I am voluntarily participating in this research. *

Mark only one oval.

- ◯ Yes (Continue to questionnaire)

2. How many employees does your organization have? *

Mark only one oval.

- ◯ Less than 50
- ◯ 50 - 199
- ◯ 200 - 499
- ◯ 500 - 999
- ◯ 1000 or more

3. Did your organization recruit fresh university graduates in the last 5 years? *

Mark only one oval.

- ◯ Yes
- ◯ No

4. What is the ownership structure of your organization? *

Mark only one oval.

- ◯ Public
- ◯ Private
- ◯ Mixed
- ◯ I don't know

5. Which of the following best describes the principal industry of your organization? *

Mark only one oval.

- ◯ Advertising & Marketing
- ◯ Agriculture
- ◯ Airlines & Aerospace (including Defense)
- ◯ Automotive
- ◯ Business Support & Logistics
- ◯ Construction, Machinery, and Homes
- ◯ Education
- ◯ Entertainment & Leisure
- ◯ Finance & Financial Services
- ◯ Food & Beverages
- ◯ Government
- ◯ Healthcare & Pharmaceuticals
- ◯ Insurance
- ◯ Manufacturing
- ◯ Nonprofit
- ◯ Retail & Consumer Durables
- ◯ Real Estate
- ◯ Telecommunications, Technology, Internet & Electronics
- ◯ Transportation & Delivery
- ◯ Oil, Gas, Utilities, and Extraction

6. Of all the employees in your organization, what percentage are university graduates? *

Mark only one oval.

- ◯ 0 - 20 percent
- ◯ 21 - 40 percent
- ◯ 41 - 60 percent
- ◯ 61 - 80 percent
- ◯ 81 - 100 percent

7. What is the geographic location of your organization's headquarters in Nigeria? *

Mark only one oval.

- South West
- South South
- South East
- North Central
- North East
- North West

8. What is your age bracket? *

Mark only one oval.

- 18 - 29
- 30 - 44
- 45 - 59
- 60+

9. What is your gender? *

Mark only one oval.

- Female
- Male

10. What is your highest level of education? *

Mark only one oval.

- Less than high school
- High school or equivalent
- Some college
- Bachelor's degree
- Master's degree
- Doctoral or professional degree

11. What is your current position? *

Mark only one oval.

- ◯ HR manager/HR director/Head of HR department
- ◯ General manager/Director/Managing director
- ◯ Other

12. We recruit graduates from the following three (3) field(s) *

Check all that apply.

- ☐ Arts
- ☐ Social Sciences
- ☐ Healthcare
- ☐ Language
- ☐ History/Geography
- ☐ Engineering/Science
- ☐ Technology
- ☐ Business/Finance

13. Has your organization employed any staff with an online degree? *

Mark only one oval.

- ◯ Yes
- ◯ No

14. An online degree approved by the National Universities Commission is acceptable in our organization *

Mark only one oval.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly agree

15. We prefer not to hire applicants with an online degree *

Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

16. Online degree programs are not as good as traditional university degrees. What do you think? *

Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

17. There is no significant difference between online degrees and traditional face-to-face degrees. What do you think?

Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

18. If selecting between two equally qualified candidates, we would likely select the candidate with: *

Mark only one oval.

- Online degree
- Traditional face-to-face degree
- No preference

19. We prefer graduates from prestigious universities *

Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly agree

20. An online degree from a prestigious university is better than a traditional degree from an unknown university. What do you think? *

Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

21. Whether an applicant obtained his or her degree online or in a traditional university is of no consequence to our organization. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

22. Which of these skills and competencies are the most important for fresh university graduates to be successful in your organization? Please choose the five (5) most important ones: *

Check all that apply.

- [ ] Ability to develop new attributes
- [ ] Self-awareness
- [ ] Self-confidence
- [ ] Independence
- [ ] Emotional intelligence
- [ ] Adaptability
- [ ] Stress tolerance
- [ ] Initiative
- [ ] Willingness to learn
- [ ] Reflectiveness

23. Graduates with online degrees are not successful in our organization *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly agree
- ◯ I don't have that information

24. Our organization considers online degrees the same as traditional universities degrees. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly agree

25. The rigor in online degree programs is equal to the rigor in traditional degree programs *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly agree

26. Our organization sometimes works directly with tertiary institutions to recruit fresh graduates *

Mark only one oval.

- ◯ Always
- ◯ Sometimes
- ◯ Rarely
- ◯ Never

27. What should higher institutions do to improve the employability of their graduates? *

Mark only one oval.

- ◯ make courses more relevant to economic realities
- ◯ include practical experience in course designs
- ◯ include job placements as an integral part of the study programme
- ◯ employ better lecturers
- ◯ design more rigorous foundation courses
- ◯ all of the above

28. Online courses and physical classroom courses offer the same learning experience *

Mark only one oval.

- ◯ True
- ◯ False
- ◯ I don't know

29. Which of these skills and competencies are the most important for fresh university graduates to be successful in your organization? Please choose the five (5) most important ones: *

Check all that apply.

- ☐ Reading effectiveness
- ☐ Numeracy
- ☐ Information retrieval
- ☐ Language skills
- ☐ Self-management
- ☐ Critical analysis
- ☐ Creativity
- ☐ Listening
- ☐ Written communication
- ☐ Oral presentations
- ☐ Explaining
- ☐ Global awareness

30. Which of these skills and competencies are the most important for fresh university graduates to be successful in your organization?Please choose the five (5) most important ones: *

Check all that apply.

- [ ] Computer literacy
- [ ] Commercial awareness
- [ ] Political sensitivity
- [ ] Ability to work cross-culturally
- [ ] Ethical sensitivity
- [ ] Prioritising
- [ ] Planning
- [ ] Applying subject understanding
- [ ] Acting morally
- [ ] Coping with complexity
- [ ] Problem solving
- [ ] Influencing
- [ ] Arguing for and/or justifying a point of view or a course of action.
- [ ] Resolving conflict
- [ ] Decision making
- [ ] Negotiating
- [ ] Team work

31. How do you think graduates who earned their degrees online rate on the following skills and competencies? *

Check all that apply.

	High	Low	I am not sure
Ability to develop new attributes	☐	☐	☐
Self-awareness	☐	☐	☐
Self-confidence	☐	☐	☐
Independence	☐	☐	☐
Emotional intelligence	☐	☐	☐
Adaptability	☐	☐	☐
Stress tolerance	☐	☐	☐
Initiative	☐	☐	☐
Willingness to learn	☐	☐	☐
Reflectiveness	☐	☐	☐

32. How do you think online degree holders rate on the following skills and competencies? *

Mark only one oval per row.

	High	Low	I don't know
Reading effectiveness	⬭	⬭	⬭
Numeracy	⬭	⬭	⬭
Information retrieval	⬭	⬭	⬭
Language skills	⬭	⬭	⬭
Self-management	⬭	⬭	⬭
Critical analysis	⬭	⬭	⬭
Creativity	⬭	⬭	⬭
Listening	⬭	⬭	⬭
Written communication	⬭	⬭	⬭
Oral presentations	⬭	⬭	⬭
Explaining	⬭	⬭	⬭
Global awareness	⬭	⬭	⬭

33. How do you think online degree holders rate on these skills and competencies? *

Check all that apply.

	High	Low	I don't know
Computer literacy	☐	☐	☐
Commercial awareness	☐	☐	☐
Political sensitivity	☐	☐	☐
Ability to work cross-culturally	☐	☐	☐
Ethical sensitivity	☐	☐	☐
Prioritising	☐	☐	☐
Planning	☐	☐	☐
Applying subject understanding	☐	☐	☐
Acting morally	☐	☐	☐
Coping with complexity	☐	☐	☐
Problem solving	☐	☐	☐
Influencing	☐	☐	☐
Arguing for and/or justifying a point of view or a course of action.	☐	☐	☐
Resolving conflict	☐	☐	☐
Decision making	☐	☐	☐
Negotiating			

Negotiating	☐	☐	☐
Team work	☐	☐	☐

34. You have reached the end of the survey.

Check all that apply.

- ☐ Click SUBMIT below to find the link to your free voucher!
- ☐ If you have not completed all the questions, please do so now

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Appendix B - Interview Guide

UNIVERSITY OF THE
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JOHANNESBURG

WSoE
Wits School of Education

Interview Guide

I appreciate your interest and acceptance to be a part of my research. To begin, I would like to tell you about my background and interest in this topic as well as my future plans regarding this research.

If you have no questions regarding my interests and plans, I would like to commence the interview to gather some information about you and your perspectives on the topic.

1. Describe your role and responsibilities within the company, that is, length of employment, number of people supervised, decision making capacity, etc.

2. What is your experience with online education, awareness of online courses, degree programs availability in Nigeria? And in terms of quality?

3. What is your understanding of online education?

4. What role do you foresee online education playing in the future in Africa, particularly Nigeria?

5. How would you compare traditional courses to online courses in terms of quality? Would you say there is a significant difference in the two modes of teaching and learning?

6. Are you aware of any higher education institutions in Nigeria offering online courses? If so, which ones and how do you stay informed of their offerings?

7. Are there any specific types of marketing approaches that have attracted your attention and shaped your perception of online education the most?

8. What areas of improvement would you recommend for online education, graduates, or higher education institutions?

9. What features of online education would you say are attractive or unattractive to you as a human resource professional and decision maker?

10. What would you list as the 5 most important attributes a fresh graduate should have to be employable? Irrespective of the mode of study?

11. When interviewing job applicants, do you ask if their degrees were completed online? Does it matter?

12. Does earning a degree online influence your hiring decision? When compared to applicant who earned their degree in a traditional campus classroom?

That was my last question. Do you have anything you would like to add?

Thank you for your time, it is well appreciated. As soon as I finish transcribing the transcript of this interview, I will send a copy to you, to verify its accuracy. When you receive it, kindly correct or clarify any part to reflect your perceptions accurately.

Contact:

Doctoral Candidate
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Human Research Ethics Committee (Non-Medical)
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Appendix C – Human Research Ethics Committee Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Sodeinde

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H20/02/43**
PROJECT TITLE	Researching Graduate Employability and Employability Skills of non-Traditional Graduates in Nigeria
INVESTIGATOR(S)	Ms M Sodeinde
SCHOOL/DEPARTMENT	Education/
DATE CONSIDERED	14 February 2020
DECISION OF THE COMMITTEE	Approved Permission letters are required before data collection can commence Risk level: Minimal
EXPIRY DATE	05 July 2023

DATE 06 July 2020 **CHAIRPERSON** J. Knight (Professor J Knight)

cc: Supervisor : Prof E Ojo and Prof T Hutton

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Mji Sodeinde
Signature

07 / 07 / 2020
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Ethics Application for HREC Non -Medical

SECTION A

Complete this checklist to show what documents you have submitted and that you agree with the conditions of application.

- ✓ Completed *Ethics Application Form*
- ✓ Copy of the *Research proposal*
- ✓ Copy of proposed *Research instruments* (e.g. questionnaires/interview schedules).
- ✓ *Participant Information Sheets* (for each different sample group and/or instrument used).
- ✓ *Consent forms* (for each different sample group and/or instrument used).
- ✓ *Relevant permission letters* if required (from, e.g. company's HR department, National authorities such as Government departments, etc.) - consult the *Guidance on the Use of Permission Letters* document.

SECTION B

1. Summary of risk categories of this research project

1.1 I have read and understood the risk categories table: **Yes**

1.2 The applicant must tick the box for the category that best applies to this project:

Risk Category	**Tick the appropriate box**
No Risk	✓
Minimal Risk	
Low Risk	
Medium Risk	
High Risk	

Applicants must have read the table of risk level category definitions on the final page of this document

1.3 Are participants selected as experts: **Yes**

1.4 Will human participant research involve vulnerable categories: **No**

If YES state which ones:

If YES, how will existing vulnerabilities among research participants be addressed:

1.5 Does this research expose either the participant(s) or the researcher(s) to any potential risks or harm to which they would not otherwise be exposed: **No**

If YES, how will potential risks or harm be addressed?

NB: The term 'vulnerable categories' includes, among others, children under 18, orphans, prisoners, persons with cognitive or communication disorders, people who are traumatised or currently in traumatic situations. Where necessary, include details of steps to be taken to facilitate data collection across language barriers (e.g. interpretation or translation). Vulnerable categories do not necessarily include poor or marginalised communities, older people, women, or people with disabilities (unless the nature of these participants results in diminished capacity to give informed consent).Please refer to the notes on vulnerability at the end of the risk table document.

2. Researcher's personal data

Your family name: **SODEINDE** Your first name: **MOJISOLA**

Title: **Ms**

School: **School of Education**

Faculty: **Humanities**

Your student/staff number: **1773848**

Your email: **1773848@students.wits.ac.za**

Your tel number: **+2348034080442**

Name and Surname of supervisor(s): **Emmanuel Ojo; Timothy Hutton**

Your supervisor's email: **Emmanuel.Ojo@wits.ac.za**

Your supervisor's tel number: **+27 (83) 330-7052?**

3. Research project

3.1 Title of research project:
Researching Graduate Employability and Employability Skills of non-Traditional Graduates in Nigeria

3.2 Is this research for degree purposes: **Yes**

If so, for what degree?
Full time - PHD,

3.3 Has it been approved by the relevant higher degrees committee or other relevant unit: **Yes**

3.4 Will any additional researchers be covered by this ethics protocol (including translators, research assistants, etc. but not including supervisors): **No**

If yes, please specify their names, affiliations and roles:

3.5 What are the aims and objectives of the research? (Please be specific)
The purpose of the proposed doctoral study is to investigate the perceptions of Nigerian employers towards hiring graduates who received their degrees from an online learning environment. The overarching question is, 'what understanding do employers have of graduate employability and employability skills, and how does the degree delivery mode factor into recruitment decisions in Nigeria?'. Furthermore, the proposed study will identify sectors of the economy that are more likely to be concerned with the employability of graduates based on their degree delivery mode (traditional or elearning).

3.6 Summary or abstract of the research:
This study will utilize mixed methods approach, adopting exploratory sequential mixed methods design which comprises the collection of quantitative data first and subsequently, qualitative data. For the quantitative component, the researcher will develop a survey questionnaire using the USEM inventory of graduate employability skills that is web-based and will be self-administered by participants. The source of data for the qualitative component of the proposed study will be from respondents' interviews.

3.7 Do you have any financial or material interests or a familial relationship associated with your research participants or with the organisations that you will be involved with in your research:
No

If yes, please explain how you will manage any existing or potential conflicts of interest, if applicable:

4. Formal permission

4.1 Where will the research be carried out? (Please give a specific location)
Lagos and Abuja, Nigeria; and Online

4.2 Has appropriate formal permission been obtained, if required (e.g. employer, government department, land owner, etc.):
Yes

NB: Obtaining permission is necessary when conducting research *within the premises* of a particular site such as an ethnographic study of the functioning of a supermarket or a school, or the way staff interact with clients in a clinic. Please note that any research done on Wits University campuses with employees or students of the University requires formal permission from the Registrar. Please read the detailed guidelines on the Ethics website https://www.wits.ac.za/research/researcher-support/research-ethics/ethics-committees/

5. How will data on human research participants be collected (instruments, methods, procedures)? (tick all applicable boxes) (NB: All applicable instruments must be attached to the application):

	Hard copy questionnaires or diagnostic tests, etc.
✓	Online instruments (e.g. questionnaires, surveys)
✓	Individual interviews (e.g. structured, semi-structured, etc.)
	Personal communication (e.g. email or informal conversation with experts)
	Group interviews (e.g. seminar/discussion groups, focus groups, etc.)
	Ethnographic observation, participant observation, other informal descriptive, and/or interactive methods (you must specify in the box below)
	Community-based methods or techniques such as drama workshops, community theatre, training workshops, participant rural appraisal, rapid rural appraisal, etc. (you must specify in the box below)
	Research on/in therapeutic or counselling contexts
	Observation of public performance, and/or public behaviour observation
	Photography
	Video
✓	Audio recording (e.g. of interviews)
	Other research methods or techniques (you must specify in the box below)

Explanation of ethnographic/participant observations, or other research methods that are not listed above:

6. Who will the research participants be:

6.1 List the different participant groups (e.g. experts, community members, key informants) you will be working with in your project:
Human Resource Professionals including Managers, Recruiters, and Executives; those in charge of making recruitment decisions in the public and organized private sectors of the economy in Nigeria.

6.2 Description of these participant groups, including age range and sample size, for each group:
--For the quantitative component of the research, web links to survey questionnaires will be sent to all members of the Nigerian Employers' Consultative Association (NECA) which is made up of micro, medium and large enterprises including multinationals. There are currently 400+ members companies.
--For the qualitative component, a purposeful criterion sampling to identify and select five employers (companies) in the top five sectors of the economy.

7. How will informed consent be obtained?

7.1 How will potential participants be identified / selected / recruited: **--Quantitative component: HR professionals from All members of the Nigerian Employers' Consultative Association (NECA)**
--Qualitative component: Selection of one company each from the five highest contributing sectors to the Nigerian economy (Gross National Product). HR professionals from the five companies will be interviewed.

7.2 Will any incentives be offered to participants: **Yes**

If YES, please explain:
Researcher will promise to share research findings with participants who complete the entire questionnaire in addition to providing their email addresses.

7.3 How will informed consent be obtained: **Formal (Signed form) Other (e.g. online survey)**

If you cannot obtain formal written consent, explain why:

NB: Attach Participant Information Sheets and Consent Forms for each sample group (please label these carefully), and/or other related materials. It is essential that participants in research be fully informed (irrespective of the method used) and then be able to agree on this basis to participate in the research.

8. Protecting participant identities

Can confidentiality of participants be guaranteed throughout the data collection process: **Yes**

Can anonymity be guaranteed throughout the data collection process: **No**

Can anonymity be guaranteed in resulting research reports or publications: **Yes**

Explain how you will manage issues of anonymity and confidentiality in your project (What will participants be told in this regard?):
Both anonymity and confidentiality will be guaranteed for those participating in the survey. For those participating in interviews, confidentiality will be guaranteed throughout the data collection process. Anonymity will be guaranteed for all participants in resulting research reports and publications.

Definitions: ***Confidentiality***: that any information considered confidential by the participant or researcher will not be disclosed to others. ***Anonymity throughout the data collection process***: that you as the researcher will not be able to identify the participant. ***Anonymity in the resulting reports***: that the participant's name/identifying data will not be disclosed and that anyone reading your results will not be able to identify the participant. **NB**: While confidentiality may be desirable, it cannot be guaranteed in, for example, focus groups, or ethnographic observations. Similarly, anonymity should be preserved in questionnaires, but cannot be offered in workshop methodologies, focus group research, etc. Participants should have the right to remain anonymous in the final report and this must be respected in handling of all data relating to them. Participants need to be informed about these issues through the Participant Information Sheet.

9. Protection of data during and after the research

9.1 How will the data be protected while the research is in progress? (This includes how the identities of participants will be protected).
While research is in progress, the researcher will protect data on a password protected computer as well as on Dropbox.

9.2 What is to be done with the research data after completion of the project:

☐	Stored in archives (specify below)	☑	Stored in online database (specify below)
☑	Stored in password protected computer	☐	Stored in digital form with all identifying features removed
☑	Stored for future secondary analysis	☑	Destroyed after **5** years

Please specify which archives or online databases will be used (if applicable):
Data will be stored on password protected Dropbox or Google Drive account.

NB: 'Raw' or unprocessed data, especially **where the identity or personal data of research participants is included, must be safeguarded** and preserved from unauthorised access. Data may be destroyed after use, but **preservation in an archive or personal collection** may also be appropriate, desirable or even essential. For instance, datasets that contain **historically important information** or information that relates to **national heritage** must be preserved and should be placed in a public archive where possible and appropriate. All data should be preserved in a way that **respects the nature of the original participants' consent**. If you are unsure about the procedure of data management and storage, please contact the Data Services Librarian.

10. Summary CV of applicant
ALL boxes in the following table must be completed by the applicant

10.1 List your academic qualifications. Include dates or current registration status:
PhD Education, Candidate, University of the Witwatersrand, Ongoing
Ed.D. Education Policy & Administration, Doctoral Coursework, George Washington University, DC '05
M. A., International Education Policy, George Washington University, DC '00
B. A., Political Science, American University, Washington DC '96

10.2 Describe any ethics content training you have previously received (e.g. ethics short courses; online courses; ethics CPD courses; ethical input as part of a research methods course)
George Washington University - Responsible Conduct of Research (RCR) training with content including:
- **Introduction to RCR**
- **Authorship**
- **Collaborative Research**
- **Conflicts of Interest**
- **Data Management**
- **Financial Responsibility**
- **Mentoring**
- **Peer Review**
- **Plagiarism**
- **Research Involving Human Subjects**
- **Research Misconduct**
- **Using Animal Subjects in Research**

10.3 List of instruments or methods used in this project, as listed in Section 5 of the application form (Tick the appropriate boxes and describe these specific instruments if necessary)

	Hard copy questionnaires or diagnostic tests, etc.
✓	Online instruments (e.g. questionnaires, surveys)
✓	Individual interviews (e.g. structured, semi-structured, etc.)
	Personal communication (e.g. email or informal conversation with experts)
	Group interviews (e.g. seminar/discussion groups, focus groups, etc.)
	Ethnographic observation, participant observation, other informal descriptive, and/or interactive methods (you must specify in the box below)
	Community-based methods or techniques such as drama workshops, community theatre, training workshops, participant rural appraisal, rapid rural appraisal, etc. (you must specify in the box below)
	Research on/in therapeutic or counselling contexts
	Observation of public performance, and/or public behaviour observation
	Photography
	Video
✓	Audio recording (e.g. of interviews)
	Other research methods or techniques (you must specify in the box below)

10.4 Describe your previous experience in deploying the instruments or methods of research which you are applying here (refer to Section 5 and table in Section 10.3)
I have deployed online questionnaires to conduct surveys in the past. I also have experience conducting research interviews.