Chapter One

Introduction

1.1 Background to the Study

Research at higher education institutions is crucial for the genesis, discovery, invention, and creation of new knowledge. This process is important in different research areas, such as educating, making decisions, putting policies into action, and getting accreditation[1]. In the realm of pure science, research is often seen as the pursuit of truth and the creation of knowledge about physical materials and human behaviour. However, in the field of education, research is validated as a scientific and systematic process of exploiting knowledge[1]. Research is vital because it helps transmit teaching skills and research output, and it creates knowledge that can be used in teaching and learning processes after it is published. This underscores the notion that research is a key criterion for measuring the success of higher educational institutions globally, which serves as an indispensable means to discover, learn, and assess the development of teaching staff[2]. Despite these benefits, it is crucial to critically examine the broader implications of enhanced research competence in higher education.

Research competence is considered an essential characteristic of an individual, signifying their readiness and capacity to autonomously address contemporary issues, thereby converting knowledge, skills and intellectual capacities[1]. The process involves acquiring new knowledge, identifying educational challenges, synthesising and articulating research methodologies, and developing research for interpreting and disseminating results. Research competence is seen as an integrative personality trait that includes possessing methodological knowledge, research technology, and the

recognition and willingness to apply them in professional activities[2]. Furthermore, education, seminars, or similar activities can enhance the stable motivation that characterises research competence. Therefore, the readiness to independently tackle problems and engage in creative tasks marks a research-minded individual. Moreover, research competence may be significantly influenced by personal qualities such as critical thinking, self-criticism, dissatisfaction with achieved results, strong intelligence, and the ability to control actions and solve theoretical and experimental problems[3, 4].

High quality instruction can achieve research competence in teaching staff, which serves as a foundation for sustainable learning. This can be developed through a combination of capacities and collaboration between higher education institutions, both locally and internationally. The concept of research competence is continually evolving due to advancements in complex technology. Few schools of thought have examined its components, emphasising the significance of motivating factors[1,2,5]**.** This implies that research competence is a combination of curiosity, a desire to seek new knowledge, and a professional drive to understand one's topic and produce achievements. The core activities of research competence include skills such as identifying research problems, planning research, and collecting, analysing, and interpreting data[2]. In line with advancements in research innovation, this study adapted various dimensions of research competence from existing literature[3,4,5,6]. These dimensions include methodological skills, data analysis skills, communication skills, and referencing skills. Methodological skills involve using appropriate tools to justify research paradigms and point out the roles and interactions between questions, theories, evidence, and explanations in social sciences[3,4].

Data analysis skills refer to the ability to scrutinise raw data to draw conclusions, making the data more understandable and useful for decision-making[6]. The ability to articulate one's thoughts, feelings, and research results in a way that other people can grasp is a key component of effective communication[5]. Referencing skills entail efficiently identifying relevant literature and organising references and bibliographies. In public polytechnics, developing research competence in OTM teaching staff will enhance their ability to innovate, solve recent problems, and contribute to both educational and societal infrastructure. Higher education institutions must ensure that academic staff expand their research competence to verify, authenticate, and filter research content.[2]. However, challenges such as a lack of mentors and other technical limitations may hinder the development of research competence in teaching staff. This can negatively impact the performance of teaching staff within the OTM departments in Nigerian public polytechnics. Therefore, adequate mentoring and various training processes can foster research competence.

The focus then should be on developing strategies to improve the research competence of teaching staff through effective mentoring relationships. It is widely accepted that mentoring relationships are important for increasing the capacity of colleges and universities[7]**.** Varied areas have different ideas about what mentoring means. For example, developmental psychologists, business professionals, and academics all have their own ideas. Mentoring is defined in academia as an individual development intervention that helps, supports, and guides academics in their professional endeavours. Here, the mentor is the knowledge owner, and the mentee is the knowledge receiver. Mentoring involves experienced professors supervising new academic talents for a fixed period, with the primary goal of achieving career excellence. Mentorship cultivates a positive professional relationship, which assists

mentees in the advancement of their professions, enhances self-esteem, enhances organisational culture, and facilitates the growth of junior academics[7]. Traditionally, mentoring is a long-term connection that promotes the professional, academic, and personal growth for parties involved[8]. Therefore, it can empower novices to tackle challenges they might otherwise avoid, demonstrating mentoring's transformative potential for individuals, groups, organisations, and communities. This study used Kram's Developmental Theory to measure mentoring relationships, focusing on stages such as initiation, cultivation, separation, and redefinition[9]. The initiation stage of this approach encompasses preliminary encounters to evaluate the suitability of the mentoring pairing.

The cultivation phase transpires over a period of two to five years, during which ideal mentorship advantages and growth prospects are realised. The separation stage recognises the mentee's academic achievements and independence, whereas the redefinition stage may result in the termination of the mentoring relationship or a change to an equal one[9,10]. In state-operated polytechnics, mentoring novice faculty is crucial for cultivating a culture of academic excellence in research, instruction, and community engagement. The changing higher education environment in Africa has intensified mentorship expectations for top academic and administrative personnel[11,12]. This suggests that proficient academic mentoring can elevate student achievement, augment lecturer expertise and abilities, and promote lifetime learning through positive relationships, trust, respect, and constructive feedback. A primary outcome of education, especially in higher institutions, is the development and acquisition of lifelong skills essential for meaningful living.

Lifelong learning skills could serve as effective instruments for change which is crucial for individuals to maintain global competitiveness[13]. It is essential for educators in higher education to employ lifelong learning strategies that combine innovative ideas with experience and expertise is essential. This is because educational institutions have always focused on lifelong learning strategies, with a growing consensus that schools should play a key role in this process[14]. Although lifelong learning strategies have been applied from various perspectives, leading to different measurement parameters. These strategies highlight features that characterise expert teachers, such as better problem-solving, adaptation for decision-making, diverse learners, and sensitivity to context[15]. To measure lifelong learning strategies in this study, the experiential learning theory (ELT) was used, emphasising the active role instructors play in building learners' understanding through reflection on their experiences[16]. The theory identifies measures for lifelong learning, such as concrete experience, abstract conceptualisation, active experimentation, and reflective observation.

The concrete experience involves engaging entirely and openly in new experiences and translating information into concise, logical forms. Abstract conceptualisation refers to reflecting on gathered experiences from multiple perspectives and thinking creatively. Reflective observation involves creating new concepts and testing new skills to combine observations into sound hypotheses. Active experimentation is the ability to use theories from reflective observation to make decisions and solve practical problems. These measures show that lifelong learning strategies are crucial for assessing lecturers' attributes to facilitate the storage, acquisition, and retrieval, as well as the utilisation of information, enhancing efficient learning[16]. This simply suggests that teaching staff can adapt lifelong learning strategies to meet their formal

and informal training needs. However, not all academic staff possess the knowledge management and self-regulatory skills to effectively use or customise their learning experiences[17]. Educational institutions should therefore focus on enhancing students' literacy and supporting academic staff through the development of relationship experiences that improve satisfaction. A support service programme can enhance performance, contribute to academic achievement, and improve the likelihood of pursuing further education, thereby enriching skills for future career plans[15].

The background to the study additionally considers the overview of the OTM programme in the polytechnics within the Southwest Region in Nigeria. OTM is a technical programme offered in Nigerian polytechnics, replacing secretarial studies in 2004 due to advancements in Information Communication Technology[18]. The programme includes office administration, technology, applications, business management, numeric components, and general studies, leading to national or higher national diplomas. Despite its relevance in the digital era, OTM lacks full recognition in Nigerian universities, with only a few universities offering it as a standalone programme and even fewer beyond the undergraduate level[19]. From a global perspective, OTM course is offered as a CPD or diploma course in developed countries, which may limit its expansion and recognition. In Nigerian public polytechnics, teaching jobs are divided into instructing and lecturing cadres, with higher qualifications required which is not the same at the university level. The limited opportunities for polytechnic educators in the universities may therefore pose challenges for polytechnic instructors seeking career advancement, mentorship, and research competence[19,20].

The performance of public polytechnics relies on their academic staff's ability to engage in meaningful research and publication. However, polytechnics face challenges in teaching staff's research abilities and sustaining knowledge, impacting their institutional rankings[18,21]. This evidence further reinforces the notion of poor mentoring support strategies as well as the inability of academic staff to enhance their lifelong learning strategies in public polytechnics in Southwest Nigeria. In view of the above discussions, this study seeks to examine the influence that mentoring relationships and lifelong learning strategies may have on the research competence of OTM lecturers in public polytechnics in Southwest Nigeria.

1.2 Statement of the Problem

The research competence of OTM teaching staff improves classroom quality, curriculum applicability, and student employability, cultivating a talented and inventive workforce. In Nigeria's public polytechnics, OTM teaching staff instruct, formulate curricula, oversee students, conduct research, and offer career advising to equip students with vital skills. When teaching staff in the OTM programme are research-competent, their institutions benefit from improved teaching quality and reputation, while Nigeria gains a more skilled and innovative workforce, driving socioeconomic development. However, research competence among teaching staff in public polytechnics' OTM programme may be declining, affecting education quality and institutional reputation[20,21]. This decline if not addressed may hinder academic mobility, credential recognition, and resource allocation, thus affecting Nigeria's socioeconomic development.

Literature indicates a lack of strong mentorship relationships and lifetime learning practices as major causes. Ineffective mentoring reduces engagement, confidence,

teaching methods, and student performance, while lack of lifelong learning leads to outdated knowledge and skills, worsening the decline in research competence. Studies have explored research competence, academic achievement, mentoring relationships, and publication skills of academic staff. However, few empirical studies have focused on the OTM field, and none have scientifically established the relationship between mentoring, lifelong learning, and research competence[4,6,20]. A recent case study found a link between mentoring and research competence, but only among female early-career OTM researchers[12]. This study investigated the combined influence of mentoring relationships and lifelong learning strategies on the research competence of OTM teaching staff (both males and females) in public polytechnics in Southwest Nigeria.

1.3 Aim and Objectives of the Study

This study investigated the influence of mentoring relationships and lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria. The listed objectives guided the study:

i. identify the level of research competence of OTM teaching staff in public Polytechnics in Southwest, Nigeria.
ii. examine the dominant phase of mentoring relationship observed among OTM teaching staff in public polytechnics in Southwest, Nigeria.
iii. identify the most prevalent lifelong learning strategy adopted by the OTM teaching staff in public polytechnics in Southwest, Nigeria.
iv. determine the influence of mentoring relationships on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

v. ascertain the influence of lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

vi. determine the combined influence of mentoring relationships and lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

1.4 Research Questions

The following questions served as the basis for the research.

1. What is the level of research competence possessed by OTM teaching staff in public polytechnics in Southwest, Nigeria?
2. Which phase of mentoring relationship is most dominant among OTM teaching staff in public polytechnics in Southwest, Nigeria.
3. What is the most prevalent lifelong learning strategy adopted by OTM teaching staff in public polytechnics in Southwest, Nigeria?

1.5 Hypotheses

The following hypotheses were evaluated at 0.05 level of significance:

$H_0$1: There will be no significant influence of mentoring relationships on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

$H_0$2: There will be no significant influence of lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

$H_0$3: There will be no significant combined influence of mentoring relationships and lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

1.6 Significance of the Study

This study when published will be substantial and of great use to numerous stakeholders which include the management of the selected public polytechnics, OTM teaching staff, academic staff, students, government, and researchers. Enhancing lecturers' research competence will help management address these issues from the perspectives of the OTM teaching staff, contributing significantly to the framework of teaching staff qualities and research characteristics. The findings of the study should assist institutional management in setting clear timelines for teaching staff to engage in research publications. Regarding mentoring relationships, the study offers significant insights into how mentoring can support the growth of younger employees, maintain the profession's vitality, and improve knowledge and skill development for various groups, including students**.** Additionally, the study outlines strategies to improve the learning approaches of OTM teaching staff and students, offering an initial evaluation of these strategies within an academic context.

The research presented techniques for training teachers to promote open expression of opinions and to question established norms, thus enhancing cognitive engagement and personal relevance in the learning process. It proposed strategies for academic personnel to refine their pedagogical and research methodologies, thus augmenting both their proficiency in utilising research instruments and their appreciation for the value of mentoring relationships. The study's findings will facilitate educators in evaluating their learning methodologies during training and professional development

programmes, enhancing research performance, and allowing them to leverage mentorship support systems.

The study also served as a guide for future researchers undertaking similar projects, emphasising the link between research competence and learning strategies as well as the importance of healthy faculty-student relationships. The findings have strengthened the body of knowledge by helping the government understand the current state of tertiary institutions and the challenges faced by academic practitioners in fostering research capabilities. This understanding informed government support for tertiary institutions and the development of teaching staff's creative potential, leading to greater achievement and satisfaction in both their personal and professional lives.

1.7 Scope of the Study

The study examined the influence of mentoring relationships and lifelong learning strategies on the research competence of Office Technology and Management (OTM) teaching staff in public polytechnics in southwest Nigeria. Research competence, the dependent variable, was measured through four key dimensions: methodological skills, data analysis skills, communication skills, and referencing skills. Mentoring relationship, the first independent variable, was assessed across the stages of initiation, cultivation, separation, and redefinition. Lifelong learning strategies, the second independent variable, were evaluated based on concrete experience, abstract conceptualization, active experimentation, and reflective observation.

The geographical scope includes all public polytechnics in the southwestern states of Nigeria. The polytechnics covered are Federal Polytechnic Ado Ekiti, Ekiti State; Federal Polytechnic Ede, Osun State; Federal Polytechnic Ilaro, Ogun State; Yaba

College of Technology, Lagos State; Rufus Giwa Polytechnic, Owo, Ondo State; Adeseun Ogundoyin Polytechnic, Eruwa; Moshood Abiola Polytechnic, Ogun State; Osun State College of Technology, Esa Oke; Gateway Polytechnic, Sapaade; The Polytechnic Ibadan, Oyo State; and Osun State Polytechnic, Iree. These polytechnics are in various states within the southwest region. Respondents included both male and female teaching staff across various professional cadres, such as Senior Instructor, Principal Instructor I, Principal Instructor II, Assistant Chief Instructor, Chief Instructor, Assistant Lecturers, Lecturer III, Lecturer II, Lecturer I, Senior Lecturer, Principal Lecturer, Chief Lecturer, Adjuncts/Part-time Lecturer and Heads of OTM Departments.

1.8 Limitation of the Study

The major limitation focused on data collection and network service interruption during the interview session which posed a limitation to the flow and depth of responses. Additionally, coordinating participants for the group interviews proved challenging due to scheduling conflicts which makes it difficult to gather all the intended voices at the same time. However, these constraints were overcome by obtaining consent from participants to use the institution's network hence the interview was conducted at their different offices. Each head of department was recruited into their preferred group and at their own convenient time.

1.9 Operational Definition of Terms

The following concepts are operationally defined and utilized in the study.

Research Competence: this refers to the ability of OTM teaching staff in public polytechnics to conduct independent research, provide its findings, and their willingness to use the knowledge of research in their professional activities. Research

competence in this study will consider four measures, which are methodological, data analysis, communication, and referencing skills. These will be briefly explained as follows:

Methodological Skills: These refer to the ability of OTM teaching staff in public to conduct scientific research by selecting the appropriate designs or techniques.

Data Analysis Skills: These mean the proficiency of OTM teaching staff at public polytechnics in understanding and utilising appropriate qualitative and quantitative analytical tools, as well as being adept with relevant statistical software packages for conducting scientific research.

Communication Skills: These refers to the ability of OTM teaching staff in public polytechnics to effectively present research findings using tables or graphs and to explain these findings in a clear and concise manner.

Referencing Skills: Within this study, referencing skills refers to the acquired knowledge and expertise of OTM teaching staff at public polytechnics in southwest Nigeria in efficiently utilising ICT resources and tools.

Mentoring Relationships: These are the relationships that exist between a more knowledgeable or experienced and a less experienced OTM teaching staff in public polytechnics in Southwest Nigeria to foster professional networking, counselling, and sponsoring. The measures considered for mentoring relationships in this study are distinct phases of the relationships and they are briefly explained as follows:

Initiation Stage: This period is the first stage, from 6 months to one year of the mentoring relationship between an experienced and a less experienced OTM teaching staff member in public polytechnics in Southwest Nigeria.

Cultivation Stage: This stage of the relationship occurs between the second and fifth years of promoting the professional growth of less experienced OTM teaching staff in the public polytechnics in Southwest Nigeria.

Separation Stage: This is the stage when the less experienced OTM teaching staff in the public polytechnics in southwest Nigeria starts to outgrow the mentoring relationship, having achieved academic success and met learning objectives. They begin to exhibit increased confidence and self-reliance.

Redefinition Stage: This is the final stage of the mentoring relationship, where a relationship between an experienced and a less experienced OTM teaching staff in the public polytechnics may either end or evolve into a relationship of equals.

Lifelong Learning Strategies: This refers to a self-initiated continuous process engaged by OTM teaching staff in public polytechnics to acquire the required knowledge, values, and skills throughout their lifetime to achieve personal fulfillment. The following measures for lifelong learning strategies are briefly defined.

Concrete Experience: It is the ability of an OTM teaching staff in public polytechnics to be fully and openly involved, without bias, in new experiences/ideas.

Abstract Conceptualisation: This refers to the ability of OTM teaching staff in public polytechnics to reflect on and observe their gathered experiences from different perspectives, which involves thinking creatively.

Active Experimentation: This means the ability of the OTM teaching staff in public polytechnics to use the theories from reflective observation to make decisions and solve practical problems.

Reflective Observation: This refers to the process by which OTM teaching staff in public polytechnics develop new concepts and test new skills by integrating their observations into logically sound theories while reflecting on their experiences.

Teaching Staff: Teaching staff in public polytechnics in Nigeria are educators who are responsible for delivering specialised vocational and technical education within the OTM departments within the Southwest Region.

Public Polytechnics: These are polytechnics owned and operated by the Nigerian government both Federal and State to give technical training in Southwest region.

Endnotes

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Chapter Two

Review of Related Literature

Chapter two provides a comprehensive review of both theoretical and empirical literature related to the study's concepts. This review aims to clarify these concepts within the study's context. Under the following subheadings, we examine relevant theories related to the main constructs of the study.

2.1 Conceptual Review

The literature review section aligns with existing research to enhance understanding of three key variables: mentoring relationships (MR), lifelong learning strategies (LLS), and research competence (RC). Each variable is explored through its definitions, types, characteristics, and relevance to the study's aim and objectives. Research competence, the dependent variable, encompasses methodological, data analysis, communication, and referencing skills. Mentoring relationships are examined through stages such as initiation, cultivation, separation, and redefinition, while lifelong learning strategies are assessed using metrics like concrete experience, abstract conceptualisation, reflective observation, and active experimentation. This section synthesises relevant literature to provide a comprehensive overview of these variables and their measures.

2.1.2 The Overview of Research Competence

In higher education institutions, research is a crucial aspect of the academic community, significantly impacting the educational sector and society[1]. It spans various disciplines, fostering growth and development in higher education. Research is considered a scientific process of systematically exploiting knowledge, which, in pure sciences, seeks truth and creates knowledge about physical materials[2]. Similarly, educational research is essential for academic achievement and excellence, starting with a problem and evolving dynamically[1]. Going by its importance, higher education institutions must ensure the acquisition and application of research skills within their community. These skills relate to a person's belief in his ability to accomplish different tasks[1]. Competence, on the other hand, integrates knowledge, skills, and abilities essential for professional activity, reflecting an individual's ability to apply these in practice.[3]. It encompasses not only knowledge, abilities, and skills but also

motivational and emotional components, forming a cohesive whole acquired through actions, methods, and techniques for problem-solving. For lecturers to succeed in teaching and research, they need self-confidence and willingness in course-related tasks[4]. Research competence is therefore crucial for advancing science and civilisation in higher education, and lecturers should possess this skill in both academic and non-academic environments[2].

Research competence involves the process of identifying problems and inconsistencies in concepts and appraising practices across disciplines[3]. This process includes formulating questions, constructing hypotheses, assessing research scopes, reviewing literature, and enhancing research frameworks. Therefore, it can be said that research competence should be developed in all students and lecturers, fostering systematic thinking, analysis, and synthesis that can lead to academic development, discovery of new knowledge, and innovation. On the other hand, higher education institutions play a key role in creating and disseminating knowledge and imparting research skills to students and academic practitioners[5]. Within this study, lecturers' research competence is considered vital for consultancy and recruiting competent students, impacting institutional rankings. This is because high-impact publications and scholarly productivity are key criteria for rewarding lecturers' performance, increasing their efficiency in conducting productive research[6]. As technology evolves, higher education institutions must enhance lecturers' research competence to address new economic realities and solve human-related problems. Developing this competence accelerates knowledge acquisition, educational innovation, and professional development, necessitating effective and modern organisational forms[3].

Although studies have identified key components of research competence, the motivational component includes cognitive motivation (curiosity and desire for new

knowledge), professional motivation (learning one's profession and achieving results), and achievement motivation (improving professional activity and striving for success)[6]. The cognitive component encompasses the knowledge necessary for research activities, including theoretical foundations and research methodology[5]. The activity component involves research skills such as navigating the subject area, identifying and understanding research problems, planning, data collection, analysis, and interpretation. The reflexive component is the ability to analyse and evaluate the results of one's research activities. Within the context of this study, components such as methodological skills, data analysis skills, communication skills, and referencing skills are adopted for evaluating the research competence of the OTM teaching staff[7,8,9]. Each of these research competence measures are further discussed to understand their importance in building lecturers' careers for excellence within this study.

Methodological skills in research involve the systematic, theoretical analysis of methods applied to a field of study, encompassing the principles and techniques associated with a branch of knowledge[7] It includes concepts such as paradigms, theoretical models, phases, and quantitative or qualitative techniques[10,11]. Methodological skills, which are systematic techniques used in research, are essential for methodological formation. Given the dynamic and open nature of academic practice, it is crucial for lecturers to systematically develop reflective skills to enhance the educational process[11]. Research methodology is interpreted in diverse ways but is considered a means for academic practitioners to develop self-awareness of their performance, creating opportunities for professional growth and development. The methodology of pedagogical study and research involves studying and applying appropriate methods, procedures, and techniques for scientific research, facilitating

better use of existing research experience while acknowledging that discovery cannot be standardized[8]. Academic practitioners need knowledge of research methodology to understand when to apply certain methods and procedures to solve educational problems. The knowledge of methodology is crucial for developing a general-cultural profile, facilitating communication with scientists, and tracking scientific achievements[10]. It also involves identifying and designing appropriate research procedures and understanding their limitations and scope.

Data analytics skills refer to the use of large pools of data to scrutinize and make better decisions, which is crucial for academic growth, enhancing research productivity, and creating significant value in academic research[13]. It involves converting raw data into a format that is easy to understand, legible, conclusive, and supportive of decision-making. This process systematically applies statistical and logical techniques to describe, illustrate, condense, recap, and evaluate data. Analytic procedures help draw inductive inferences from data, distinguishing the phenomenon of interest from statistical noise[14]. The process begins with identifying what needs to be measured, guiding the analysis's main objective. Data preparation converts data into a machine-readable numerical format for analysis programmes. The procedure involves steps such as data coding, data entry, overseeing missing values, and data transformation.[9]. Data coding converts data into numerical values, facilitating the analysis process. Secondly, data entry involves inputting coded data into text files or spreadsheets, which can then be added to statistical programmes[14]. Thirdly, data transformation is crucial before interpreting data, such as transforming reverse-coded items before comparing them with non-reversed ones[9]. Data analysis begins after collecting all required data, necessitating error removal and elimination of unwanted information[14].

Collecting raw, detailed data and recording patterns allows for deeper analysis later. Given the importance and diverse applications of statistics, data analysis skills are essential for faculty performance, which shows that researchers need various skills for data analysis, including the ability to analyse effectively. Unintentional scientific misconduct often results from poor instruction and follows-ups[14]. Academic researchers should understand the rationale for selecting analytic methods to supervise staff and make informed decisions. The aim of analysis is to distinguish between true and false effects, which can be influenced by biases in data collection or analysis methods. While not inherently unethical, analyses should be proposed before the study begins, even if exploring[13]. Researchers should clarify that exploratory studies are more about searching than theory-driven research. Knowledge of computer-based statistical packages is essential for complex analytic procedures. Challenges with data analysis may include excluding outliers, managing missing data, altering information, data mining, and developing graphical representations. Furthermore, analysis can uncover data dimensions or new variables.

Statistical analysis is typically quantitative, but qualitative procedures like content, thematic, and ethnographic analysis are also used[13,14]. Researchers use various tools to evaluate hypotheses, discern patterns, and answer research questions. Understanding data analysis issues is crucial for data integrity. Data analysis expertise helps identify performance problems, improve decision-making, minimize risks, and reveal valuable insights. It makes facts transparent and recognizable, identifying important trends[7,9]. Communication skills border on quality institutional output, which relies on selecting knowledgeable academic staff proficient in research skills, such as report writing and communication[15]. A core mandate of higher education institutions is integral to

research output both as continuous self-education and as a course of study. It is rare to find academic staff who write and publish papers without conducting advanced research. Hence, the research findings are communicated to interested groups about a research event or phenomenon, presenting information in an organised format for a specific audience and purpose[7,16].

Presenting research findings require functional language suited to the situation and effective communication skills. Reporting research findings follows a specific procedure acceptable to the audience and depends on the type of report. In academic research, an investigative report is written after research is conducted, following an organised and systematic writing process. The purpose of every report should be clear, considering the audience, including valuable information, and adhering to time limits. Effective communication is crucial for any research endeavour, ensuring that findings are properly conveyed to the relevant audience[16]. It allows researchers to disseminate knowledge, engage with others in the field, and drive progress. This exchange fosters collaboration, critical thinking, and knowledge growth for researchers. Effective communication ensures transparency and integrity in the scientific process, fostering trust and credibility[17]. By effectively communicating research, scientists can influence policy, shape public opinion, and contribute to evidence-based policymaking. This creates a more informed society that can make better decisions, support evidence-based initiatives, and appreciate the value of scientific research. Researchers must therefore strive to improve their communication skills and use various channels and formats to disseminate their findings to a diverse audience.

Effective communication skills are crucial for any academic researcher in sharing the findings of their research with the public or within academic settings. These skills

involve understanding received information and presenting it in a way that others can comprehend. They encompass the ability to transfer information, data, ideas, thoughts, perceptions, understanding, intuition, desires, and feelings from one person to another[18]. Communicating research findings is a key part of academic work, involving publishing for the academic community, sharing with interested parties or policymakers, and disseminating to the public[18]. In higher education, research is often written for submission to supervisors or assessors and shared through conferences, journal articles, and books[7]. Understanding how research can contribute to society is important for communicating findings to various audiences. This involves engaging with other researchers, policymakers, stakeholders, and the public. Effective communication enables researchers to share findings, build on existing research, challenge established theories, and offer new perspectives, thus contributing to the larger body of knowledge[17]. These skills extend beyond mere communication in research and the simple transmission of information; they encompass interpretation, analysis, and synthesis.

Researchers must explain their methodologies, present their results, and draw meaningful conclusions. These skills help convey information accurately and enhance understanding and engagement with the intended audience. By effectively communicating their findings, scientists can inspire others, influence policy decisions, and contribute to the advancement of knowledge. One fundamental aspect of effective research communication is clarity[7]. Researchers must convey complex concepts and data clearly and concisely, ensuring the main message of the study is easily understood. Using simple language, avoiding jargon, and logically structuring the presentation of findings are crucial for achieving clarity. For example, if a researcher uses convoluted language and technical terms, the audience policymakers, fellow

researchers, or the public may struggle to grasp the significance of the research. However, by presenting the findings clearly and accessibly, the researcher can effectively convey the key takeaways and implications of their work[7]. Accuracy is crucial in scientific research and equally important in communicating research findings. Researchers should present data accurately, without exaggeration or misrepresentation, and properly cite sources to maintain research integrity and enable verification. For instance, if a researcher presents findings without references, the audience may doubt the research's validity.

Simplifying complex research data is essential because research findings can be complex, often involving technical terms, graphs, and statistical analyses[13,14]. To communicate effectively, researchers should simplify the information without sacrificing accuracy. Techniques include summarizing complex data, using visual aids like charts or infographics, and providing real-world examples. For example, presenting findings solely through intricate graphs may confuse a general audience. However, summarizing the data, using visual aids, and providing relatable examples can bridge the gap between technical details and audience understanding[18]. Effective research communication requires balancing accuracy and accessibility. Researchers must present findings clearly, precisely, and simply to ensure the information resonates with the intended audience. Mastering these elements allows scientists to make a significant impact and contribute to collective knowledge. Overcoming challenges involves ensuring clarity, addressing misconceptions, and embracing cultural diversity[7]. Through effective communication, researchers can contribute meaningfully to their fields and society.

Referencing is a system used in academia to indicate where ideas, theories, quotes, facts, and other information used in research can be found[19]. It is essential for acknowledging the sources of information in academic writing. Failure to properly credit other authors' contributions amounts to plagiarism, which is considered academic theft[20]. Citing sources solidifies claims and enhances the credibility of a research paper. Plagiarism remains a common issue due to a lack of knowledge about proper citation practices. Researchers must adequately credit their sources to avoid severe repercussions. Citing sources helps scholars locate novel references and improves the credibility of research work. Quality referencing is a key indicator of good research ethics, though it is time-consuming and requires serious attention[19]. Plagiarism has been a significant concern in higher education, especially in research writing. Researchers must responsibly adopt others' ideas by properly citing them. Citing sources not only plays a crucial role in research writing but also helps researchers become better writers. Referencing involves two types: in-text citations and a reference list at the end of all document[21]. All academic documents must include both to acknowledge the sources of information used.

Referencing is a standardized method that uniquely identifies each source, making adequate referencing skills necessary. These skills will be discussed in the following paragraphs. To improve citation and referencing skills, the first step is to choose a citation style that suits the purpose, audience, and discipline[20]. Different citation styles have specific rules for formatting, punctuation, capitalization, and in-text citations. For example, APA style is commonly used in social sciences, MLA style in humanities, Harvard style in business, and Chicago style in history[21]. Researchers should avoid biased, outdated, or unreliable sources like Wikipedia, personal blogs, or social media posts. Researchers should also critically evaluate sources and check their

references for further information. Thirdly, researchers should keep track of reference sources during the research process[9]. This helps prevent the loss of essential information such as the author, title, date, or page number, and avoids duplicating or missing citations. Methods for tracking sources include taking notes, making copies, bookmarking websites, or using citation management software[9].

Another skill is the ability to correctly cite reference sources according to the rules of the chosen citation style. This means giving credit to the original authors or creators of the information, ideas, or words used in the work. Reference sources should be cited whenever quoted, paraphrased, summarized, or referred to in the research text[21]. Researchers should use the appropriate format, punctuation, and order for in-text citations and reference lists or bibliographies. Avoiding plagiarism is also crucial when drafting a research report[9]. Plagiarism is the act of using someone else's work without proper credit or permission and is a serious academic and ethical offense that can result in penalties such as failing grades, suspension, or expulsion[7]. To avoid plagiarism, researchers should always cite sources, use quotation marks for direct quotes, and use their own words and voice for paraphrases and summaries. Researchers should check their work for plagiarism using online tools like Turnitin, or Grammarly before submitting or publishing it. The ultimate purpose of research is to contribute evidence that informs scientific and managerial decision-making and professional practices[1].

However, scientific and management research leads to inconclusive and often irrelevant results, adding to publication pollution and undermining research reliability[3]. Concerns have been raised about surveys, audits, or small observational studies that are inadequately powered to draw meaningful conclusions[22]. Poorly

conducted research wastes resource and raises ethical concerns due to the pointless exposure of research participants to risk and inconvenience. Publishing poor-quality research can negatively impact educational policy[22]. Stakeholders in the academic research process must ensure they are not advancing the research competence of trainees by allowing them to undertake and publish substandard science. It is in the institutions' interest to support high-quality academic research to uphold their status as centres of research excellence. If research remains a mandatory component of specialist training, educational institutions urgently need to revise current research education strategies and institutional research culture[5]. Trainees face some challenges, including inadequate research competence, limited supervision capacity, insufficient time protected from academic obligations, and the absence of clear academic research education strategies and outcomes[23].

One major challenge is limited research experience among lecturers. Although the academic research component is part of a master's degree, lecturers are expected to conduct research at a level equivalent to master's candidates in other fields. However, recent literature highlights that specialist trainees often lack the necessary knowledge and skills for successful academic research[7,9,23]. This is unsurprising, given that various undergraduate curricula do not include mandatory research exposure and historically place little emphasis on evidence-based research. Most higher education institutions offer only small, elective research projects during undergraduate training, meaning specialist trainees have unique research training needs[23]. The traditional expert-apprentice model, where a supervisor guides the trainee through the research process, faces limitations. Many trainees do not meet the regulatory requirements for supervision set by higher education institutions[23]. Consequently, many institutions have a limited number of suitably qualified supervisors, although this number will

grow as more academic candidates graduate. Having a postgraduate degree does not guarantee successful research supervision skills[24]. There is a need for professional development programmes to equip specialists with the necessary pedagogical and research skills to supervise academic research projects effectively.

Another challenge hindering the research competency of academics in higher education is the limited time available for conducting and supervising research[25]. This issue is often central to debates about obtaining academic degrees. Research projects, from planning to execution to final write-up, require a significant investment of time from both candidates and their supervisors, accounting for about 25% of the specialist training curriculum[24]. Insufficient time, compounded by other academic obligations, creates a tense mentor-student dynamic during training. The added workload and severe time constraints of an already overburdened academic curriculum contribute to the lowest completion rates. This situation could reduce the number of research-competent lecturers available for appointments, undermining academic service delivery[25]. Studies have shown that students who complete their research projects within a four-year advanced training programme often do so at the expense of fully engaging with course workloads and final exam preparation. Key strategies can enhance research competence among lecturers in higher education institutions[1]. One of these is that the curriculum planning should be explicitly tied to the needs of students[23].

Academic degree candidates represent a unique cohort of postgraduate researchers with distinct challenges and specific research training needs compared to typical PhD students. These candidates require intensive instruction on fundamental research principles, tailored to their field, relevant to their needs, and appropriate to their

research stage. Higher education institutions have tried to expand existing research training and support services to better accommodate these individuals, but inflexible, generic, scheduled faculty research techniques courses fail to meet their androgenic needs[23]. Academic faculties need to develop student-centred research support and supervisory models that better meet the training needs of these trainees. The success of research training and support strategies relies on students accessing these services. Academic faculties must recognize the academic requirements of specialist training and allocate time for research activities to both trainees and their supervisors[26]. While this strategy is well-intentional, it does not guarantee success if candidates lack explicit direction and guidance on using this time effectively[9]. Therefore, providing protected research time must be accompanied by more structured support. Supervisors play a critical role in teaching, role modelling, and mentoring within the research community[23]. For this to be effective, supervisors need to feel equipped to function as legitimate members of the scholarly community.

2.1.2 Concept of Mentoring Relationships

The ideal scenario for helping young scholars succeed in their fields of study and educational programmes is based on assumptions and beliefs linking the teaching and learning processes. These assumptions provide the rationale for complex interactions as well as dynamics[27]. However, there is a longstanding notion of peculiarity regarding the complexity of these relationships, particularly the interactions within pairs. The advice given can influence mindsets and communication styles, and the nature of teaching and learning factors, whether personal factors are maintained inappropriately or simplistically, can shape concepts, beliefs, and expectations[27]. The roots of mentoring can be traced back to Homer's Odyssey, where Mentor, the son of Alcimus and companion of Odysseus, was entrusted with the care of Odysseus's

household and the education of his son Telemachus[28]. Mentoring is essential for building individual capacity and fitting them into a system[27,29]. It is widely recognized as a crucial contributor to capacity building within organizations. Through capacity building, individuals can develop and enhance their skills and knowledge, thereby improving the organization's reputation, image, and knowledge base[29].

An examination of mentoring conceptualizations in organizational settings supports the literature that suggests that there is a wide degree of variance in the concept where mentoring appears to mean one thing to developmental psychologists, another thing to businesspeople, and a third thing to those in academic settings thus prompting numerous definitions[30]. Therefore, there are mixed views on mentoring regarding a widely accepted definition and process in empirical literature. Though operational definitions of mentoring vary from programme to programme, it is a relationship where a person with greater experience supports a person with less[27,29]. It can also be described as a process where a person who has acquired knowledge over the years through experience understands the needs of others who are desirous of acquiring similar knowledge and is willing to pass on such knowledge to them[31]. To this end, we may say the owner of the knowledge is the mentor while the receiver of the knowledge is the mentee. From the academic point of view, specifically inclining the definition to mentoring in academics, mentoring is defined as a powerful individual development intervention that is expected to assist, support and guide academics in their career trajectory[30,31]. It is also described as a nurturing process in which a more skilled or more experienced person, serving as a role model or encourages a less skilled or less experienced person for the purpose of promoting the latter's professional and/or personal development[31].

In other academic mentoring programmes, mentoring can be seen as a process where selected academic talents are supervised for a fixed period by an experienced professor who has advanced knowledge in a similar career[32]. It can also be referred to as programmes designed as part of an effort to cultivate essential skills, abilities, and mind-set to help students become familiar with a new environment and, ultimately, to provide them with frameworks and techniques to help them navigate a complex professional and academic landscape by a more tenured professor[33]. Concisely, mentoring is simply a one-to-one systematic, continuous, graduated, and progressive interactions or learning relationship over and above the requisite academic exchanges between experienced academics and less experienced academics[27,34]. There are varieties of approaches to mentoring, these include consultation, coaching, and communication of practice, technical assistance, and reflective supervision[28,29,35]. Therefore, the primary goal of mentoring is to achieve career excellence, thus meeting professional goals. Although, there is widespread agreement that mentoring in general is helpful for a variety of purposes and in several contexts.

Mentoring is one of the best methods to increase self-esteem in a mentee. It has also proven to be an important part of organizational culture, through senior employees assisting with the development of junior employees. Several types of mentoring take place in an organization depending on the structure, goal, and policies in place[36]. However, mentoring strategies may be categorized into formal and informal mentoring and these strategies are categorized into two: traditional forms which are informal and formal mentoring which assumes different forms such as peer, group, and electronic mentoring[37]. Informal mentoring is viewed as an independent/personal action or initiative by a mentor, who acts as an adviser and guide, or by a mentee, the recipient of the mentor's guidance and support that makes the pairing process rely

completely on a process of natural selection[38]. Although it is an informal and unstructured activity, it provides an organized context and allows the individual participants to decide the terms of their relationships and the activities they will undertake. It can be unstructured and focuses on building a relationship between the mentee and the mentor with whom they have personal connection or social network. Formal mentoring on the other hand is usually initiated by an organization with the expectation that both mentees and mentors will participate and benefit[39]. This is usually geared towards achieving an organizational goal and it is a way of training employees to fit well into the organization.

Formal mentoring, however, may have some underlying disadvantages as both parties merged may not be able to foster a good relationship because of individual differences[39,40]. When based on structured programme that has an organized context, formal mentoring gives participants the procedures and guidelines with which to conduct their relationships. It is a relationship between an experienced employee and an understudy where the experienced employee acts as a role model and provides support and direction to the protégé[33,40]. While learning, growth and development may occur in many diverse types of work and close personal relationships; mentoring relationships are unique because their primary focus is on career growth and development. With this understanding, the relationship is a process within a contextual setting, involving a relationship between a more knowledgeable and experienced (older) individual and a less experienced individual. This provides professional networking, counselling, guiding, instructing, modelling, and sponsoring[41,42]. The various importance of an effective mentoring relationship has been acknowledged from numerous definitions, such as the necessity of a reciprocal and developmental process for both the mentor and mentee.

Effective mentoring relationships hold great promise to enhance the teaching and learning process[29,43]. A major element of that success is the mentor's ability to practice effective mentorship. This therefore suggests that a good mentor should have an in-depth knowledge of the system, work ethics, and overall vision of the department, faculty, and the university. In addition, it is suggested that listening skills, strong supervisory skills, interest in another person's development and an easily approachable person, and the ability to provide constructive feedback are important attributes of a good mentoring relationship[44,45]. What is to be noted is that the mentoring relationship is such that at the end of the day certain essential services such as role modelling, teaching, and resource person, should be provided. In the educational setting, the mentor is expected to guide the mentee to develop competence in teaching, research and extension work, publication, and general professional development[46,47]. These services can be provided through coaching, training, observation, discussions, counselling, and demonstration. The mentor will therefore need the skills to be able to conduct the services successfully. It is a vital and essential component in the personal, educational, and professional experiences of newly recruited in higher institutions.

The main goal of the mentor/mentee relationship is geared towards achieving career development. Mentoring programmes in academics are usually specific and are closely tied to the career stage[48]. This indicates that, while learning, growth and development may occur in many diverse types of work and close personal relationships, mentoring relationships are unique because their primary focus is on career growth and development. Mentoring has been identified as an important influence in professional development in both the public and private sectors[32,49].

Critically, one can say mentoring relationships may produce positive development and organizational outcomes. When linked to the educational sector, mentoring relationships are said to be a complex and multi-dimensional process of guiding, teaching, influencing, and supporting a beginning or new teacher. It is accepted that a mentor leads, guides, and advises another teacher more junior in experience in a work situation characterized by mutual trust and belief. Typically, mentoring programmes pair novice teachers with more experienced teachers who can ably explain school policies, regulations, and procedures; share methods, materials and other resources[50]. Its further help solve problems in teaching and learning, provides personal and professional support; and guides the growth of the new teacher through reflection, collaboration, and shared inquiry.

Concisely, mentors and mentees benefit from a variety of teaching and learning partnerships for supporting early-career academics in higher education. Mentoring in higher education is a complex, multifaceted concept which includes, but is not limited to, interpersonal dynamics, role expectations, previous experiences, social context, and communication skills[32,51]. Since Institutions of Higher Education are experiencing greater levels of faculty diversity than before. Mentoring relationships are increasingly comprised of cultural, ethnically, and heterogeneous pairings. Influential mentoring in higher education helped lay the foundation for defining the stages involved in mentoring relationships. These mentoring stages comprised elements such as thought processes, problem-solving orientation, abilities, ethnicity, cultural backgrounds, and generational wisdom, as well as the varied traditional diversity considerations that define our individual and unique identities[52,53]. However, in the typical academic mentoring relationship, four phases are identified: these phases are initiation, cultivation, separation, and redefinition[28,29].

The first stage of the mentoring relationship is particularly important. In the Initiation phase where both the mentor and protégé approached the relationship with a view to learning each other's working styles. In this stage, the mentor and mentee get to know each other, see if they are the right match, and build the relationship. They informally discuss their common interests, values, future goals, and dreams[28,29]. The mentorship phase during the initiation stage is when roles are clarified for both the mentor and the mentee. It is the stage where mentors and mentees can establish common ground where they get to know one another. This is the stage to build relationships and establish integrity with a mentee[54]. Informal meetings can be used to develop strong connections. During this time, peer observation can also be conducted, which takes about six to twelve months for a mentoring relationship to establish[28,29,56]. In an academic context, the initiation stage occurs when two individuals enter a mentoring relationship. For informal mentoring, the matching process occurs through professional or social interactions between potential mentors and mentees. Potential mentees search for experienced, successful people whom they admire and perceive as good role models. Mentoring research describes this stage as a period when a potential mentee proves him- or herself worthy of a mentor's attention[57]. Both parties seek a positive, enjoyable relationship that would justify the extra time and effort required in mentoring.

Good matching programmes are sensitive to demographic variables as well as common professional interests[57]. The assignment of a mentee to a mentor varies across formal mentoring programmes. Mentors may review mentee profiles and select their mentees or programme administrators may match mentors and mentees. Regardless of the method, a good formal mentoring programme would require both parties to explore the relationship and evaluate the appropriateness of the mentor–

mentee match[57,58]. Since the mentoring pair is new in the relationship, the first stage can be a bit challenging. There can be confusion, difficulty in communication, or even lack of communication. In some cases, mentees are reluctant to trust their mentors at this stage[57]. If this stage is not treated as a priority, the relationship can cut short because of miscommunication and misunderstanding. Mentors play a vital role here to make the relationship work. Not only do they take the initiative to communicate with the mentee but also devote time to relationships[58]. They make sure the mentee feels comfortable with them. Further, they are responsible for building trust in the mentee. The Initiation phase usually lasted no more than a year[28,29]. If a meaningful mentoring relationship evolved, it then transitioned into the cultivation phase.

The cultivation stage on the other hand is the primary stage of learning and development, assuming a successful initiation stage. It is the stage where a mentor helps the mentee set learning goals[29.] They also agree on their initial expectations and define the strategy to achieve the target. Besides, they talk about when and how they will meet, what will be the frequency of their meeting and accountability. Although mentors and mentees work on setting goals and creating a work plan, the negotiation stage is not simple[28]. It involves talking about soft issues in a relationship, establishing ground rules, confidentiality, boundaries, and shared responsibilities. These are the topics that are often left out of conversations because they are not easy to talk about. Yet, these are critical topics that need to be discussed. Two broad mentoring functions are at their peak during this stage. The career-related function often emerges first when the mentor coaches the mentee on how to work effectively and efficiently[58]. Coaching may be active within the mentee's organization when a mentor assigns challenging assignments to the mentee, maximizes the mentee's exposure and visibility in the organization, and actively sponsors the mentee through

promotions and recognition. Also, during this stage, the mentor and mentee learn more about each other's capabilities and begin to maximize in the functions of mentoring[29,32]. Here, optimal learning occurs, and developmental needs are met. But this intensity may wane off as mentee gains confidence and new knowledge cultivation: at this stage, there are frequent interaction opportunities leading to possible mutual development.

The relationship may be further forged and considered as the longest stage in the mentoring programme usually lasting from two to five years[29]. During this stage, the mentor and mentee can work together to produce projects that can lead to professional development. The psychosocial function emerges after the mentor and mentee have established an interpersonal bond. Within this function, the mentor accepts and confirms the mentee's professional identity, and the relationship matures into a strong friendship. The cultivation stage is a positive one for both mentor and mentee[28]. The mentor teaches the mentee valuable lessons gained from the mentor's experience and expertise. The mentee may also teach the mentor valuable lessons related to innovative technologies, new methodologies, and emerging issues in the field of study[59]. If a mentoring pair is not compatible, the cultivation is the stage where they can part their ways in a friendly manner. The cultivation phase ideally is expected to last from two to five years and is the most intense period of the relationship in which the greatest benefits are derived. This phase is characterized by an abundance of psycho-social interactions, such as protégé observation of and learning from the mentor, alongside heavy promotion, and protection of the protégé by the mentor[29].

The interactions usually prove beneficial to both the mentor and protégé in the short and long term. After the cultivation phase, the formal part of the relationship usually

ends, indicating that the relationship had entered the separation phase[28,55]. In this phase, which typically extended from six to twenty-four months past the cultivation phase, it is not uncommon for the mentor or protégé to be fraught with feelings of anxiety or defiance. The separation stage describes the meaning to the end of a mentoring relationship. The relationship may end for several reasons. There may be nothing left to learn, the mentee may want to establish an independent identity, or the mentor may send the mentee off on his or her own the way a parent sends off an adult child[60]. If both parties do not accept the relationship's end, this stage can be stressful with one party unwilling to accept the loss. Problems between the mentor and mentee arise when only one party wants to terminate the mentoring relationship. Mentees may feel abandoned, betrayed, or unprepared if they perceive the separation to be premature[29]. Mentors may feel betrayed or used if the mentee no longer seeks their counsel or support. At this stage also, the mentee is given autonomy and there will be less frequent meetings with the mentor. At this point, it would be good to share self-management strategies with mentees because unattainable goals and objectives can create disappointment and frustration for the mentee[28,29]. Have an open idea therefore where mentee can meet mentor on a need basis to provide a good listening ear as well as guidance to guide them back to focus will be needed.

After the separation phase, the mentoring relationship changes and resembles an informal support or peer relationship, which is the common characteristic of the redefinition phase. The Redefinition phase usually allowed the mentor and protégé to re-evaluate their interactions and to embrace a new professional relationship[29]. During the redefinition stage, the relationship can continue if both the mentor and mentee recognize decides to continue but that it will not be the same as their mentoring relationship. If both parties successfully negotiate through the separation stage, the

relationship can evolve into a collegial relationship or social friendship[55]. Unlike the cultivation stage, the focus of the relationship is no longer centred on the mentee's career development. Furthermore, if the mentor and mentee are to succeed in terms of separation, the relationship can develop into friendship. Unlike the cultivation stage, part of the relationship does not focus on the development of mentee career[28]. The former mentor can interact with new mentees. Similarly, a former mentor can serve as a mentor to others. At the redefinition stage, a lasting friendship evolves to informal contact, here, mentorship becomes a more peer-like friendship, but the mentor may continue to offer support when necessary. Society expects educators to continuously acquire new knowledge and skills to keep up with the changes that are occurring within their educational institutions[61].

Finding a mentor is a means to career advancement, professional development, or satisfaction in contemporary work settings; nor is assigning formal mentors to high potential employees the solution to building learning, competence, and high performance. With today's fast-changing technology, educators are challenged to change from what is viewed as traditional ways of mentoring to a modern way where the mentor in this century is expected to be more of a facilitator and a guide rather than to encourage the lecture method[31]. The ability of the lecturers to meet all the societal and organizational expectations depends on the professional orientation that each individual educator possesses[38]. It is believed that lecturers have the option to use the resources that are readily available to them such as the more experienced colleagues[31,38,61]. The more experienced colleagues would share their knowledge and experience with the less experienced ones, and this could be done through mentorship. Creating and cultivating a developmental network is a far better approach to ensuring ongoing learning and growth that group of individuals who have a genuine interest in

a member's development and who are uniquely qualified to assist in critical aspects of learning and development[44,50].

In higher education institutions, individual who make up the developmental network may or may not know one another, and they may span several departments, and geography. Importantly, it is referred to the entire network; this is not about everyone and anyone who helps in career; rather, a developmental network that is sub-network of people, a small group, generally about five people in size who a mentee turns to for mentoring port in everyday life at work[48]. It therefore points to the fact that the mentee are the ones who enlist a mentor(s) to provide the mentoring functions that will enable them to take the next step forward, whatever that next step may be. Once the mentee has learned the value of building and maintaining a rich developmental work for, they will be able to model and facilitate this for others who want mentoring as well[29]. Mentoring relationships is a more intentional approach to building developmental relationships at work. Interestingly, there is a widely held belief that individuals who are successful in their mentoring relationship are more assertive, strategic, and eager to ask for help, however, studies suggests the opposite; that is, actively soliciting advice from others is not common practice among most academic professionals. This is because seeking out help places an individual in a vulnerable position, which is uncomfortable and uncommon for those who are accustomed to having solving situations on their own[35].

It is often expected that others will already know what we need or should in fact know what we need. Therefore, the ongoing learning and development is not a solo activity. In the academic field, professional learning is dependent upon the career and personal support of others[31]. Yet, oftentimes, academic practitioners fail to engage others in the

improvement of their own practice; as well as fail to cultivate mentoring relationships. However, the following are steps needed towards building an effective mentoring relationship. First, it is critical for each mentee to know him or herself well[28,29,31]. It is also the case that when individuals do seek help, they are not as well-prepared as they could be. Knowing oneself well, which includes one's personal goals, strengths, and weaknesses, as well as relational skills, can be tremendously useful to mentors who a mentee requires help from[27]. Only with this self-awareness will a mentee be able to figure out who to turn to for developmental support to further their own personal and professional journey and only then will they be able to appropriately respond to and engage in the mentor's suggestions effectively. As a mentee's career and life unfold, re-assessment will be necessary; as one grows and circumstances change, the developmental network of choice a few years back will no longer be responsive[60]. While a mentee may be noticeably clear about what they want to achieve, they may also discover that their self-reliance at this point leaves them without the relational skills.

Self-knowledge should be done to include an assessment of their relational skills such as the propensity to reach out for help, ability to identify potential mentors, inviting feedback, and establishing a connection of mutual trust and respect with others[27,55]. Sometimes, mentors can be sources of insight and support to build this critical relationship building skills. It is also critical for the mentee to think through the context of their field of study. It is not reasonable for a mentee to build a developmental network that is inappropriate for the field of study as chemist wanting to be mentored by a biotechnologist[27]. Therefore, knowing the opportunity structure for the appropriate field of study is important. Be it, promotion, or change in career path, there are various kinds of advice and coaching that is appropriate to seek out.

Further, there are diverse ways to seek advice or coaching in this regard. Without the benefit of connections with one or more individuals who are already working in the field of study or professional inclination, it is quite likely that assumptions about what it will be like to make the move may be faulty or at best incomplete[43,39]. This is true even for individuals who want to stay in their current field of study but who seek to broaden or dramatically change the focus of their professionalism.

Research on career transitions indicates that the best way to obtain an accurate understanding of the unknown context and its potential fit with personal values and goals is to develop a clear picture of the "possible selves" intended[56]. Another critical step is enlisting potential mentors. Here the primary task is to actively enlist mentors in one's developmental network who have the potential to provide the critical help that is needed to advance one's personal goals. As a lecturer in a higher education institution aspiring to reach a higher position, it is important to develop alliances with mentors or individuals at more senior levels who can sponsor and promote such aspiration, coach, and serve as a role model for what it takes to prepare for their level of responsibility[57,60]. There is the need to engage peers in one's immediate faculty and outside the faculty who can help in navigating politics, and who can share information about those at more senior levels. Regular reassessment of the developmental network is done by comparing the networks of successful senor professionals, as one's career unfolds, the ideal developmental network changes as well[28,29,31].

A mentee who decides that a particular mentor is not a good fit with his/her professional aspirations will be best served by enlisting other mentors or individuals in other settings who can open doors to different career possibilities. At some point, a mentee who is no longer a novice in his or her role, may need to look elsewhere for support to continue learning. If the mentee continues to advance, there is the need to

consider who else to enlist in their developmental network. Similarly, if there are technical areas that are still unfamiliar, it is necessary for them to seek relationships with peers that require learning more about new areas of the field of profession[49,56]. And, if the mentee is of a diverse cultural background, or female in a male-dominated faculty, it will be beneficial to enlist mentors of a similar background or identity group (either peers or seniors) who can help in strategizing for success[55]. This does not suggest that as a mentee's career unfolds prior mentors are no longer relevant, but rather a mentee's focus and relationship-building efforts may need to shift if the developmental network is to continue to support their learning and growth. While this may sound calculating and borderline manipulative, it is a wise saying that individuals who invest their time and energy wisely and consistently, in ways that serve their personal goals as well as the goals of their organizations, attain greater satisfaction and performance levels[29,32].

Relationships with prior mentors transform into friendships, or more distant alliances, and are now valued in a different way[58,62]. Just as one needs to create a personal vision to prioritize actions in a resource constrained reality, so does one need to create a vision for one's developmental network to ensure that actions taken to support one's growth and development are maximized. Academic mentoring-relationships are a tool for the sustainability and improvement of education standards[63]. Hence, it is among the improvement strategies for effective knowledge and skill acquisition among learners. Its most necessity in higher educational institutions is multidimensional teamwork between a junior professional and a senior academic professional, with the primary goal centring at the nurturing of the junior professional for proper development and improvement of the profession in the future. This is because evidence provided by recent studies proved that mentoring relationships have many

advantages to the junior professionals in this case the learners (mentees), senor professionals (the mentors), and the institution[31,64,65].

Mentoring-relationships have several benefits for both the mentee and mentor for it increases motivation as well as assists personal development of the mentees[31,64]. To the mentee, it helps them to know the culture and political set up in the institution, develop skills, have access to resources and have increase clarity of goals and lower attrition rates. Therefore, mentoring relationships is regarded as a ladder for greater improvement and achievement through good mentor relationships, especially for sustainability of quality education in both public and private academic institutions[66]. This means that through effective academic mentoring-relationship, the goal of the education institution will be achieved. In higher education institutions, mentees are supposed to be conditioned in 'a most productive and elegant manner, particularly typifying academic culture of excellence in research, teaching, and community services[31,66]. However, the rapidly changing landscape of higher education in Africa and beyond has led to the unimaginable apathy, on the part of many senior academics and the management staff, to embark on the process of meaningful professional initiation of the new entrants into the culture of teaching research, and publishing[31]. Adjudged from this perspective, the psycho-social stability and/or emotional preparedness often desired in the quality of performance of the inexperienced newly recruited lecturers, who inevitably engage in the process of trial and error, to find their feet in academia[66].

Mentoring relationships, typified as part of any institutional responsibilities, is the informal educational process which promotes personal and intellectual (otherwise, management) growth, including professional development through empowerment and

confidence building for the achievement of academic, professional, workplace and other competence[66,67]. In applying the general concept of mentoring relationships, which among others, includes coaching, training discussion, counselling and or supervision of the less experienced scholar's ill academia and, or personnel' (and students inclusive), it is the basis for the development of a virile, nurtured, and well-groomed academic of all time, for all day. Mentoring, with defined specific goal, does not promote gullibility in the mentee; rather, it equips the mentee with independent skills needed for sustainable growth and personal development[66,67]. The mentor, in higher education institutions and any organization, would, therefore, be someone who had "been there, done that" before and knows 'when' and 'how', the expected competences that are arranged to facilitate skill acquisition, but without exploitation. In higher education, however, the mentor-mentee relationship is expected to exemplify that of symbiotic, especially when empowered.

Within academic settings, learners are prompted through effective participatory learner-teacher activities (otherwise, that of the teacher-teacher), to initiate and develop the capacity for independent and collaborative efforts to academic success[55]. Particularly hinged on the multidimensional of the transformative theme, the empowerment of the stakeholders in higher education institutions in general, recognizes the tripod inter-connectivity of the mentee, mentor, and community paradigm[67]. While the paradigm necessarily goes for the more experienced academic to purposefully research-driven activities, individual change such as personal growth instigated via continuous and eventful cell-research breakthrough, then becomes the bridge to community and, or connectedness and politico-social and economic changes[68]. However, to bring about or create change, there is need and readiness to change individually to influence partnership in solving the complex issue. This

conceptualization and the synthesis of the recognition of mentee-mentor mutual trust and respect, with individuals striving to collaborate toward facilitating creative is the epitome of capacity building in higher education institutions. Therefore, skills enhancement and acquisition flow symbiotically between the mentee and mentor irrespective of gender, age, academic status, experience, personality variables, which are all held constant, to impact positively on personal development and growth as well as overall implication for overall survival[66,69].

Mentoring relationships among lecturers in higher education institutions may be mostly geared toward the requirements of specific lecturers to aid them in fulfilling the work of educating, investigation, management, and other functions[70]. Mentoring relationships in Academic setting entails offering guidance, assistance, and support to new lecturers to acclimatize them to the academic environment. It is an intimate, progressive association between two or more lecturers in which one lecturer usually the junior lecturer (mentee) consciously takes advantage of the senior lecturer (mentor) superior experience, expertise, abilities, or prestige in each field. Its aim is to ensure that the correct methods of conducting tasks can take the shape of an informal or formal relationship. Mentoring relationships can also be developed naturally through mutual appreciation, aspiration, ideals, and interests[70]. Studies have revealed that participating in a formal mentoring programme can help junior faculty staff learn process preconceptions, better equipped them to manage roles and perform tasks proficiently[31,44,60,70].

Mentor-mentee relationship gives the mentee a sense of belonging in a community where they might sometimes feel isolated. Mentors are identified because they thrive academically and have a solid professional background. Mentoring relationships in

academic discipline is inherently multidimensional[71]. Herein, active listening, shared experience, collaborative learning, and corrective feedback are characteristics of academic mentoring relationships. Active listening entails reaffirming a rephrased edition of the presenter's message, asking questions, when appropriate and maintaining moderate to high non-verbal conversational involvement[29]. Active listening receives the most attention among many listening abilities considered valuable by scholars and practitioners. Active listening is an essential communication skill during initial interactions[70]. Listening comprises transferring a message, hearing that message, and making a good judgment of it. Active listening is listening with an aim. It involves showing interest, listening, understanding, and taking note of the speaker's facts and ideas. Active listening involves the mentee expressing interest in the messages from the mentor as they take note of facts and ideas from the mentor to improve their performance on tasks[71]. Collaborative learning pertains to individuals working together to address a problem, complete a project, or create a product; and is underpinned by the belief that learning is a social activity[71,72]. It can emerge in peer-to-peer or bigger groups. Collaborative learning focuses on group members working together to achieve a common objective.

Collaborative learning is the implementation of collaboration in the mentoring process[72]. Collaboration is an interactive approach in which individuals are responsible and accountable, particularly learning and valuing their peers' abilities and efforts in all situations where individuals come together in groups. Collaborative learning provides a proper atmosphere that encourages learners to enhance and expand their expertise[71]. Each group is viewed as a participant whose work is connected to psychical, effective, and behavioural activities aimed at achieving the group's specific goals; and this aid learner in decision-making and boosts their sense

of community. Collaborative learning is based on the premise that learning is inherently a social process in which learners converse and learn from each other which is a form of peer mentoring[70]. Shared experience is a result of output, whether excellent or negative, that was previously performed by the mentor and communicated to the mentee for future organizational outcomes to adopt improved techniques to complete assigned tasks effectively. Shared experience at work enables mentees to acquire knowledge shared by mentors. Every relationship commences with a shared experience[72]. Recognizing whatever motivates a relationship's social contacts is critical because they can affect long-term perceptions and new prospective engagements. When individuals repeatedly share their experience with a commonly encountered partner, the outcome becomes positive and enhances continuous learning.

Shared experience is based on collaboration where previous knowledge concerning work outcomes is elaborately deliberated with a view to attaining better performance in future work outcomes[32]. Corrective feedback enables mentees to assess their performance on work outcomes; it helps learners develop skills and helps them comprehend diverse concepts[31]. Corrective feedback is thus an essential part of the learning slit of individuals. Feedback on a task is often called corrective input or knowledge of results; and concentrates on the performance of a task rather than the knowledge required to perform it. Feedback focuses on the process underlying a job and encourages a deeper appreciation of achievement. Such feedback is relevant to detecting and correcting errors and helps learners develop a facility for self-appraisal. Feedback on self-regulation addresses the interplay between commitment, control, and confidence. It addresses the way mentees monitor, direct, and regulate actions toward learning goals and implies a measure of autonomy, self-control, self-discipline, and self-direction[67,73]. In other words, feedback that does not describe why a person

performed poorly or that would not refer to specific conditions is likely to inspire personal uncertainty and low productivity.

A supervisor must direct feedback to observe performance while being aware of its impact on learners' self-efficacy, such that attention is redirected to the task, and lead learners to invest more effort in it[31]. Feedback that focuses on the person of the learner does not have educational value. It concentrates on the personal attributes of the learner and does not contain task-related information, strategies to improve commitment to task, or a better understanding of self or the job itself[73]. This type of feedback adversely affects learners. It is also imperative that mentors invite mentees to give them positive and corrective feedback on how they are doing as mentors. When feedback is received, it is also required that the mentor should apply non-defensive measures and take immediate steps to use it[66]. Numerous studies have highlighted the need to promote a culture of research support and encouragement in higher educational institutions through the engagement of senior professionals in this process[31,44, 55,70]. Institutional research culture is based on the reiterated investigative behaviour of research professionals, organizational capacity to produce research, and an infrastructure that facilitates the development of high-quality studies. Those responsible for policy planning and strategy implementation must identify resources to promote research competence among academic professionals and the development of a research culture[31].

Mentoring principles are essential in the development of an institutional research culture, such as improving skills and trust, establishing bonds and partnerships, training researchers who are close to the practice, improving appropriate dissemination, investing in infrastructure, and building elements of sustainability and

continuity[66]. However, an institutional research culture is affected by individual and institutional factors, among which are multidisciplinary research groups. It is important for lecturers in institutions of higher learning to develop relevant research skills because they affect a strong institutional culture that promotes an environment to produce knowledge and interaction and collaboration with other institutions[31]. Therefore, knowing and evaluating the development of research skills among lecturers and of successful strategies to achieve high competence in research are important institutional planning aspects[67,70]. Mentoring programme in research may be a successful strategy to improve the use of research in educational practice which includes professional development and emotional support for developing skills and self-confidence[70]. In this context, mentors are professionals with experience in conducting and teaching research and function as advisers for academic professionals involved in assisting the development of research. Further, given their experience, mentors can also contribute to the training of other junior academic professionals while helping them with the various problems and choices presented[73].

In the field of academic research, mentoring encompasses explicit training in research methods, ethics and procedures and active efforts aimed at ensuring that the supervised learner acquire appropriate competences. In this case, the mentors are usually PhD holders or advisors who play a significant role in the training of doctoral students and in their success[70]. Mentoring of doctoral students aims to prepare them for career success in academia or a related profession. PhD mentors provide students with important feedback on their performance, encouragement when they need it, pragmatic information on how to acquire the necessary skills to succeed in each field and help open doors to career opportunities[70,71]. Successful thesis supervision is not solely contingent on what supervisors can offer their supervised students; doctoral

students must be initiative-taking, receptive to feedback and committed to sustaining the supervision/mentoring relationship. Several traits related to being a good mentor have been found to include relational (being approachable and accessible, instrumental (enrichment of research and writing skills and understanding of institutional rules and practices, including promotion and tenure processes) and psychosocial (helping to cope with the stress inherent in their roles)[73,74]. This is because mentees value mentor attributes such as being approachable, respectful, and supportive, content expertise and a good communicator.

2.1.3 Overview of Lifelong Learning Strategies

Learning can be defined as the process whereby knowledge is created through the transformation of experience[75]. Therefore, facilitating and understanding the learning process is the primary aim of teaching. The learning process is different for everyone; even in the same educational environment, learning does not occur in all individuals at the same level and quality[76]. Studies have shown that individuals exhibit different approaches in the learning process and no single strategy or approach to learning is. enough to provide optimal learning conditions for all individuals[76,77,78]. This may be related to the learner's diverse backgrounds, strengths, weaknesses, interests, ambitions, levels of motivation, and approaches to learning and personal learning environment. However, not all learners possess the knowledge management and self-regulatory skills to effectively customize this personal learning environment to provide the learning experience they desire[77]. In this case, personal learning environment is considered as a learner-centric self-paced collaborative learning environment aimed at supporting the completion of learning activities and providing the necessary infrastructure to achieve the lifelong learning framework[77]. Under this,

learning activity may be composed of multiple learning tasks, and multiple learning activities that are used to describe a learning scenario. These learning activities itself can be described as a coordinated series of strategies performed to achieve a result and are usually done by mobilizing available resources, producing new ones, and operationalizing self-organized learning processes.

Self-organized learning constitutes a new and important direction in developing lifelong learning strategies that could go a long way in influencing academic excellence[78]. These learning strategies allow learners to pay attention and conduct learning practices in specific situations. Accordingly, learners with high mental capacity may not achieve optimally because of their failure to use or control their learning strategies[79,80]. Hence self-organized learning focuses on how the learner disciplines their cognitive, emotional, or behavioural learning processes. Furthermore, there is no environment that ensures learning, but optimal learning environments necessitate modifications in the selection and building of learning strategies[78,81]. Learning strategies can be defined as activities/actions performed by the learners, which aim to facilitate the acquisition, storage, retrieval, and use of information, and more significantly, to enhance efficient learning. Learning Strategies can also be described as behaviours and thoughts in which a learner engages, and which are intended to influence the learner's encoding process[82]. These strategies are manifested by actual thinking and actions that can maintain lasting effort and consequently play a decisive and direct role in enhancing academic performance. Learning strategies has also been defined as "procedures for acquiring, organizing, or transforming information that can be used to succeed in one's study.

It is also described as methods of learning applied by students in achieving, analysing, and internalizing their newly acquired knowledge[83]. Students who do not know or use good learning strategies often learn passively and ultimately fail in school. Learning Strategy instruction focuses on making students more active learners by teaching them how to learn and how to use what they have learned to be successful[84]. Additionally, learning strategies are described as the ability of a learner to apply the newly acquired knowledge or skills. This therefore posits that, learners in higher education institutions may encounter massive amounts of information to be learned, and more importantly, to be applied in practice. For this reason, as lifelong learners, they need to utilize efficient learning strategies that work well and make voluminous information durable[84]. The learning strategies differ in effectiveness and practicality, one of the reasons for this situation is their learning strategies, with the extent of employing learning strategies and the underlying individual's psycho-emotional, and environmental factors affecting learners[86]. Lifelong Learning strategies are related to skill and are an indicator to assessing the acquisition of a skill[77]. This is a fundamental outcome of education, particularly higher education, is the development, facilitation, and acquisition of lifelong skills for meaningful living. Lifelong learning skills are dependable and positively oriented tools for change. These skills are based on five core capabilities: the capability to act and organize, generate development results, relate, adapt, and self-renew, and achieve coherence[87]. There has been a noticeable shift in studies related to learning and education since the last quarter of the twentieth century.

Initially, psychologists and educators focused on behavioural theory principles to interpret learning and teaching processes. However, by the early 1970s, the focus shifted to cognitive theories, where behavioural theory views the learning process as

measurable observational responses[75]. From a humanistic approach lifelong learning strategy, are a measure of the indicative and responsive abilities that express, in an estimated way, what a learner has learned because of the process of education or training. Holistically, it refers to the skills or ideas gained from a given academic area of human learning. Lifelong learning strategies are a multidimensional concept that is intricately related to the growth, cognitive, emotional, social, and physical development of a learner; it is not related to a single instance, but occurs across time and levels, through a learner's life in school and into post-school years and working life[88]. The current academic mainstream evaluation focuses on the result of the performance. In the traditional regulated learning environment, the performance process is usually established, at least globally, once for all learners by the teacher[88,89]. This is instantiated with pre-defined learning strategy in any learning environment. The "how" is underrated in the evaluation process, focusing on the "what," which is in turn reflected in the design of learning environments.

Learning environment on the other hand can be globally sketched as platforms to use, reuse, and produce the resources involved in a learning strategy and the assessment of the performance result. This is also true for a personal learning environment where the emphasis is even stronger on the organization and exploitation of resources in a self-paced manner[90]. The learning strategies actively include listening, speaking, writing, thinking, and reading[77]. To improve the outcomes of learning, it is necessary to implement active learning which is a part of the broader educational movement toward the individual involved and engaged in learning. It refers to the outcome of a thoughtful and conscious attempt on the part of the learner to participate in the learning process. A fundamental component necessary to implement and enhance lifelong learning strategies involves exploring the learner's perceptions about their

learning context[79]. Such exploration is necessary to understand the learner's learning strategies, the influence of the learning strategies on learning goals and the level of performance of the intended outcomes of the learning strategies using various educational approaches and the real effects on learning performance.

Documenting the learning strategy process is a challenging task, particularly if the learner itself must do it[91]. However, it has been viewed as the result of the learning approach, promoted by the teaching activity, and produced by the learner. This includes the knowledge, skills, and ideas, acquired, and obtained through their course of study within and outside the classroom situation because of determination, hard work, and in academic pursuit. Similarly, lifelong learning strategy is a process that gives learners an opportunity to develop their talents, improve their grades and prepare for future academic challenges[92]. It is also a measure of the indicative and responsive abilities that express, in an estimated way, what a learner has learned because of a process of education or training. However, it can be managed through actions that trigger events such as automatic and interactive facets of events related to a specific activity together with its timestamp[93]. In addition, it is also possible to apply the available interactive features of the personal learning environment to let the learner tag, edit and annotate the performance of the activity at any time of the process and later by itself.

The lifelong learning strategy process can be concretized as an asset associated with an activity and displayed as an interactive editable timeline particularly suited for displaying chronologically organized data sets such as the performance process which completes and merges the two sides: processes and result[87]. They are learning processes promoted by educational institutions that involve the transformation of a

given state, into a new state, and they are achieved with the integrity in a different unit with cognitive and structural elements which varies according to circumstances, organics and environmental conditions that determine skills and experiences which are propelled by various factors such as intellectual level, personality, motivation, skills, interest, study habits, self-esteem or the mentor-mentee relationship. Approaches in the study of learning in relation to performance have been grouped around two orientations: Learning strategies in relation to performance have a predisposing characteristic to learn in a particular way[94]. This gives them a similarity with learning styles which are specific and stable ways to process information. Learning strategies are predispositions, general and constant, responding to a subject's trend. However, lifelong strategies are more flexible than the styles since they modulate according to the context and need using the necessary strategies to achieve the intended objectives, which are more specific[82]. Researchers have pointed out distinct learning strategies as the key determinants of performance[71,79,80,81].

The surface learning strategy is based on an extrinsic motivation; the individual tries to "achieve something" and avoid failure with the intent to comply with the evaluation requirements by reproduction[95,96]. The processes are oriented to rote learning by repetition, so that facts and ideas are barely interrelated. The learner accepts ideas and information passively and concentrates only on a test or exam. While the deep approach in this case is based on an intrinsic motivation; the individual has an interest in the subject and learning has personal significance for him or her. Regarding processes, the individual interacts with the learning content, relates ideas with prior knowledge and experience, uses organizing principles to integrate ideas, relates evidence to findings, and examines the logic of the arguments used. Regarding results, a deep level of understanding is obtained by integrating well the

fundamental principles and facts. Individuals with a deep approach usually achieve a good lifelong learning strategy[96]. However, an exclusively deep approach may not be as good for attainment as the deep approach. Concisely, individuals using the deep approach define their own goals and try to achieve them their way. If it turns out that these are not academic goals, it gives the impression that they are doing it wrong in all senses of the term, no matter how satisfying it can be learning from his/her point of view.

Learning strategies are processes performed by an individual when undertaking an academic task and come from both his/her perceptions of the task as well as from the characteristics of the individual[96,98]. Lifelong learning strategies are a term that appears frequently enshrined in higher educational discourse. It is a satisfactory and superior level of performance of an individual as they progress through and complete their educational experience. Although the various definitions of lifelong learning strategies are rarely questioned, reaching unanimity regarding its measurement has been elusive and continues to be a controversial topic among policymakers, measurement experts, and educators[99]. Researchers have used a variety of ways to measure lifelong learning strategies; some measurements of learning strategies involve the demonstration of knowledge through performing presentations and participating in activities and discussion[100]. Major studies have shown that learning strategies can be measured using two major measurement paradigms; these are quantitative (behavioural and cognitive) and qualitative[75,81,95]. Within the qualitative orientation there are two descriptive lines: Styles and learning approaches. The latter are within the paradigm of information processing but allows sharing performance processes among learners and enhancing self-efficacy through self-evaluation of knowledge, comprehension, and skill development[101].

Different schools of thought have also measured lifelong learning strategies with respect to lecturers from the practical aspect of pedagogy, which involve various forms of "tacit knowledge that is hard to put into words"[98]. This approach is often based on the idea that the most central aspects of learning strategies used by lecturers are only acquired by practice and cannot be easily codified through scientific inquiry. In this regard, lifelong learning strategies are concerned with the art or craft of observing and refining one's skill[101]. This is because the lifelong learning strategies of lecturers are dependent upon pedagogical approaches. In addition, they develop motivation towards learning, acquire a better understanding of the concepts to bring about improvements in academic concepts[100]. Acquiring skills that are necessary to depict appropriate behavioural traits, develop the abilities construct and make use of the knowledge and liberate themselves through acquisition of education. Studies have shown that when these approaches are well implemented, only then will they be able to learn and enhance their lifelong learning strategies [79,81,95]. The several types of approaches through which lecturers can be able to enhance their lifelong learning strategies focused on combining what one learns within the educational settings with the solutions of the real-world problems[102]. This approach provides lecturers with overarching organizing ideas and concepts, which would enable them to develop the bigger picture.

With integrated learning, lecturers begin to internalize the process by developing connections across the disciplines and/or among topics across the disciplines. There are advantages to integrated learning, which includes the application of academic knowledge in the real world, the development of self-awareness, the ability for lecturers to step outside of their comfort zones. Also, the awareness of obstacles that

arise when pursuing academic goals includes, the awareness of global issues, the improvement of leadership, teamwork, and communication skills, and the recognition of the significance and meaning of academic goals. The second type is the Inquiry-based learning approach that puts emphasis upon the roles that are played by the lecturers in the learning processes where senior faculty members or instructors are vested with the responsibilities of directing and guiding[103,104]. In this approach, the senior faculty member or mentor impart knowledge and understanding to junior members or mentee by telling them what they need to know, encouraged to explore academic material, ask questions, and share ideas[104]. This is crucial in forming amiable and pleasant terms and relationships with others and creating a sociable and cordial environment within educational institutions.

This learning approach is different from other approaches, as the order of learning gets reversed. Another learning strategy is experiential learning which has gained prominence at all levels of education[100]. One of the major benefits of experiential learning is that the lecturer develops motivation towards learning and can acquire an understanding of different concepts in a better way. As the name implies, experiential learning is the learning that takes place through experiences[105]. As the lecturers grow, they undergo diverse types of experiences in their professional and personal lives. The individuals learn from positive as well as negative experiences. The experiential learning approach is more specifically defined as the learning through reflection on doing. Hands-on-learning can be a form of experiential learning. But it does not necessarily involve the lecturers reflecting on their product. Therefore, it is well-understood, experiential learning is put into practice at all levels of education and is regarded as one of the indispensable lifelong learning strategies [105]. One of the most recognized classical front runners promoting lifelong learning strategies in learning is

the process of organizing and internalizing knowledge and experiences by thinking and reflecting[75,80]. It is an approach that initiates the learning processes with perceiving and processing continua.

On the perceiving continuum, a learner perceives experiences either through concrete experience (feeling) or abstract conceptualization (thinking). On the processing continuum, a learner internalizes experiences either through reflective observation (watching) or active experimentation (doing)[96,100]. On this note, lecturers have diverging learning strategies and tend to view actual scenarios from various aspects and tend to observe before acting, and those with an assimilating learning strategy understand a wide range of information by putting it into a concise, logical format. Learners with an accommodating style learn primarily from firsthand experiences and may rely on others for information rather than technical analysis[100]. People with a Converging learning style actively tackle technical problems and make decisions based on available information and logical analysis. Beyond these four primary learning styles, learning is also a dynamic process and individuals with a predominant learning mode may also utilize different learning modes (CE, AC, RO, and AE) based on circumstances[96]. This learning mode begins when a student engages in an activity, reflects on his or her experience, then derives meaning from the reflection, and finally, puts into action the newly gained insight through a change in behaviour or attitude. Although this form of learning occurs naturally in daily life, it can also be set up or structured to guide learners through an experience and maximize learning outcomes[80]. This strategy to learning can be beneficial to lecturers because it is a balance of effective (emotional), behavioural, and cognitive (knowledge-based) learning which may be strong.

The experiential learning cycle has four stages and while they are presented in a specific order, the learning can begin during any stage in the cycle. To maximize the learning opportunity, though, it is ideal to complete all four stages[95]. The following four stages must be present in a workshop or training design to complete the learning cycle: concrete experience, reflective observation, abstract conceptualization, and active experimentation[75,100]. Pedagogical skills are regarded as essential, efficacious, and worthwhile in promoting student learning and in upgrading the overall system of educatio[76]. In educational institutions at all levels, the instructors are recruited based on their educational qualifications, skills, abilities, job experience and overall personality traits. Hence, to do well in their job duties and to achieve the desired goals and objectives, they need to augment their understanding in terms of pedagogical skills. In the present existence, the use of technologies and the internet have gained prominence. On the internet, there are number of articles that can provide information in terms of pedagogical skills[80,96,100]. Therefore, it can be stated, when the instructors have the main aim of promoting student learning and upgrading the overall system of education, they not only have to be well-equipped in terms of teaching methods, teaching materials and various types of instructional strategies, but they also need to be well-aware of pedagogical skills[95]. In this research paper, the emphasis is put upon meaning and significance of pedagogy and pedagogical skills for educators.

Students' learning emphasizes the important roles educators play in supporting students' development in areas beyond their core academic skill. Therefore, utilizing teaching methods that best suit the learning process is an important to be considered in students learning. Studies have shown that there exist a set of emotional support and institutional techniques that are important to learners as instructional methods which usually help students become more self-reliant, motivated to learn, and willing

to take risks by making his/her instructional methods to be emotionally supportive and safer channel[75,95,100]. Therefore, this can imply that the leading role of these instructional methods is to provide a wide range of alternative avenues through which units of instruction can be presented to learners. However, the effective use of these instructional methods in the institution of learning, makes students learn in a meaningful way and so, they become actively involved intellectually, perceptually, and physically[106]. Accordingly, the student's learning process is a continuous process that involves bringing about desirable change in learners through appropriate methods which can work effectively especially to suit learners' needs in a unique way[105]. The use of these various pedagogues can affect the amount of knowledge students retain or forget as well as their positive perceptions for learning the content. There are two major approaches to applying lifelong learning strategies in learning; this are "live" approach and "classroom-confined" approach[100].

The live approach occurs when lecturers are arranged to experience learning situations when lecturers solve academic problems through participation; where lecturers can generate, reflect, and exchange on the feelings and difficulties that they experienced with other lecturers and among classmates[107]. These exchanges enable the lecturer, in view of this, pedagogical skills in this regard can be understood as a problem-solving activity practiced in a study environment. Reference to the learning cycle, stages of concrete experience, reflective observation and abstract conceptualization can be sustained with a pedagogical approach within classroom setting, while the stage of active experimentation may be implemented with assignment[100]. However, each of the learning cycles will be discussed in detail in the preceding section. Learning cycle is typically presented with concrete experience at the top, to signify that that is where the process of acquiring pedagogical skills begins.

This phase is used to describe the entry point into the learning process based on a perceived considerable experience. The concrete experience phase describes a student's involvement in acquiring new experience[75,79,80].

At this stage, learners encounter an experience that could be either a completely new experience or a reimagined experience that has already happened[108]. At this cycle, it is believed that the key to learning lies in student's involvement. This is because it is not enough for learners to just read or watch demonstrations to acquire new knowledge. This could involve being exposed to a new task or a new way of conducting an assignment with which they are already familiar. While the experience is usually a personal one, it might also be a situation where learners acquire knowledge by observing, hearing about, or reading about someone else's experiences (shared experience) which is beneficial to the learning experience[108]. Concrete experience is a major deviation from an expectation, a problem or something unusual that initiates the subsequent phases of the learning cycle[100]. This includes the immediate reaction to the experience, including a preliminary reflection and comparison between the experience and one's own abstract concepts which results as a direct "aftermath" of a negative experience and can fuels or intensifies the learner's cognitive processes. This pedagogical skill itself provides students with an activity that offers them a special and unique opportunity to really taste various levels of learning divide and cooperation before they can experience it in their real professional life[75]. This learning strategy is initiated with the aim of creating relevant and meaningful experiences for students to create knowledge, either individually or cooperatively, under various levels of learning and cooperation.

While lecturers in one learning divide experience free flow of information and cooperation with others in the learning environment, others manage information

without cooperation and questioning by others. Under the given environment, students can still try to experience cooperation in creating knowledge through mutual discussion and challenges, while another student may not. In the learning cycle, concrete experiences are followed by reflective observation[75]. As the name implies, learners, after engaging in an experience, usually step back to reflect on the task or activity. This stage in the learning cycle allows the learner to ask questions and discuss the experience with others. It is used to describe the thought and sense making oriented stage of reflective observation, in which the experience is understood from various perspectives[100]. For most learners, this is where seeing and doing transforms into the real-time absorption of current information. In practice, this could mean a situation where a student is shown how to accomplish an academic task. They then look at how it could be applied in different circumstances.

Communication is vital as it allows learners to identify any discrepancies between their understanding and the experience itself[109]. One could say the experience with others may help ease the reflection process by introducing other points of view. At this stage, learners will also try to place the experience alongside other previous experiences to look for patterns or notable differences. This helps them to reflect on the discrepancy and gap between their understanding and the experience itself. To be able to reflect, students must mature through a process of "recovery" which is regarded as the learning processes associated with rehabilitation. This process entails a separation from failure to allow critical reflection in which the learners make sense of failure, which allows them to move on by trying other opportunities to excel in their academic pursuit or develop observations about own experience leading. Learners move from reflective observation to abstract conceptualization when they begin to classify concepts and form conclusions on the events that occurred[100,109]. As

such, abstract conceptualization gives learners the chance to assess how their innovative ideas can be applied in real world situations. In other words, they generate abstract principles that they can apply to future situations. After all, the focus lies in drawing conclusions and learning lessons based on experience[100].

The learning process ends with the phase of active experimentation, in which the newly created concepts and theories are evaluated in experiments, generating new concrete experiences[75]. The stage of active experimentation can be distinguished into exploitation of proven concepts and exploration of new strategies. It also entails the process of reflective action. At this stage, learners apply their innovative ideas to the world around them. This allows them to see if there are any changes in the next occurrence of the experience. As such, this stage offers an opportunity for learners to evaluate out their innovative ideas and lessons gathered from the experience. By actively experimenting with different concepts, students can learn how to associate what they have experienced with the latest ideas and innovations[100]. This experimentation results in new concrete experiences that effectively trigger the beginning of a new phase of practicality. After all, life effectively amounts to a series of interlinked experiences. For the students to ensure that their pedagogical skills are adequate, it is important for the students to apply them through active experimentation. Assignment or projects are a possible and appropriate way to attain active experimentation which is one of the major strategies in arousing students' active experimentation which required them to demonstrate their abilities of applying the knowledge that is covered in the learning process[100]. Concisely, it involves using theories to solve problems and make decisions. In the past few decades, studies on learning strategies have emerged in professional educational studies[81,95,95].

Beyond the dynamic learning processes, lecturers come from diversified cultural backgrounds with varying previous training and experience. Lecturers, however, can develop different preferences to perceive, process, retain and recall the information or skills they are trying to learn with different learning strategies considered based on individual preferences, rather than one being superior to another[100,109]. Studies have shown that learning strategies, which prove to be effective and valuable at all levels of education and are useful and operative in achieving academic goals and in upgrading the overall system of the learning process, need to be recognized, acknowledged, and honed on a regular basis[75,80]. The instructors need to be aware of these skills. First among the learning strategies is creating a pleasant environment within the learning environment. Within the classroom settings, the lecturers need to work in collaboration and integration with each other in achieving academic goals and in upgrading the overall system of education. In the creation of a pleasant environment, there are number of factors that need to be considered, these are utilizing technologies and modern, scientific, and innovative methods in the teaching and learning processes, providing infrastructure, furniture, equipment, amenities and facilities[75,79,95].

Scanning the classroom is the second, which is also regarded as an important learning strategy for the instructors where teachers maintain good oversight in terms of their own classroom[110]. Within the classroom setting, the environment needs to be created in such a manner that the teaching and learning processes can take place in an effective manner. Factors such as infrastructure, furniture, and equipment need to be well-organized, technologies and other teaching and learning materials need to be in a well-ordered state while concepts and the attitude of the instructors towards their students need to be supportive[111]. In scanning the classroom, when the instructors feel that there are certain deficiencies, which need to be improved, they communicate with

their students. Hence, the instructors and the students need to work in collaboration and integration with each other in the formation of an amiable and pleasant environment. Thirdly, providing adequate explanation of concepts is difficult, whereas, in other cases, they are manageable[112]. Providing adequate explanation of the concepts is primarily referred to providing the information, which is easily understandable and factual. In the implementation of this skill, there are several factors that need to be taken into consideration.

Apart from communicating verbally, the students should be provided with articles and other reading materials[113]. When the students are provided with reading materials, they will revise the concepts on their own and will be able to prepare themselves well for tests and exams[110]. Therefore, one can say that providing adequate explanation of the concepts is a pedagogical skill, which is regarded as noticeable in imparting knowledge among students in terms of subjects and concepts. Fourth is pausing while instructing students, they are communicating with them verbally within the classroom settings. Pausing while instructing is a pedagogical skill, which is commonly put into operation in educational institutions at all levels. Competent instructors are well-aware in terms of ways of using their voices and they need to ensure that they speak slowly and clearly, so the students can understand them. They usually make use of simple words, so students can understand appropriately.

Another process is Scaffolding Tasks and Activities which is referred to as creating a framework for the students for the implementation of tasks and activities in an effective manner[113]. Traditionally, one forms the viewpoint in terms of scaffolding as the temporary structure that facilitates learning and understanding. In education, the job duty of the instructors is to impart knowledge and understanding to the students[100].

They conduct this task through guiding and giving advice and suggestions. Therefore, it is understood that providing adequate explanation of the concepts is a pedagogical skill, which is regarded as noticeable in imparting knowledge among students in terms of subjects and concepts. Thinking Deeper in terms of Lesson Plans: this is a learning strategy that renders a significant contribution in upgrading their problem solving, analytical and critical thinking skills[111]. In addition, they should be able to provide answers to any questions that may take place enabling the students to think deeper in terms of lesson plans[115]. These will contribute effectively to acquiring an efficient understanding of the lesson plans and academic concepts and the achievement of academic goals.

Conducting Assignments and Projects: the lecturers need to conduct assignments upon the completion of every educational plan[102]. The primary objective of conducting assignments and projects is to assess the learning abilities. The assignments are regarded as one of the indispensable assessment strategies as well. Through giving assignments, the instructors can identify whether their teaching learning methods and instructional strategies are proving to be worthwhile and meaningful or there is a need to bring about improvements. Research projects are regarded as an integral part of their course curriculum. Giving assignments and projects is regarded as a pedagogical skill, without which the lesson plans are not regarded as complete. This pedagogical skill needs to be put into practice at all levels of education. Asking open-ended questions is important between the instructors and students to facilitate learning[100]. Asking questions enables the students to augment their learning and clarify all their doubts and problems. One will not be able to acquire an efficient understanding of the lesson plans and academic concepts without putting forward questions.

When the instructors are providing answers to open-ended questions, in some cases, they are required to reiterate the entire explanation of the concepts. This enables the students to understand better as well as clarify their doubts. An open-ended question is a pedagogical skill, which facilitates understanding of the lesson plans and academic concepts in a well-organized manner[103]. Measures needed to enhance learning strategies are regarded as fundamental as acknowledged by the lecturers at all levels of education with reasons that learning strategies are regarded as the key factors in promoting student learning and leading to enrichment of the overall system of education[100]. Hence, the lecturers need to ensure they put into practice the learning strategies in an effectual manner. Furthermore, lecturers are vested with the job duty of imparting information in terms of these skills to the students. In leading to upgradation of pedagogical skills, the lecturers need to be well-aware in terms of the measures such as visible learning, thinking skills, explicit instructions, co-operative learning, and collaborative team teaching. These measures are briefly defined to align with the purpose of this study[79]. Visible learning is a learning that has the primary aim of leading to an increase in the abilities and aptitude of the students, needed in the achievement of educational goals and objectives[114]. In learning, the students make use of several types of materials and sources. When they are reading a book or an article or report or are making use of distinct types of technologies, that are computers, laptops, iPad, and mobile phones, their learning is recognized.

On the other hand, individuals also learn by making artworks and handicrafts. They learn diverse types of sports and creative activities by participating in them. When the students get engaged in visible learning, it is viewed by other individuals as well. Hence, this learning is given the name of visible learning. When the students

experience any inconsistencies, their instructors and fellow students provide them with help. Thinking skills refers to the skills which are regarded to be of utmost significance in acquiring an efficient understanding of the concepts and achieving academic goals[100]. The effective implementation of co-operative learning can result in higher self-esteem, higher achievement, increased retention, greater social support, and the use of the higher-level reasoning. When these factors are acknowledged and put into practice in an effectual and worthwhile manner, cooperative learning will be graded. It has proved to be beneficial to the students in number of ways. These are, acquiring support from others, forming good terms and relationships, implementing tasks and activities in a manageable manner, developing motivation towards learning and so forth. Therefore, it is understood, putting cooperative learning into practice is regarded as a vital measure in enhancing pedagogical approaches[114].

Teaching Collaborative team teaching is the method of teaching, where two instructors share the responsibilities within the classroom setting96. Collaborative team teaching is a long-standing approach to teaching that has been practiced in educational institutions for number of years. When the instructors form the viewpoint that they need to implement collaborative team teaching, they will make use of professional knowledge to contextualize the teaching programme to suit the needs and requirements of the students as well as the overall system of education. The instructors may teach collaboratively in one or two learning areas or open the doors between the classrooms to create a larger open classroom. These are the major approaches that need to be put into operation in leading to upgradation of the overall system of education and in facilitating student learning[96]. After the function of planning has been put into practice, the individuals need to initiate them. This can only be achieved by taking part in discussion classes that could bring about

improvements in their lifelong learning techniques through the exchange of ideas and viewpoints as well as equipping themselves in terms of measures, strategies and approaches needed to put into practice knowledge acquired[115]. The major aim of all educational institutions can therefore be said to be that they ensure that students learn and understand various subjects and concepts.

2.2 Theoretical Framework and Review

This section examines various theories and models that explain how mentoring relationships (MR) and lifelong learning strategies (LLS) influence the research competence (RC) of OTM teaching staff in public polytechnics in Southwest Nigeria. Three theories will be reviewed: the European Research Competence Model (ERCM) for the research competence variable, Kram's Developmental Theory of Mentoring for the mentoring relationship variable, and Experiential Learning Theory (ELT) for the lifelong learning strategies variable.

2.2.1 European Research Competence Model

The European Research Competence Model (ERCM), developed by the European Commission 2022 is based on the taxonomy of transversal skills for researchers[8,22]. It encompasses seven competence areas: cognitive abilities, conducting research, managing research, managing research tools, making an impact, and working with others. Each competence is defined by a descriptor and further developed with learning outcomes for each proficiency level, aimed at strengthening researchers' skills for successful careers in academia and beyond[8,113,116]. The ERCM views researchers as fundamental resources for research, innovation, and society at large[22,26]. Therefore, equipping researchers with transferable skills necessary for effective and successful careers in all relevant sectors, including academia, is crucial. This model

addresses the adapted measures for the research competence variable, which includes methodological, communication, data analytical, and referencing skills.

Figure 2.1: European Research Competence Framework for Researchers

Source: [8,22]

The ERCM outlines how competencies are linked through the integration of formal and non-formal learning, with a strong focus on lifelong learning[22]. This model suggests that developing research competence, particularly in formal education, involves various competencies, including cognitive abilities like abstract, critical, and analytical thinking, as well as problem-solving and creativity skills[22,26,113,117]. Each of these competencies is explained along with its relevance to the study. Conducting research requires disciplinary expertise, the ability to perform scientific and interdisciplinary research, authoring research documents, and adhering to research

ethics and integrity principles[8,26]. When these skills are used correctly, they enhance the analytical and methodological abilities of OTM teaching staff, thereby increasing their recognition in research domains. Another important category is managing research, which includes the ability to identify relevant sources for grants, develop project management skills, demonstrate creativity and innovative negotiation strategies, and learn from past research activities[8,22]. When OTM teaching staff engage in these activities, it can improve their reference skills and overall research performance, helping them organise their achievements and gain recognition in academia.

Managing research tools involves handling research data, managing intellectual property rights, and using open-source software[8,22]. This can enhance research expertise by identifying relevant literature, organising reference lists, conducting research, analysing data effectively, sorting relevant information, storing and sharing research appropriately, maintaining research databases, and creating open-source software tools and repositories in their field. Collaborating with others involves professional interactions, teamwork, and building mentor-mentee relationships to nurture diverse talents and develop resilient researchers[113,116]. It is also essential to create a healthy work environment, understanding the relationships between well-being, work, and the physical and mental health of staff, while developing networks. Self-management in this context includes managing personal professional development, making an impact by participating in publication processes, disseminating results to the research community, communicating with the broader public, and promoting knowledge transfer[117]. Using appropriate methodological tools to justify research paradigms can enhance methodological skills.

Data analytic skills, by understanding and using qualitative and quantitative analytical tools; communication skills, by explaining research findings using various criteria; and referencing skills, when researching properly cite sources[113]. The European Research Competence Model is relevant to this study, as it broadly defines performance excellence within academia and identifies competencies applicable to various roles within polytechnics. Each competency outlines exemplary working behaviours and sets benchmarks for assessing teaching staff. This model helps academic institutions communicate the behaviours that are required, valued, recognised, and rewarded for specific roles. It guarantees that lecturers possess the essential skills and knowledge to carry out scientific research from beginning to end. For this study, the European is relevant, as it can be used to broadly describe performance excellence within academia and identify several competencies that can be applied to multiple occupational roles within the polytechnics.

Each competency is used to describe, in generic terms, excellence in working behaviour as well as establish the benchmark against which teaching staff are assessed. It is also a means by which academic institutions can be able to communicate behaviours required, valued, recognised, and rewarded concerning specific occupational roles. It ensures that lecturers, in general, are equipped with the required skills and knowledge of conducting scientific research from the beginning to the end. The European research competence model was used to best explain how competency can be achieved in research when the seven-competence framework is applied, cutting across methodological, data analytical, communication, and referencing skills.

2.2.2 Kram's Developmental Theory of Mentoring

Kram's Developmental Theory of Mentoring, introduced by Kram, provides a conceptual framework based on interpersonal dynamics, role expectations, past experiences, social context, and communication skills[28,29,55]. The theory highlights the essential functions of mentoring relationships, including providing psychosocial support through role modelling and offering career or instrumental support by presenting challenging work for skill development. It identifies four distinct phases in mentoring relationships: initiation, cultivation, separation, and redefinition. The initiation phase is where mentors and mentees form expectations and get to know each other[55]. The cultivation phase is the stage where the relationship matures, with mentors providing significant psychosocial and career support. While at the separation phase, the mentees seek autonomy and greater independence from mentors; at the redefinition phase, both the mentors and mentees transition into a different form of relationship characterised by more peer-like interactions or terminate the relationship[55]. The framework is premised on the idea that developmental mentoring allows mentees to drive the relationship, learn more about themselves, and assess their options, while mentors serve as independent sounding boards[29]. This model describes the process of empowering individuals to take charge of their development.

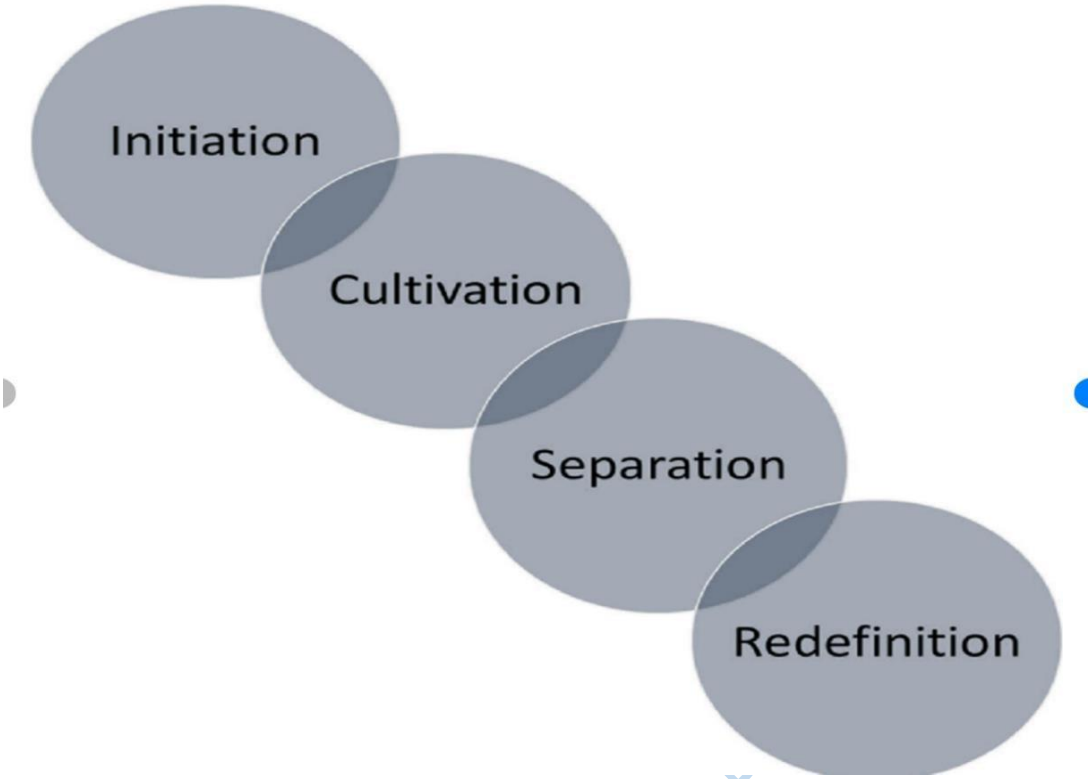

Figure 2.2: Kram's Phases of Mentoring Relationship

Source:[28,29]

As shown in the Figure 2.2 diagram, mentoring relationships develop and mature over time, offering various levels of mentoring functions as they progress through these four phases. In addition, the model describes these four stages as an upward spiral, suggesting opportunities for growth and development for both parties involved in the mentoring relationship[55,74]. While the mentee primarily benefits, there are also opportunities for the mentor to learn. The theory suggests that by helping mentees analyse their behaviour, mentors can also develop a new mindset by examining their own skills and working practices and becoming more self-aware. From a communications perspective, mentors can gain insights into other parts of the organisation and understand the impact of senior management decisions[31,74]. This theory is relevant to this study, as it helps identify key mentoring frameworks that contribute to successful mentoring relationships, enabling both parties to achieve their

goals and definitions of success. It provides valuable information for various mentoring structures, including faculty, peer, and student mentoring. Within the studied polytechnic, the phases of the mentoring framework can be used to support learners' success, offering a solution through a mentoring programme. Effective utilisation of each phase of the mentoring relationship can yield professional and personal benefits for both the mentor and the mentee.

2.2.3 The Experiential Learning Theory (ELT)

David Kolb's Experiential Learning Theory (ELT), introduced in 1970, asserts that all learning is experiential and practical[75,77]. This model takes a comprehensive approach, incorporating experience, perception, cognition, and behaviour, which are understood and transformed by the learner. As learners interact with and transform content, they develop divergent, assimilative, convergent, or accommodative knowledge. The theory also identifies four developmental stages of learning: concrete experience, abstract conceptualisation, reflective observation, and active experimentation[77,114].

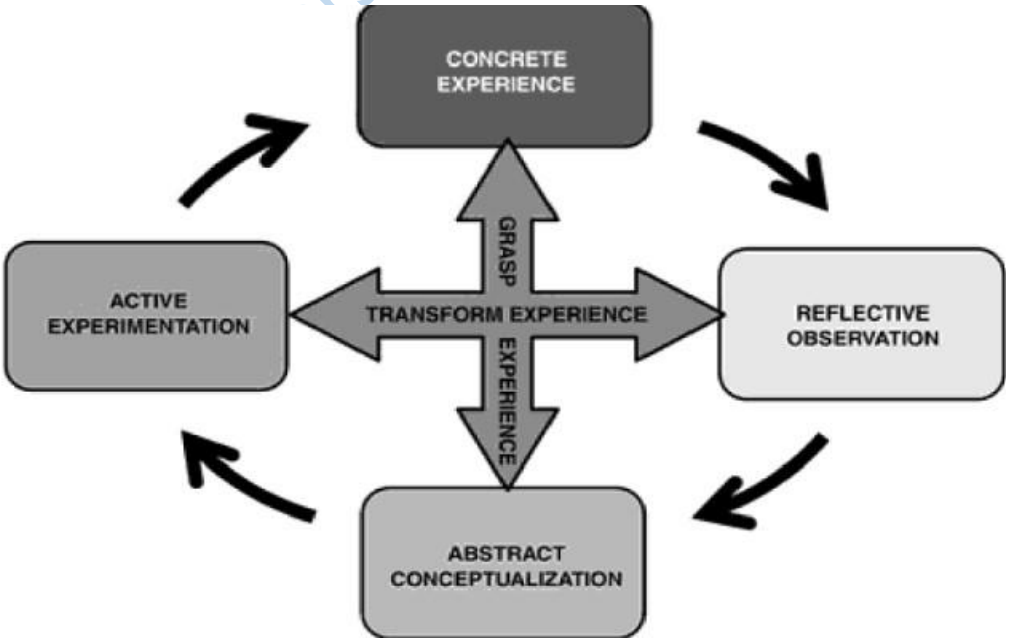

Figure 2.3: The Experiential Learning Theory

Source:[75,77]

Concrete experience focuses on the learner's ability to fully, openly, and without bias engage in new experiences and ideas[95,100]. At this stage, learners develop the skill of translating information into concise and logical forms, and their interest in abstract ideas or concepts enhances their ability to acquire learning skills. Abstract conceptualisation, on the other hand, is characterised by the specialisation and refinement of metacognitive skills[75]. During this stage, learners develop the ability to reflect on and observe experiences from multiple perspectives, fostering creative thinking. The reflective observation stage involves learners creating new concepts and testing new skills by integrating observations into logically sound theories[100,114]. This phase includes reviewing results from investigations, processes, and interdependencies, as well as enjoying brainstorming and reflecting on their experiences. Finally, active experimentation involves learners using theories from reflective observation to make decisions and solve practical problems[100]. This learner-centred approach emphasises engagement, reflection, and application, helping learners retain, process, and apply knowledge more effectively.

The experiential learning theory can be used to create environments that influence learners' existing knowledge while developing new skills in practical contexts[95]. It also helps identify skills applicable in various practice environments and gives an overview of opportunities that motivate learning interest and offer transferable skills for professional development and career growth. This model describes an approach to learning where individuals actively construct their knowledge, with reality shaped by their experiences[75]. The knowledge process involves active learning, contextual learning, constructing meanings, using prior knowledge, motivating learners, sharing authority, facilitating learning, and group learning. It visually represents overlapping, continuous processes that occur throughout the learning journey[100]. Research

competence is essential for teachers, as it significantly enhances the quality of education they provide. By engaging in research, teachers can integrate the latest findings and methodologies into their teaching practices, ensuring that students receive up-to-date and evidence-based instruction. Moreover, research competence contributes to professional development, allowing teachers to stay current with educational trends and contributing to academic discourse. This involvement in research not only increases their authority and credibility within their field but also opens opportunities for career advancement. Additionally, research-active teachers can inspire and motivate students by demonstrating the importance of inquiry and evidence-based learning, promoting a culture of curiosity and critical thinking. Overall, research competence is a vital component for teachers, enhancing their teaching effectiveness, supporting their professional growth, and enriching academic experience for their students.

2.3 Review of Empirical Studies

2.3.1 Research Competence and Mentoring Relationship

Studies reviewed examined the link between mentoring relationships and research competence, considers the implementation of support structures or a wide range of interventions to help learners engage in the researching process and succeed in activities that involve the process of generating, discovering, inventing, and creating new knowledge. Furthermore, these studies put forward strategies educational institutions often employ to increase research competence among academic staff through interaction with each other, which could also be enhanced through networking, seminars, and attending similar academic activities. The research has demonstrated that these strategies and methods are effective in building complex

educational competences directly connected with thought, search, logic, and creative processes of knowledge mastering.

A related study conducted in Catalonia, Spain, examined the influence of mentoring on doctoral students' research self-efficacy through a psychometric lens. Using a quantitative survey design, data were collected from 1,265 doctoral students across 46 programmes via an online platform (Quadratics). The findings revealed that mentoring significantly enhanced students' confidence in conducting research, an effect closely associated with the time and effort invested in their thesis work. Furthermore, the study emphasized that effective mentoring and supervision are essential for doctoral students' academic development and for improving supervisory practices within institutions. These insights strongly relate to the current study on mentoring relationships, lifelong learning strategies, and research competence development among educators in the Office Technology and Management field. While the Catalonia study adopts a quantitative approach, current research used a mixed-method design, offering a richer contextual understanding of mentoring in a resource-constrained environment. Additionally, the Catalonia findings reinforce the argument that mentoring not only benefits individual scholars but also strengthens institutional capacity, a perspective that aligns with my advocacy for policy reforms to enhance research culture in Nigerian higher education[23].

In a similar context, a study explored mentors' perceptions of their professional identity and competency development[57]. Adopting a self-study methodology, the research drew on personal reflections, journals, focus group discussions, and mentoring dialogues to examine mentoring practices. The findings underscored the value of critical reflection, showing that engaging in reflective processes can lead to transformative learning experiences. These experiences not only foster personal and

professional growth for mentors but also enhance their mentoring competencies. The study concluded that when mentors actively pursue strategies to improve their mentoring skills, it cultivates a culture of continuous learning and positively contributes to the broader organisational learning environment[57].

A study investigating postgraduate students in library schools across Southwest Nigeria revealed that these students possess essential research competencies, including the ability to define research problems and formulate relevant questions and hypotheses[2]. Conducted using a descriptive survey design, the study involved 161 students and employed a validated, close-ended questionnaire to gather data. The analysis, which included percentages, means, correlations, and regressions, showed that students demonstrated a solid foundation in research skills. Importantly, the study emphasized the critical role of lecturers in nurturing and sustaining these competencies. It concluded that adopting innovative and student-centred teaching methods in research instruction is vital for maintaining students' positive attitudes toward research. Such approaches not only enhance their ability to conduct independent studies but also improve their capacity to source and apply relevant academic materials in assignments and scholarly work. Ultimately, strengthening research instruction contributes to the overall academic performance and research readiness of postgraduate students[2].

A study conducted in a tertiary hospital in São Paulo, Brazil, explored how mentoring influences research competence among healthcare professionals[69]. Using a quasi-experimental, time-series design, the study involved 35 participants and collected data through virtual meetings. Results showed that those who received mentoring training demonstrated notable improvements in research skills, particularly in critically

analysing literature and selecting appropriate research methods. Participants also showed enhanced critical thinking and better management of the research process. The study concluded that further investigation is needed to fully understand mentoring's role in shaping future researchers and sustaining healthcare services[69].

A research paper was conducted to determine if mentoring directly improves students' research skills[64]. The study gathered data which were analyse from 539 participants. The findings of the study indicated that, firstly, mentoring improves information-seeking skills and information-sharing behaviour and facilitates students' competency development due to the technical knowledge transfer from the faculty mentor to student mentees. Secondly, information literacy constructs and competency development promote research skills, emphasising that students with those behaviours and capacities will achieve enhanced research skills. Finally, the findings suggest that mentoring does not directly translate to improved research skills; rather, information-seeking and sharing behaviours and competency development fully mediate such a link. Thus, mentors must shape this behaviour for mentoring to develop students' research skills[64].

A study conducted in tertiary institutions in Bayelsa State, Nigeria, examined the link between academic mentorship and lecturers' performance. Drawing data from 2,030 junior staff using a validated questionnaire, the study found a strong, statistically significant correlation between mentorship and improved academic performance. Key mentoring elements such as active listening, collaborative learning, shared experiences, and constructive feedback were shown to positively influence lecturers' teaching quality, skills, and delivery. The study recommended that universities

implement structured mentoring programmes to enhance staff capacity, support career growth, and improve overall academic effectiveness[65].

A study explored the interpersonal dynamics of mentorship within the EDUCATE programme, focusing on what makes mentor–mentee relationships effective[27]. Using semi-structured interviews with a mentor and a mentee, the research found that the psychosocial function was central to the mentoring experience, while the mentor emphasized career-related support and programme-specific elements. Frequent interactions and shared research knowledge were identified as key contributors to a successful relationship. Additionally, trust, personality compatibility, and mentor training in psychosocial aspects were highlighted as crucial factors in fostering meaningful and impactful mentorship[27].

A study conducted across nineteen universities in the South-South region of Nigeria examined the impact of mentorship practices on the research productivity of early-career educational psychologists[66]. Using a quantitative research design, data were collected from a population of 723 early-career researchers through a structured questionnaire focused on mentorship and research output. The findings revealed a significant positive relationship between mentorship practices and research productivity. Specifically, the use of cloning and apprenticeship models—where mentors closely guide mentees through research tasks was shown to enhance the ability of early-career researchers to produce scholarly work. The study concluded that effective mentorship is a key driver of research success and recommended that institutions strengthen their mentorship frameworks to support the development of emerging scholars and improve overall academic output[66].

A study conducted among 350 occupational therapy faculty members in the United States investigated the role of mentoring in enhancing research productivity[118]. Using a mentoring questionnaire and descriptive statistical analysis, the study found that mentoring significantly contributed to increased research output, particularly among junior faculty. Interestingly, senior faculty also reported that their own research productivity benefited from mentoring experiences. The study identified several institutional supports such as intramural funding, release time, administrative backing, grant writing seminars, and access to statistical and computing resources as positively correlated with research productivity. Based on these findings, the authors recommended that new faculty members be paired with mentors to support their development in research, teaching, and service. Establishing clear short- and long-term goals and regularly evaluating progress were suggested as effective strategies for helping faculty meet academic expectations and advance in their careers[118].

A study conducted in a private university in Ibadan, South-West Nigeria, explored the effectiveness of mentor–mentee relationships from the perspective of early-career female academics[32]. Using an interpretive qualitative design, the research involved five participants from various departments and collected data through semi-structured interviews. Reflexive thematic analysis revealed that many early-career female academics experienced unmet expectations and challenges in navigating their academic careers. Despite these difficulties, the study found that strong mentor–mentee relationships play a vital role in supporting professional growth. Key themes such as trust, personality compatibility, and the mentor's understanding of psychosocial needs were identified as essential to effective mentoring. The study recommended that while mentors are important, early-career female academics should

also take initiative in their personal and professional development by actively seeking opportunities to build skills and advance their careers[32].

The study on teachers as researchers: skills and challenges in action research examined the competencies and obstacles faced by teachers engaging in action research[11]. Conducted among 147 elementary and secondary teachers in Quezon Province, Philippines, the research revealed that while most teachers demonstrated basic competence in 32 out of 38 research related skills, they struggled significantly with tasks such as selecting appropriate data analysis tools, interpreting results, and publishing their work. Key factors affecting their engagement included limited knowledge, attitudes toward research, and lack of resources. The study emphasized the need for targeted capacity-building initiatives to enhance teachers' research skills and support their professional development[11].

Similarly, another study explored the relationship between mentoring by senior faculty and the current productivity of junior faculty in nursing colleges[119]. The study involved 183 nursing faculty members from eight of the top twenty nursing schools, who responded to a mailed questionnaire. The findings indicated that mentorship, particularly when it involves role-specific modelling and teaching, can predict research-oriented productivity among junior faculty. Additionally, professionally stimulating environments were found to contribute to the ability to predict research activity in junior faculty members. The study also revealed that mentoring enhances the productivity of senior faculty who serve as mentors. The sample's institutional and demographic variables influenced other productivity measures like book publishing and professional service. Implementing such a mentorship model in academic institutions could help address the issue of "revolving door" appointments for junior

faculty members, providing them with greater stability and support in their academic careers[119].

A study investigated the research mentoring experiences of 120 doctoral students in counsellor education programmes. The researchers employed a purposive sampling technique to select a population of 131 doctoral-level students enrolled in Council for Accreditation of Counselling and Related Educational Programmes' accredited counselling programmes across the United States. The findings revealed that research mentorship significantly impacts the overall research productivity of doctoral students. Additionally, the study found no significant effects of gender on the productivity classification of doctoral students. The study concluded with recommendations for the counselling profession to further develop research on the mentorship experiences of doctoral students. These recommendations aim to enhance our understanding of how mentoring can support doctoral students' academic and professional growth, contributing to the advancement of the counselling field[120].

A study conducted on mentorship practices and research productivity among early-career educational psychologists in universities investigated how different mentorship approaches influence the research output of early-career educational psychologists in Nigerian universities[30]. Drawing data from 723 researchers across 19 institutions, the study found that mentorship significantly boosts research productivity. Specifically, cloning where mentors replicate their own research style and practices and apprenticeship (hands-on guidance and collaboration) were shown to have strong positive effects. In contrast, nurturing which focuses on emotional and developmental support had only a minimal impact. The authors concluded that institutions should

prioritize structured mentorship programs, especially those emphasizing cloning and apprenticeship, to enhance the research capabilities of early career academics[30].

2.3.2 Lifelong Learning Strategies and Research Competence

In improving academic achievements, the main priority is the ability to participate effectively and comprehend various educational activities. Educators, particularly in tertiary institutions, must be highly attuned to their teaching methods when imparting information and knowledge to enhance both the learning process and academic performance[121]. Based on this foundation, educators would be able to identify the lifelong learning strategy to be able to facilitate academic prowess in conducting research publications to suit the learner's learning ability. Workable learning strategies could help academic practitioners cope and adapt to the learning requirements in higher education institutions[117]. Besides, academic practitioners are to be responsible for their learning so they can unleash their full potential and consequently perform better in their research output. Applying appropriate strategies in their learning experience will reward them with better research competence. There are few theoretical and practical studies undertaken by researchers that suggest that lifelong learning strategies such as teacher competencies or student-student interaction are fundamental for creating effective learning environments as well as academic achievement[117]. This section reviewed the relevant literature on lifelong learning strategies in academia.

A study investigated the effect of enhancing lifelong learning and professional growth by exploring the role of self-directed learning for university educators in Kuwait[115]. The research employed a deductive and quantitative approach using a questionnaire survey, and data were analyzed through Partial Least Squares Structural Equation

Modeling (PLS-SEM) to test the hypothesized relationships. The sample comprised university educators from both public and private institutions in Kuwait, focusing on lifelong learning factors such as motives, attitudes, and conditions. The results revealed a strong direct link between lifelong learning factors and the professional growth of educators, except for the relationship concerning attitudes toward reflection activities. These findings underscore the effectiveness of self-directed lifelong learning in meeting educators' professional development needs and improving their teaching practice. Consequently, the study recommends that educational institutions prioritize and support lifelong learning initiatives to foster educators' growth and enhance teaching and learning in post-compulsory education settings[115].

A study on incentives and motivations for sharing research data*:* a researcher's perspective which explores the factors influencing researchers' decisions to share their data[91]. The study found that while many researchers are motivated by the potential for increased collaboration, visibility, and scientific impact, significant barriers still exist. These include concerns about data misuse, lack of proper attribution, and the time required to prepare data for sharing. The study highlights the need for clearer policies, better infrastructure, and tailored incentives to encourage data sharing across disciplines. It recommends institutional support, recognition systems, and training to foster a more open research culture[91].

A doctoral study explores two research lines beginning teachers' reading attitude and motivation: a study into the evolution from teacher training to entrance in the teaching profession and into the impact of a teacher professionalization programme[99]. The first line examined pre-service teachers' reading attitudes, focusing on both affective (emotional) and conative (motivational) components. It profiled these attitudes at the start of teacher education and tracked their development until graduation. The study

found that reading attitudes were linked to reading behaviour, perceived reading ability, and later, reading-promotive behaviour. The second line evaluated the impact of a year-long continuing professional development (CPD) programme designed to enhance beginning primary school teachers' reading motivation and self-efficacy in promoting reading among students. The findings showed that targeted CPD can positively influence teachers' confidence and motivation to foster reading engagement in their classrooms[99].

In a related vein, another study was conducted to investigate factors that influence university teachers' lifelong learning strategies from the perspective of professional development[117]. Non-probability sampling survey research design was employed in the study. The population of the study was full-time teachers working in seven universities located in Shandong Province, China. Significant positive relationships among variables demonstrated organisational learning culture, managerial effectiveness, learning content focus, collaborative learning, and psychological empowerment as influential factors. The study found that universities offered limited and less suitable learning content and didn't provide a variety of learning opportunities, which could negatively affect teachers' psychological empowerment both physically and mentally[117].

A study examined the correlation between learning strategies and the academic achievements of undergraduate students[121]. A self-report questionnaire was designed to collect data from a sample of one thousand one hundred and twenty-seven students at Nong Lam University, Ho Chi Minh City, Viet Nam, who participated in the study. The results revealed a lack of correlation between academic achievement and six sub-scales of learning strategies, namely anxiety, concentration, information processing,

selecting main ideas, self-testing, and test strategies. In fact, only three sub-scale areas attitudes, motivation, and study aid were discovered to have a close relationship with students' achievement. Therefore, the study concluded that we need to organise special training or workshops to raise students' awareness and enhance their learning and studying strategies[121].

A related study investigated the relationship between lifelong learning and attitudes toward the teaching profession among 515 pre-service teachers in Turkey's Central Anatolia region[122]. Using a correlational survey design and a researcher-developed questionnaire, the study found a moderate, positive, and statistically significant link between lifelong learning motivation and professional attitudes. Specifically, increased motivation and persistence in lifelong learning were associated with stronger values such as creativity, mental stimulation, and adaptability in teaching. The findings suggest that promoting lifelong learning among teachers and pre-service educators can enhance both personal growth and professional effectiveness, contributing to a more dynamic and responsive educational workforce[122].

A study conducted at a vocational high school in Turkey examined the relationship between lifelong learning and epistemological beliefs among 360 associate degree students[123]. Using correlational methods and standardized questionnaires, the study found a moderate, positive link between lifelong learning and the "effort" dimension of epistemological beliefs, while weaker associations were observed with the "single truth" and "ability" dimensions. Additionally, demographic factors such as gender, age, and department showed no significant impact on students' lifelong learning levels. The findings suggest that students' motivation and persistence in learning are

more closely tied to their beliefs about effort than to fixed views of knowledge or ability[123].

A study conducted at Sakarya University in Türkiye explored the relationship between lifelong learning trends and online information searching strategies among 317 pre-service teachers[124]. Using a correlational research design and standardized scales, the study applied multiple and stepwise regression analyses to identify predictors of lifelong learning. The results showed a significant relationship between lifelong learning and all dimensions of online information searching strategies. Notably, lifelong learning was positively associated with strategies like evaluation, purposeful thinking, trial and error, selection of main ideas, control, and problem-solving, while a negative correlation was found with the disorientation strategy. These findings suggest that effective online search strategies play a key role in supporting lifelong learning among pre-service teachers[124].

In a similar vein, another study investigated the relationship between the lifelong learning tendencies and teacher self-efficacy levels of social studies teacher candidates[125]. The study adopted a descriptive research design but with mixed approaches to data collection and analysis. The study group of research consists of three hundred and seven social studies teacher candidates studying at the education faculty of a public university in the 2016–2017 academic year. The research instrument was a questionnaire. The findings from this study revealed that lifelong learning tendencies and teacher self-efficacy levels of teacher candidates show statistically significant differences in terms of grade level and taking education for personal and professional development. It is concluded that teacher self-efficacy

levels of teacher candidates are a significant predictor of their lifelong learning tendencies[125].

A research paper was done to examine the lifelong learning tendencies of English teachers, their professional competencies, and their self-efficacy in integrating technology[126]. For this purpose, a descriptive survey model was used in this study. As a result of this research, it was determined that teachers' self-efficacy in integrating technology and professional competencies are predictors of their lifelong learning tendencies. It is thought that the results of this study will contribute to raising awareness about the impact of teachers' self-efficacy and professional development on technology integration on issues surrounding their lifelong learning tendencies[126].

A study involving 322 teachers examined the relationship between lifelong learning tendencies and digital literacy levels using quantitative survey methods[127]. The findings showed that teachers demonstrated strong lifelong learning motivation and confidence in their digital literacy skills. A significant correlation was found between the two, suggesting that teachers who actively engage with digital tools are more inclined toward continuous learning and personal development. The study concluded that digital literacy could predict lifelong learning tendencies, and teachers who embrace educational technologies are better equipped to stay current and adapt to evolving professional demands[127].

2.4 Conceptual Model

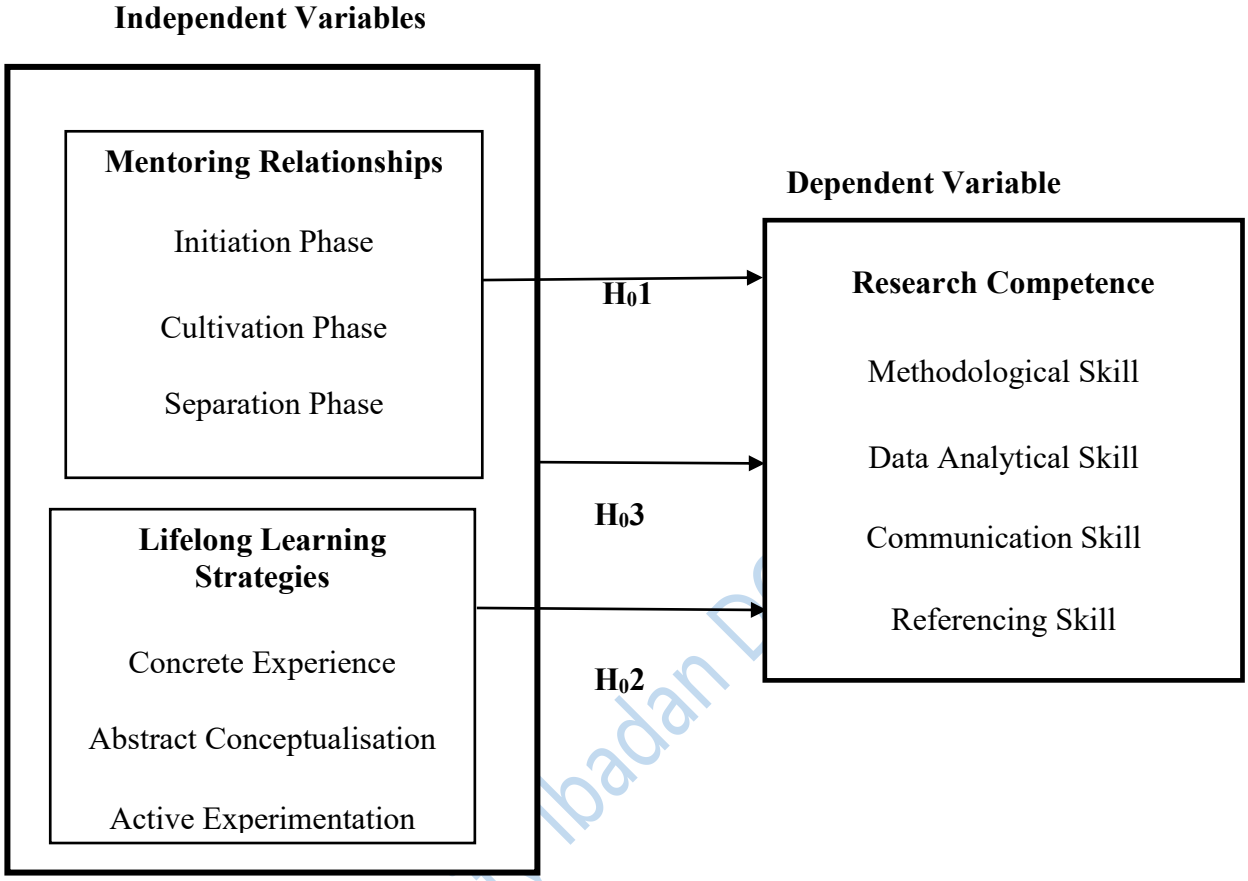

Figure 2.4: Conceptual Model on Mentoring Relationship, Lifelong Learning Strategies and Research Competence

Source: Researcher's Conceptual Model, 2024

The conceptual framework in figure 2.4 shows the model of three variables: the dependent variable is research competence, the first independent variable is mentoring relationship, and the second independent variable is lifelong learning strategies (LLS). Research competence (dependent variable) within the context of this study will be measured with 4 (four) measures which are: methodological skills, data analytical skills, communication skills, and referencing skills which were adapted from existing literatures[7,8,9]. Mentoring relationships (first independent variable) measures were derived from Kram's developmental theory of mentoring[31,55,73]. These measures

include phases of mentoring relationships which are: initiation, cultivation, separation, and redefinition stages and all the four measures were adopted for this study to measure the mentoring relationship. Furthermore, the second independent variable is LLS Within the context of this study, the measures for this variable were derived from Kolb's ELT and these will be adopted to provide explanation for lifelong learning strategies[75,95,96]. Kolb's ELT has four variables which were adopted to measure the lifelong learning strategies in this study, and these include: concrete experience, abstract conceptualization, active experimentation, and reflective observation[75]. All four measures were adopted to represent lifelong learning strategies[100].

The choice of the three variables was based on the existing gaps in relevant literature with indication from scientific results that the existence of a formalized mentoring relationships within the studied polytechnics and the utilization of lifelong learning strategies of OTM teaching staff may influence their research competence output. This study will evaluate the three hypotheses reflected in the conceptual framework. The first hypothesis H01 seeks to determine the influence of mentoring relationships (initiation, cultivation, separation, and redefinition) on research competence (methodological, data analytical, communication, and referencing skills) of OTM teaching staff in public polytechnics in Southwest, Nigeria. The second hypothesis will investigate the influence of lifelong learning strategies on their research competence, while the third hypothesis is to determine the combined influence of mentoring relationships and lifelong learning strategies on the research competence of the OTM teaching staff in the public polytechnics in Southwest, Nigeria.

2.5 Summary of Literature Review

This chapter reviewed relevant literature regarding this study, explained the overview of research competence, explored its meaning, importance, and significance, and discussed empirical findings on research competence of lecturers from various occupations within and outside Nigeria. The review of literature on the research competence of lecturers in academic institutions indicates that the academic reputation of academic staff lies in their ability to investigate scientifically and produce innovative ideas, knowledge, and new discoveries that will improve existing practices. Processes and strategies in the pursuit of an active role in research, faculty members are required to do research as part of their academic function and activities[113,114]. Empirical evidence has suggested that research management is one of the skills that lecturers must possess as they work in academic and non-academic environments[113,114,116]. These skills include structuring the setting in which research is conducted to promote the discovery of new information and its application in practice; possessing acceptable researching abilities and adequate understanding of the project; working well in scenarios involving a variety of projects with varying goals; collecting and analysing data; recognising the idea of results-based management of research operations; and using established reporting procedures to inform the other researchers[8,9,10,128].

Furthermore, this study stresses the need for the management of selected polytechnics to provide training and seminars for the faculty members to widen their research opportunities and increase their global research involvement. Nevertheless, studies have been conducted to determine faculty members' level of competency in writing and publishing research papers in terms of conceptual skill, computational skills, and technical skills[8,9,10,128]. These studies were conducted to determine the level of

satisfaction with the facilities/resources/funds provided by the institution to promote research competence and activities for the enhancement of the research capability of the institutions. However, these studies do not cover how the faculty members, through lifelong learning strategies, can enhance their research capabilities; thus, this study intends to cover this gap. In addition, review of literature on mentoring relationship in this study has revealed paucity of studies among faculty members especially in the OTM departments in polytechnics in Nigeria.

Literature reviewed so far in this study shows that mentoring relationships is the most suitable relationship that would make positive impacts on the professional development of the academic staff[27,55,73]. Such relationships give individuals the courage to do the things which they think they cannot do and guide their professional development or even change their lifestyle positively. Literature further indicated that mentoring can be a life-motivation relationship that inspires mutual growth, learning, and development[31]. This may point to the reason mentoring relationship has the capacity to transform individuals, groups, organizations, and communities. Research on mentoring relationships has largely focused on organizational work settings and on undergraduate and graduate students, with much less attention to the antecedents and benefits of mentorship provided among faculty members which has been shown to be critical to professional development and career satisfaction among faculty, such that formal mentoring programmes for faculty have proliferated across academic institutions. Despite continued efforts to promote mentoring relationships of faculty members, studies show that early career scholars may not be receiving the mentorship that they require[32,54].

This narrative may be true for faculty members in most polytechnics in Nigeria, where the OTM programme is being offered, who may not have the strategies to influence the mentoring process, which has led to poor competency levels. Another factor may be linked to lack of adequate training to display pedagogical skills as well as research competence in the OTM profession due to lack of mentors in the field. Furthermore, aside from their lack of mentoring relationships, there may also be a lack of lifelong learning tendencies to influence professional performance, as there are limited universities that offer the same programme to PhD levels. While there may be a considerable number of international studies on this subject, the issue has not received adequate attention in Nigeria. However, literature has provided support to the notion that the lifelong learning strategies of lecturers are complex and dependent on several factors[75,104]. An understanding of lecturers' lifelong learning strategies could help solve related educational issues, facilitate the learning process, and thus improve the academic profession. Recent research on mentoring early career researchers: the study only gathered data from mentees in the field and has not factored in the mentor's account[27,32]. This study will therefore be able to close this gap, as it intends to collect data from all heads of department of the twelve polytechnics to be able to compare their responses with the mentee's feedback. It is important to note that the literature reviewed in this study on mentoring relationships and lifelong learning strategies does not include research competence in its investigation. This, however, serves as one of the gaps this study tends to cover.

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Chapter Three

Methodology

This chapter outlines the research methods employed to investigate the objectives, address the research questions, and evaluate the hypotheses formulated to gather the necessary data. The methods are organised within the following framework: research design, study population, sample and sampling technique, description of the research instrument, validity of the research instrument, reliability of the research instrument, data collection methods, and data analysis methods.

3. 1 Research Design

This study adopted a convergent parallel mixed-method design, which involves collecting quantitative and qualitative data concurrently and then integrating the results to provide a comprehensive understanding of the research problem. The rationale for using this design lies in its ability to augment knowledge generation, elucidate outcomes, and strengthen the validity of findings by triangulating multiple data sources. In the quantitative phase, a descriptive survey research design was employed to analyse a subset of the study population, offering a cost-effective and time-efficient alternative to longitudinal studies. Simultaneously, the qualitative phase consisted of focus group interviews with heads of Office Technology and Management (OTM) departments in public polytechnics across Southwest Nigeria. This approach enabled the collection of diverse viewpoints and rich contextual insights on mentoring relationships and research competence development. The concurrent collection of data ensured that both strands addressed the same research questions, allowing for integration during interpretation and enhancing the depth and credibility of the findings.

3.2 Population of the Study

The study population consists of one hundred and eighteen OTM teaching staff from public polytechnics in Southwest Nigeria. For data collection, respondents were divided into two groups: one hundred and six teaching staff and twelve heads of department. These approaches aim to facilitate quick and reliable information gathering within a reasonable time and to obtain the necessary input to achieve the research objectives.

Table 3.1: Population of OTM Teaching Staff in Public Polytechnics in Southwest Nigeria

S/N	Name of Public Polytechnics	Teaching Staff	Heads of Department
1	Federal Polytechnic, Ado Ekiti, Ekiti State	12	1
2	Federal Polytechnic Ede, Osun State	10	1
3	Federal Polytechnic Ilaro, Ogun State	14	1
4	Yaba College of Technology, Lagos State	10	1
5	Rufus Giwa Polytechnic, Owo Ondo State	10	1
6	Adeseun Ogundoyin Polytechnic, Eruwa	9	1
7	Moshood Abiola Polytechnic, Ogun State	5	1
8	Osun State College of Technology, Esa Oke	5	1
9	The Polytechnic Ibadan, Oyo State	10	1
10	Lagos State Polytechnic, Ikorodu	8	1
11	Osun State Polytechnic, Iree	8	1
12	Gateway Polytechnic, Sapaade	5	1
	Total	**106**	**12**

Sources: Institutions' Establishment 2024

3.3 Sample Size and Sampling Technique

The sample size for this study consists of 118 academic staff, encompassing all teaching staff in the OTM departments from twelve public polytechnics in Southwest Nigeria. Given the small number of respondents, the total enumeration sampling technique was employed to select the entire population with the same characteristics. All respondents share similar characteristics as teaching staff within the Office Technology and Management (OTM) departments, making it feasible to collect data from every member. Using total enumeration enhances the reliability and validity of the findings, as it eliminates sampling error and ensures comprehensive coverage of the population[4]. Given the limited number of teaching staff in the OTM field, this method allows the researcher to make accurate generalisations about the entire group without relying on probabilistic sampling.

3.4 Description of the Research Instrument

Two sections of data gathering were employed for this study. For the first section, a structured questionnaire was used to gather data from respondents for quick access and replies to meet the purpose of the study. The instrument was tagged with the Research Competence Mentoring Relationships and Lifelong Learning Scale (RCMRLLS). The study followed the Likert scale design, which permits the researcher to provide alternatives for respondents to pick from a structured questionnaire. Furthermore, qualitative methodologies were used through a semi-structured online group interview. The questionnaire includes the following sections:

Section A: The researcher developed this section to collect demographic information of respondents, and the remainder contained biodata of respondents measured through

five indices: gender, age, academic qualification, employment level, and years of experience.

Section B: The Research Competence (RC) scale includes four aspects: methodological skills, data analysis skills, communication skills, and referencing skills. The items were adapted from existing literature, given the reliability testing result as a guide in formulating the questions with Cronbach alpha coefficients of 2.7 and 3.32, respectively[5,6]. The scale used a four-point modified Likert-type format to assess response using 4= highly skilled, 3= moderately skilled, 2= weakly skilled, and 1= not skilled. Examples of questions include: 'What is your ability to identify the choice of research design based on the objectives of the study?' and 'How well can you conduct interviews for the purpose of data collection?' This study reported a Cronbach's alpha coefficient score of 0.891.

Section C: The Mentoring Relationship (MR) scale consists of four sub-variables: initiation stage, cultivation stage, separation stage, and redefinition stage. These items were adopted from Kram's Developmental Theory of Mentoring with a Cronbach alpha coefficient score of 0.74[7,8]. Each of the adapted questionnaires is considered dependable given the reliability evaluation result reported by scholars. The response options provided in this study's questionnaire followed a 4-point Likert-type scale of 4= strongly agree, 3= agree, 2= disagree, and 1= strongly disagree. Examples of questions are 'My mentor has confidence about my confidence' and 'I interact with my mentor around work tasks.' From this study a Cronbach's alpha coefficient score of 0.80 was recorded.

Section D: Lifelong Learning Strategies (LLS) scale consists of four sub-variables: concrete experience, active experimentation, abstract conceptualisation, and reflective

observation. The items were adapted from experiential learning theory for lifelong learning strategies with Cronbach's alpha coefficient scores of 0.7, 0.8, and 0.76, respectively, which suggest that the instrument is dependable[8,9,10]. The scale employed a four-point Likert style of 4=strongly agree, 3=agree, 2=disagree, and 1=strongly disagree. Examples of statements are 'I can relate the course materials to what I already know' and 'I can treat the course materials as a starting point of my career.' This study reported a Cronbach's alpha coefficient score of 0.82 for lifelong learning strategies.

Semi-structured interviews were conducted online, where participants were recruited into groups to a video conference room via Microsoft Teams to share their perceptions and experiences regarding the variables in the study. This qualitative dialogue enabled participants to respond to answers to adapted semi-structured questions[11]. The online interview sections were conducted in two groups for all the heads of department or one teaching staff at the chief lecturer cadre from each polytechnic who serve as the mentors. At each session of the group interview, two research assistants were recruited along with the researcher to facilitate, document, categorise, and analyse the qualitative data. Interview questions in line with the research question for the study are, 'Can you share your perspective on the level of research competence within the OTM teaching profession?'

3.5 Validation of the Research Instrument

To validate this instrument, the content was gathered through a related literature review and modified from questionnaires that had been used by other researchers. For content and construct validity, the research instruments were verified and ascertained by senior lecturers and other experts within the information management field, with

the final review completed by the supervisor**.** The final questionnaire and interview questions were based on the input of these academic practitioners.

3.6 Reliability of the Research Instrument

The researcher put the questionnaires to a reliability test to assess internal consistency of all items measuring each variable in the study. Internal consistency was used to establish the reliability of the replies to the elements of the questionnaire. Cronbach's alpha coefficient is frequently employed to measure internal consistency in multi-item evaluation instruments, such as this research. A Cronbach's alpha value of > 0.7 but < 1 score for a questionnaire is determined to be trustworthy. The reliability of the instrument was done via a pilot study employing 32 copies of the questionnaire, which were distributed to OTM teaching staff at Auchi Polytechnic Edo State, Federal Polytechnic Bida, and Kwara State Polytechnic Ilorin, which are not part of the research, and a 100% response rate was achieved. The results of the reliability analysis for all study variables are presented in Table 3.2.

Table 3.2 Reliability Test of Instrument

Variables	Number of items	Composite Reliability	Cronbach's Alpha
Research Competence	16	0.928	0.891
Mentoring Relationship	12	0.916	0.804
Lifelong learning	12	0.908	0.826

Source: Field Survey, 2025

As shown in Table 3.2, the reliability analysis indicates that the research competence construct, comprising sixteen items, achieved a Cronbach's Alpha score of 0.891. Similarly, the mentoring relationship construct, with twelve items, also recorded a Cronbach's Alpha of 0.891. The lifelong learning construct, consisting of twelve

items, yielded a Cronbach's Alpha of 0.826. These results demonstrate that all constructs exceed the commonly accepted threshold of 0.70, indicating strong internal consistency and, therefore, reliability of the instrument. Furthermore, the composite reliability values, which also surpass the acceptable benchmark, reinforce the findings from Cronbach's Alpha analysis.

3.7 Method of Data Collection

Primary data were collected to address the study gap using a structured questionnaire aligned with the study objectives. The instrument is well-suited for a cross-sectional study design, as it facilitates the collection and analysis of data regarding respondents' perceptions at a specific point. Additionally, data were also collected through interview. The combination of quantitative and qualitative research methods enhanced the study's outcomes. The researcher obtained an introduction letter from the Department of Information Management at Lead City University to seek permission from the authorities of the selected polytechnics. This procedure helped streamline the administration, retrieval, and response rate of the questionnaires and interviews. Data were collected via a Google Form online platform, with the instrument distributed electronically through various platforms, such as WhatsApp, email, and text messages, to ensure that respondents had access to the link sent to them at their convenience. This approach was considered effective for quickly reaching all potential respondents required to complete the questionnaire.

3.8 Method of Data Analysis

The researchers analysed the collected data using descriptive statistics, inferential statistics, and thematic analysis. Descriptive statistics, frequency distributions, means, standard deviations, and response percentages, were analysed which help answer the

three research questions one to three in this study. To evaluate the hypotheses formulated, simple regression was employed to analyse hypotheses 1 and 2 while multiple regression analysis was used to test hypothesis 3. All hypotheses were evaluated at a 0.05 significance level. The survey data were analysed using SPSS (Statistical Package for the Social Sciences), version 25. Additionally, interview data related to the study's objectives were coded and analysed thematically to support the conclusions drawn from the quantitative results.

Endnotes

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Chapter Four

Results and Discussion of Findings

4.0 Introduction

This section presents the empirical findings derived from the analysed data, along with their interpretations and reflections on the research conclusions. The study aimed to examine the influence of mentoring relationships and lifelong learning strategies (LLS) on the research competence of teaching staff in the Office Technology and Management (OTM) field in public polytechnics in Southwest Nigeria. To achieve these objectives, data were collected through questionnaire and interviews, which served as the primary instruments for gathering relevant information. This chapter includes details on respondents' demographics, variable-specific responses, and hypothesis testing. Data analyses were performed using Statistical Product and Service Solutions (SPSS) version 25. The chapter ended with a look at the main results. For the quantitative study, questionnaire was administered online and a total of one hundred and five (105) copies were filled and returned. All of the copies that were sent back were certified as being properly filled and functional. Consequently, the response rate is 99.06%. The data response rate table is explained in table 4.1

Table 4.1: Response Rate

Response Rate: Deposit Money Banks	Frequency	Percent (%)
Filled form and used	105	99.06%
Not Filled	1	0.94%
Attrition Rate		
Expected number of Questionnaire	106	100%

Source: Field Survey Data (2021)

4.1 Demographic Data of Respondents

This section displays the demographic profiles of the individuals who responded to the survey. From Table 4.1, the results show the gender, age brackets, highest academic qualification, current grade level/cadre, and length of service (in years) of the respondents

Table 4.2: Demographic Profiles of the Respondents

Variables	Measurement	Frequency	Percentage
Gender	Male	47	44.8%
	Female	58	55.2%
Age bracket	21-30	06	5.7%
	31-40	24	22.9%
	41-50	44	41.9%
	51-60	21	20.0%
	61 and above	10	9.5%
Highest academic qualification	HND	16	15.2%
	B. Sc/BEd.	28	26.7%
	PGD	09	8.6%
	M.Sc./MBA/MA	37	35.2%
	MPhil/PhD	15	14.3%
Current grade level/cadre	No response	47	45.3%
	Teaching assistant	06	5.7%
	Assistant lecturer	07	6.7%
	Adjunct lecturer	01	1.0%
	Chief lecturer	06	5.8%
	Lecturer III	04	3.8%
	Lecturer II	06	5.7%
	Lecturer I	02	1.9%
	Principal lecturer	02	1.9%
	Senior lecturer	01	1.0%
	Instructor	04	3.8%
	Principal instructor	07	6.7%
	Senior instructor	01	1.0%
	Chief instructor	11	10.7%
Length of service	Below 6 yrs	15	14.3%
	6-10 years	30	28.6%
	11-15 years	27	25.7%
	16 years and above	33	31.4%
	Total	**105**	**100.0%**

Source: Field Work, 2025

According to Table 4.2, 47 respondents (44.8%) were male, and 58 respondents (55.2%) were female, demonstrating a higher proportion of female respondents. This pattern reflects an equal gender distribution among OTM teaching personnel. According to the age brackets, 06 respondents (5.7%) were between 21 and 30 years old, 24 respondents (22.9%) were between 31 and 40 years old, 44 respondents (41.9%) were between 41 and 50 years old, 21 respondents (20.0%) were between 51 and 60 years old, and 10 respondents (9.5%) were 61 years or older. The demographic table indicates that many of the respondents were between the ages of 41 and 50, which suggests that most of the OTM teaching staff are in the middle stage of their careers. Merely 5.7% are under the age of 30, which shows that not many young people are entering the OTM field. The profile of respondents by highest academic qualification shows that 16 respondents (15.2%) had an HND, 28 respondents (26.7%) had a BSc., 09 respondents representing 8.6% had a PGD, 37 respondents representing 35.2% had an M.Sc./MBA/MA, and 15 respondents representing 14.3% had an MPhil/PhD. The results indicate a high level of education among the respondents, with many holding M.Sc./MBA/MA degrees. Nonetheless, with 15% of the teaching faculty in possession of higher diploma certification and just 14.3% possessing MPhil/PhD degrees, there exists an opportunity for further academic advancement within the workforce.

The length of service result shows that 15 respondents amounting to 14.30% are at their early career and has spent below 6 years within the system while 30 respondents representing 28.6% were has 6-10 years' experience, 27 who are 25.7% are counting 11-15 years, 33 respondents representing 31.4% are within the category of teaching staff who have 16years and above. These statistics revealed that highest percentage of the staff are more experienced that those who are not. This indicates a good

proportion of staff have worked in the polytechnics for substantial years thereby acquiring more knowledge on the job. This shows that the academic workforce is largely experienced or seasoned, which is interpreted positively as meaning that many personnel have had time to develop good research and teaching skills.

The demographic profile by current grade level or cadre shows that 06 respondents representing 5.7% were teaching assistants, 07 respondents representing 6.7% were assistant lecturers, a respondent representing 1.0% was categorised as an Adjunct lecturer, 05 respondents representing 4.8% were in the chief lectureship cadre, 04 out of the respondents representing 3.8% were on lecturer III, 06 respondents representing 5.7% were lecturer II, 02 respondents representing 1.9% were lecturer I, 02 respondents representing 1.9% were principal lecturers, a respondent representing 1.0% was senior lecturer, 04 respondents representing 3.8% were instructors, 07 respondents representing 6.7% were principal instructors, a respondent representing 1.0% was senior instructor, 11 respondents representing 10.7% were chief instructors. Nevertheless, a notable percentage (45.3%) of respondents did not provide information regarding their present academic level. This lack of information may stem from ethical concerns related to confidentiality and privacy regarding their official designation.

On the other hand, the number of participants who disclose their current grade is characterised by small numbers across various academic and technical ranks. This indicates a deficiency in standardisation regarding staff positions, the presence of overlapping roles, or ambiguity in career progression paths. Staff members may be isolated in their roles and require effective mentorship or peer collaboration. Additionally, there may be a need for institutional planning to align staff

qualifications with their respective responsibilities. This study therefore indicates the necessity for succession planning and promotion pathways. The profile by length of service indicates that 15 respondents, representing 14.3%, were below six years in service; 30 respondents, or 28.6%, had served for six to 10 years in service; 27, or 25.7%, had served for 11 to 15 years in service; and 33, representing 31.4%, were 16 years or more. This indicates that some respondents had been on duty for 16 years and above in service, suggesting an experienced workforce possessing significant institutional knowledge and expertise within the public polytechnics in Southwest, Nigeria.

Overall, the demographic profile of respondents shows that OTM teaching staff in public polytechnics in Southwest Nigeria have a lot of experience, a fair mix of genders, and the right academic qualifications, with many being mid-career professionals. The limited numbers of younger staff and PhD holders suggest potential difficulties in succession planning and academic advancement. Also, there is a divergent yet fragmented academic framework, with a considerable number of the academic workforce who do not disclose their grade level. This may indicate institutional discrepancies, insufficient career clarity, or administrative deficiencies in classifying the teaching staff's grades.

4.2 Data Presentation

4.2.1 Analysis of Research Questions

Research Question One: What is the level of research competence possessed by OTM teaching staff in public polytechnics in Southwest, Nigeria?

Table 4.3a: Analysis of Responses on Level of Research Competence Possessed by OTM Teaching Staff in public Polytechnics in Southwest, Nigeria

Methodological Skills	Highly skilled	Moderately skilled	Weakly skilled	Not skilled	Mean
Identifying the choice of research design based on the objectives of the study	47 (44.8%)	50 (47.6%)	5 (4.8%)	3 (2.9%)	3.34
Determining the appropriate sample size using appropriate techniques	43 (41.0%)	55 (52.4%)	5 (4.8%)	2 (1.9%)	3.32
Selecting a sample that represents the population of a study	53 (50.5%)	45 (42.9%)	5 (4.8%)	2 (1.9%)	3.42
Conducting interviews for the purpose of data collection	46 (43.8%)	47 (44.8%)	9 (8.6%)	3 (2.9%)	3.30
Weighted Mean					3.35
Data Analysis Skills					
Collecting scientific data in a systematic manner	31 (29.5%)	59 (56.2%)	9 (8.6%)	6 (5.7%)	3.10
Analysing gathered data in research	34 (32.4%)	49 (46.7%)	14 (13.3%)	8 (7.6%)	3.04
Interpreting a quantitative analysed data	39 (37.1%)	52 (49.5%)	11 (10.5%)	3 (2.9%)	3.21
Interpreting a qualitative analysed data	33 (31.4%)	52 (49.5%)	13 (12.4%)	7 (6.7%)	3.06
Weighted Mean					3.10
Communication Skills					
Conveying research ideas using structured and effective academic writing	62 (59.0%)	36 (34.3%)	7 (6.7%)	0 (0.0%)	3.52
Confident in presenting my research findings at conferences	56 (53.3%)	38 (36.2%)	8 (7.6%)	3 (2.9%)	3.40
Adapting presentation style to suit different academic audiences	45 (42.9%)	47 (44.8%)	10 (9.5%)	3 (2.9%)	3.28
Effectively communicating research ideas through oral presentations	54 (51.4%)	40 (38.1%)	8 (7.6%)	3 (2.9%)	3.38

Referencing Skills	Highly skilled	Moderately skilled	Weakly skilled	Not skilled	Mean
Identifying different referencing styles for conducting research	44 (41.9%)	51 (48.6%)	7 (6.7%)	3 (2.9%)	3.30
Paraphrasing words to avoid plagiarism in research	47 (44.8%)	49 (46.7%)	6 (5.7%)	3 (2.9%)	3.33
Using digital scientific systems to cite relevant literature	32 (30.5%)	54 (51.4%)	15 (14.3%)	4 (3.8%)	3.09
Using the correct format to list citations from several sources	33 (31.4%)	56 (53.3%)	10 (9.5%)	6 (5.7%)	3.10
Weighted Mean					3.21
Overall Weighted Mean					**3.27**

Decision rule: 1.0 – 1.99= not skilled; 2.0 – 2.49 = weakly skilled; 2.5-3.49 = moderately skilled; > 3.5-40 = highly skilled

Source: Field Survey, 2025

Table 4.3a shows that 47.6% of respondents were reportedly skilful in choosing the appropriate research design based on the study's objectives, 44.8% were moderately skilled, 4.8% were weakly skilled, and 2.9% were not skilled. On average, the responses have a mean value of 3.34, which indicates that 52.4% of respondents were moderately skilled in determining the appropriate sample size using appropriate techniques, 41.0% were highly skilled, 4.8% were weakly skilled, and 1.9% were not skilled. On average, the responses for this item indicate a mean value of 3.32. In addition, 50.5% of respondents were highly skilled in selecting a sample that represents the population of a study, 42.9% were moderately skilled, 4.8% were weakly skilled, and 1.9% were not skilled. The average responses reveal a mean value of 3.42. Also, 44.8% of respondents were moderately skilled in conducting interviews for the purpose of data collection, 43.8% were highly skilled, 8.6% were weakly skilled, and 2.9% were not skilled. The average responses for this item have a mean value of 3.30. The weighted mean is valued at 3.35, suggesting that the

methodological skills of the respondents are moderately high among the OTM teaching staff. The results reveal that OTM teaching staff possess a consistently moderate level of methodological skills, reflecting their confidence. However, the 10% of staff exhibiting inadequate or no skills suggests a need for additional training and development opportunities. This would augment their methodological skills, particularly in transitioning from a moderate to a higher degree of competence

Data analysis skills, Table 4.2a indicates that 56.2% of respondents were moderately skilled in collecting scientific data in a systematic manner, 29.5% were highly skilled, 8.6% were weakly skilled, and 5.7% were not skilled. The answers show that the mean value is 3.10 on average. Moreover, 46.7% of respondents were moderately skilled in analysing the gathered data in research, 32.4% were highly skilled, 13.3% were weakly skilled, and 7.6% were not skilled. On average, the responses for this item indicate a mean value of 3.04. Also, 49.5% of respondents were moderately skilled in interpreting quantitatively analysed data, 37.1% were highly skilled, 10.5% were weakly skilled, and 2.9% were not skilled. On average, the responses indicate a mean value of 3.21. In addition, 49.5% of respondents were moderately skilled in interpreting qualitatively analysed data, 31.4% were highly skilled, 12.4% were weakly skilled, and 6.7% were not skilled. On average, the responses for this item indicate a mean value of 3.06. The weighted mean is valued at 3.10, which suggests that the data analysis skills of the respondents are high. The findings indicate that the OTM teaching staff in the selected polytechnics demonstrated a moderate level of data analysis skills. Among the four measures of research competency, data analytical skills had the lowest score of 20.9%, particularly in the analysis of data when quantitative and qualitative methods are combined, suggesting a potential skill deficiency. Weakly or poorly skilled responses are present, ranging from 8.6% to

13.3% across all examined items. This study further suggests that although the staff may possess confidence in their data analysis capabilities, there exists potential for enhancement, notably in data analysis, interpretation, and the application of statistical methods. These skills would improve their research effectiveness and enhance their trust in managing research data.

According to Table 4.2a, for communication skills, 59.0% of respondents were highly skilled in communicating research ideas using effective written communication, 34.3% were moderately skilled, 6.7% were weakly skilled, and none were not skilled. On average, the responses indicate a mean value of 3.52. Results also indicate that 53.3% of respondents were highly skilled in confidence when presenting their research findings at conferences, 36.2% were moderately skilled, 7.6% were weakly skilled, and 2.9% were not skilled. On average, the responses for this item indicate a mean value of 3.40. In addition, 44.8% of respondents were moderately skilled in adapting presentation styles to suit different academic audiences, 42.9% were highly skilled, 9.5% were weakly skilled, and 2.9% were not skilled. On average, the responses indicate a mean value of 3.28. Also, 51.4% of respondents were highly skilled in expressing research ideas using effective oral communication, 38.1% were moderately skilled, 7.6% were weakly skilled, and 2.9% were not skilled. On average, the responses for this item indicate a mean value of 3.38. The weighted mean has a value of 3.40, which suggests that the communication skills of the respondents are moderately high. The result shows that communication skill emerged as the most robust aspect of the research competencies examined in this study. The result indicates that most respondents possess the capability to effectively communicate their research to their audience, with written communication achieving the highest mean score of 3.52. This suggests that OTM faculty are proficient in articulating their

research concepts in both written and verbal forms. A mean score of 3.38 was observed for adjusting presenting styles to different audiences, indicating a need for development in the flexibility of tailoring messages to diverse audiences. The communication skills of the OTM teaching staff are well developed and consistently strong.

For referencing skills, Table 4.3a indicates that 48.6% of respondents were moderately skilled in identifying different referencing styles for conducting research, 41.9% were highly skilled, 6.7% were weakly skilled, and 2.9% were not skilled. On average, the responses indicate a mean value of 3.30. Also, 46.7% of respondents were moderately skilled in paraphrasing words to avoid plagiarism in research, 44.8% were highly skilled, 5.7% were weakly skilled, and 2.9% were not skilled. On average, the responses for this item indicate a mean value of 3.33. Moreover, 51.4% of respondents were moderately skilled in using digital scientific systems to cite relevant literature, 30.5% were highly skilled, 14.3% were weakly skilled, and 3.8% were not skilled. On average, the responses indicate a mean value of 3.09. In addition, 53.3% of respondents were moderately skilled in synthesising relevant citations in the required format from multiple sources, 31.4% were highly skilled, 9.5% were weakly skilled, and 5.7% were not skilled. On average, the responses for this item indicate a mean value of 3.10. The weighted mean is valued at 3.21, which suggests that the referencing skills of the respondents are high. The OTM teaching staff showed a moderate to elevated level of reference skills, with paraphrasing being the most notable strength for preventing plagiarism. This finding demonstrates a robust understanding of academic honesty and citation standards. The areas of weakness include the use of digital citation systems, which had a mean score of 3.09, and the synthesis of citations from diverse sources, which had a score of 3.10.

The results suggest that, while their core referencing skills are robust, there is a notable lack of confidence in utilising digital technologies and integrating various references, as reported by some of the respondents. The findings highlighted the necessity for specialised training in contemporary citation tools and methodologies. The overall weighted mean for level of research competence possessed by OTM teaching staff in public polytechnics in Southwest, Nigeria, is 3.27. This indicates that OTM teaching staff in public polytechnics in Southwest, Nigeria possesses a moderate level of research competence.

Responses to Interview Questions on Level of Research Competence Possessed by OTM Teaching Staff in public Polytechnics in Southwest, Nigeria.

Table 4.2b presents the thematic analysis of responses to interview questions on research competencies of OTM teaching staff in public polytechnics in Southwest, Nigeria.

Table 4.3b: Thematic Analysis on Level of Research Competence Possessed by OTM Teaching Staff in public Polytechnics in Southwest, Nigeria

Themes	Codes	Theme descriptions
Current Level of Research Competence	Moderate and improving competence Low research interest Limited research process Poor student research quality Exposure improves competence	Research competence is growing but still developing among staff. Staff show limited enthusiasm for engaging in research. Lecturers lack deep understanding of research methodology. Weak student projects reflect gaps in relationships. Participation in academic activities can boost staff research capability.
Role of Qualifications and Experience	Research tied to qualification Advanced degrees encourage research Conferences improve output	Higher academic qualifications can lead to better research competence. MSc and PhD holders show more engagement in research. Seminars and conferences can enhance research productivity and awareness.
Research Output and Publication Trends	Preference for Journal Individual-driven publication effort	Staff often publish in local journals for ease and promotion requirements. International publications are often personally motivated, not institutionally.
Institutional and Structural Influences	Institutional support needed Need for formal assessment	Limited funding, facilities, and motivation structures hinder progress. Lack of structured evaluation for research competence among staff.

Source: Field Survey, 2025

The participants noted in Table 4.3b that research competence is relevant in the teaching profession at the moderate level. They indicated that although the knowledge of research is improving among the teaching staff, a lack of personal motivation may

be linked with the moderate result. Participants mentioned that collaboration, mentoring, getting involved in training and development, and attending workshops and conferences could enhance the research competence of the OTM teaching staff. However, they expressed that systemic issues like funding, infrastructure, institutional policies, and motivation continue to create major obstacles. In addition, the level of awareness of the need for quality publication among polytechnic staff is low. Participants therefore stated that staff seek opportunities outside their network to learn, advance, and compete with their university-level colleagues. Teaching staff at the polytechnic level are less motivated due to the lack of a requirement for international publication or its use as a criterion for promotion.

Accordingly, participants perceived that the low level of academic qualifications within the polytechnic teaching staff could impact their level of research competence. Quantitative results for research question one indicates that the OTM teaching staff have a developing research competence level, which supports this thematic conclusion. The gap in referencing and analysis skills found in the quantitative study shows the same worries noted in the thematic results about the teaching staff's limited research knowledge, low involvement, and lack of support from the institution. This finding further suggests the necessity of boosting research competence through institutional support, a formal mentorship programme, and targeted capacity building.

Research Question Two: Which phase of mentoring relationship is the most dominant among OTM teaching staff in public polytechnics in Southwest, Nigeria?

Table 4.4a: Analysis of Responses on the Most Dominant Phase of Mentoring Relationship Among OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

Initiation Phase	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
I make conscious effort to establish a link with a potential mentor	42 (40.0%)	61 (58.1%)	1 (1.0%)	1 (1.0%)	3.37
I have expectation of having a mentor to guide me in my field of study	59 (56.2%)	42 (40.0%)	3 (2.9%)	1 (1.0%)	3.51
I interact well with my mentor around work tasks	50 (47.6%)	48 (45.7%)	7 (6.7%)	0 (0.0%)	3.41
Weighted Mean					3.43
Cultivation Phase					
I am recognized by my mentor for performing optimally	41 (39.0%)	58 (55.2%)	5 (4.8%)	1 (1.0%)	3.32
My mentor makes work easier	47 (44.8%)	50 (47.6%)	7 (6.7%)	1 (1.0%)	3.36
I have a stronger interpersonal bond with my mentor in the institution	45 (42.9%)	50 (47.6%)	9 (8.6%)	1 (1.0%)	3.32
Weighted Mean					3.33
Separation Phase					
I can function effectively without close mentoring from my mentor	39 (37.1%)	53 (50.5%)	12 (11.4%)	1 (1.0%)	3.24
I try to solve issues myself when I encounter setbacks rather than turn to my mentor for help	32 (30.5%)	55 (52.4%)	16 (15.2%)	2 (1.9%)	3.11
I receive career supports from my mentor when there is limited opportunity for career advancement	32 (30.5%)	63 (60.0%)	7 (6.7%)	3 (2.9%)	3.18
Weighted Mean					3.18

Redefinition Phase	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
I can operate effectively without the guidance of my mentor or senior colleague	32 (30.5%)	54 (51.4%)	17 (16.2%)	2 (1.9%)	3.10
My mentor has confidence about my research competence	40 (38.1%)	56 (53.3%)	7 (6.7%)	2 (1.9%)	3.28
I have no reservations in talking to my mentor about common work problems	43 (41.0%)	53 (50.5%)	7 (6.7%)	2 (1.9%)	3.30
Weighted Mean					3.23
Overall Weighted Mean					**3.29**

Decision rule: 1.0 – 1.99=strongly disagree; 2.0 – 2.49 = Disagree; 2.5-3.49 = moderate; > 3.5-40 = high

Note: Strongly Agree (4), Agree (3), Disagree (2), Strongly Disagree (1)

Source: Field Survey, 2025

Based on the answers in Table 4.4a, 58.1% of those who answered said they tried to connect with a mentor, 40.0% said they strongly agreed, 1.0% said they disagreed, and 1.0% said they strongly disagreed. The answers show that the mean number is 3.37 on average. Also, 56.2% of those who answered strongly agreed that they expected to collaborate with a mentor to help them with their studies, 40.0% agreed, 2.9% disagreed, and 1.0% firmly differed. The answers show that the mean value is 3.51 on average. Also, 47.6% of those who answered strongly agreed that they got along well with their teachers when it came to work tasks. Another 45.7% agreed, 6.7% disagreed, and none strongly disagreed. The answers show that the mean value is 3.41 on average, while the weighted mean value is 3.43. This result strongly suggests that teaching staff actively pursue and value mentoring relationships.

This score, which is in the upper range of "moderate" (2.5–3.49), suggests that a substantial number of staff intentionally seek mentorship, such as connecting with potential mentors and setting clear professional development goals within academia.

This high initiation participation indicates a positive mentoring culture in institutions. It suggests that institutional encouragement, perceived benefits of mentorship, or shared knowledge of its value for professional progression and academic success make the environment conducive to mentoring relationships. By creating trust, communication, and mutual commitment early on, this initiative-taking approach prepares the mentoring relationship for the remaining stages of mentoring relationships.

According to Table 4.4a, for the cultivation phase, 39.0% of the respondents agreed they were recognised by their mentors for performing optimally; 55.2% of respondents expressed strong agreement, while 4.8% disagreed and 1.0% strongly disagreed. The responses yield a mean value of 3.32. In the subsequent item, 47.6% of respondents agreed that their mentors facilitate work, 44.8% strongly agreed, 6.7% disagreed, and 1.0% strongly disagreed. The responses yield a mean value of 3.36. Furthermore, 47.6% of respondents indicated a stronger interpersonal bond with their mentors within the institution; 42.9% strongly agreed; 8.6% disagreed; and 1.0% strongly disagreed. The responses yield a mean value of 3.32. The weighted mean is 3.33, indicating that respondents concurred that the cultivation phase is highly prevalent in mentoring relationships.

The report further explains that mentors acknowledge mentees' achievements, streamline work, and build relationships. Over 80% to 94% agreement and high concordance across all items reveal that mentees feel encouraged, appreciated, and linked to mentors. Mentoring is functional, emotional, and professional during this crucial growth time. For the separation phase, Table 4.4a shows that 50.5% of respondents agreed they could function effectively without close mentoring from their

mentors, while 37.1% strongly agreed. Conversely, 11.4% disagreed, and 1.0% strongly disagreed. The responses yield a mean value of 3.24. Furthermore, 52.4% of respondents indicated that they attempted to resolve issues independently when faced with setbacks, rather than seeking assistance from their mentors; 30.5% strongly agreed with this approach; 15.2% disagreed; and 1.9% strongly disagreed. The average responses yield a mean value of 3.11.

Furthermore, 60.0% of respondents indicated that they received career support from their mentors in situations with limited career advancement opportunities; 30.5% strongly agreed; 6.7% disagreed; and 2.9% strongly disagreed. The average responses yield a mean value of 3.18. The weighted mean is 3.18, indicating that respondents concurred with the high prevalence of the separation phase in mentoring relationships. This phase exhibits moderate separation, with a weighted mean of 3.18, when mentees need less daily mentorship. The majority (87.6%) believed they could succeed without close mentoring, and over 82% try to manage problems individually. Despite limited growth opportunities, 90.5% sought career advice from mentors. The result implies that mentors are useful at crucial career stages despite increased autonomy.

As shown in Table 4.4a, for the redefinition phase, 51.4% of the respondents agreed they could operate effectively without the guidance of their mentors or senior colleagues; 30.5% strongly agreed. Conversely, 16.2% disagreed, and 1.9% strongly disagreed. The responses yield a mean value of 3.10. Furthermore, 53.3% of respondents indicated that their mentors possess confidence in their research competence; 38.1% strongly agreed; 6.7% disagreed; and 1.9% strongly disagreed. The average responses yield a mean value of 3.28. Additionally, 50.5% of

respondents indicated they had no reservations about discussing common work problems with their mentors; 41.0% strongly agreed; 6.7% disagreed; and 1.9% strongly disagreed. The responses yield a mean value of 3.30. The weighted mean is 3.23, indicating that respondents acknowledged observing the prevalence of the redefinition phase in mentoring relationships. These findings show that as mentees become more independent, the mentoring relationship remains supportive and communicative, becoming collaborative or peer-like.

The overall weighted mean for mentoring relationships of OTM teaching staff in public polytechnics in Southwest, Nigeria, is 3.29. The most prevalent of the four phases of mentoring relationships is that of the initiation phase while separation phase have the lowest mean score. Table 4.4a shows that OTM teaching staff in public polytechnics in Southwest Nigeria most often mentor in the initiation phase, with a weighted mean of 3.43. This suggests that staff are particularly interested in mentoring relationships and work hard to build them.

Responses to Interview Questions on the Most Dominant Phase Mentoring Relationships Among OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria.

Table 4.3b presents the thematic analysis of responses to interview questions on the most dominant phase of mentoring relationship among OTM teaching staff in public polytechnics in Southwest, Nigeria.

Table 4.4b: Thematic Analysis on the Most Dominant Phase of Mentoring Relationship Among OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

Themes	Codes	Theme descriptions
Structure and Forms of Mentoring	Structured peer mentoring system Informal research-based mentoring Mentoring through shared training Institution-dependent mentoring practice Research collaboration as mentorship	Formal mentorship where junior staff are paired with senior colleagues. Mentorship occurring through collaborative research projects. Learning and development through joint training attendance. Mentoring varies depending on institutional practices and support. Using joint research to mentor and build capacity in junior staff.
Availability and Accessibility of Mentors	Lack of visible mentoring Self-developed mentors emerging External mentorship sourcing	Absence or invisibility of structured mentoring relationships. Individuals becoming mentors through self-driven development. Seeking mentorship outside one's institution due to lack of internal options.
Challenges to Effective Mentorship	Incompetence limits mentorship quality Mentorship despite structural issues	Senior staff lack the skills or knowledge needed to effectively mentor others. Mentoring exists even with inconsistencies in programme naming or structure.
Benefits and Outcomes of Mentoring	Mentorship fosters professional networks Mentoring builds career legacy	Mentoring helps build valuable academic and professional relationships. Mentors experience fulfilment and legacy through developing others.

Source: Field Survey, 2025

According to the participants in Table 4.3b, mentoring relationships among OTM teaching staff in public polytechnics in Southwest Nigeria appear to be inadequate. Many senior staff members lack the relevant expertise needed to mentor junior staff, which has led the junior staff to seek external mentors or pursue self-development because of insufficient guidance within their institutions. However, some institutions

have established structured mentorship systems that combine inexperienced staff with experienced colleagues, while some are still lagging in this area. In addition, the results show that staff help their junior colleagues by carrying them along when attending trainings or programmes, giving them tasks in research, and collaborating with them. Mentees, at times, go to classes with their mentors to develop their teaching techniques. Some staff join different professional bodies to interact, network, and acquire new skills. The participants observed that this situation does not apply to all the polytechnics studied; therefore, a formal and effective mentoring programme is important for enhancing research competence.

The quantitative result on the second research question closely links the high frequency of the initiation phase to themes such as merging, accessibility, and motivation for mentorship. The findings revealed that structured peer mentoring, research-based collaboration, and collaborative training are institution-dependent and inconsistently applied at these polytechnics. While staff members may be actively forming mentoring relationships, the uneven availability and visibility of mentors lead some to seek external mentorship or develop their own mentoring skills. Also, the low separation score indicates a significant gap in commitment and effort from staff to be merged and engage in effective mentoring relationship. This revealed highlighted challenges such as senior staff's inability or the absence of formal programmes. This phase suggests that mentoring is culturally respected and sought after by individuals, despite a lack of comprehensive institutional support or standardised practices, as reported by participants. The result highlights a grassroots approach to mentorship, where staff actively participate in connection, collaboration, and professional development, often addressing systemic shortcomings.

Research Question Three: What is the most prevalent lifelong learning strategy adopted by OTM teaching staff in public polytechnics in Southwest, Nigeria?

Table 4.5a: Analysis of Responses on the Most Prevalent Lifelong Learning Strategy adopted by OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

Concrete Experience	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**	**Mean**
I can combine fresh and previous knowledge to determine academic concepts not understood	51 (48.6%)	48 (45.7%)	6 (5.7%)	0 (0.0%)	3.43
I can clarify my doubts in my duties with my colleagues	57 (54.3%)	46 (43.8%)	2 (1.9%)	0 (0.0%)	3.52
I can identify academic errors	42 (40.0%)	59 (56.2%)	4 (3.8%)	0 (0.0%)	3.36
Weighted Mean					3.44
Abstract Conceptualization	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
I can treat the course material as a starting point	44 (41.9%)	59 (56.2%)	1 (1.0%)	1 (1.0%)	3.39
I think about innovative ideas for course work development	52 (49.5%)	49 (46.7%)	4 (3.8%)	0 (0.0%)	3.46
I can decide good supporting evidence when a theory is presented in my course work	40 (38.1%)	61 (58.1%)	2 (1.9%)	2 (1.9%)	3.32
Weighted Mean					3.39
Reflective Observation					
I collaborate with other colleagues to complete the academic assignments	51 (48.6%)	51 (48.6%)	3 (2.9%)	0 (0.0%)	3.46
I set aside time to discuss academic work with senior colleagues	44 (41.9%)	56 (53.3%)	4 (3.8%)	1 (1.0%)	3.36
I observe senior faculty members to influence academic tasks	38 (36.2%)	52 (49.5%)	15 (14.3%)	0 (0.0%)	3.22
Weighted Mean					3.35

Active Experimentation	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
I can relate the course material to what I already know	54 (51.4%)	48 (45.7%)	2 (1.9%)	1 (1.0%)	3.48
I can express what is learned in my own words, instead of repeating what the book says	57 (54.3%)	47 (44.8%)	1 (1.0%)	0 (0.0%)	3.52
I understand how to apply ideas from study experience in other course activities	52 (49.5%)	51 (48.6%)	2 (1.9%)	0 (0.0%)	3.48
Weighted Mean					3.49
Overall Weighted Mean					**3.42**

Decision rule: 1.0 – 1.99=strongly disagree; 2.0 – 2.49 = Disagree; 2.5-3.49 = moderate; > 3.5-40 = high

Source: Field Survey, 2025

In line with the responses presented in Table 4.4a, for concrete experience, 45.7% of respondents expressed agreement, 5.7% expressed disagreement, and no respondents indicated strong disagreement. The average responses yield a mean value of 3.43. Furthermore, 54.3% of respondents strongly agreed that they could clarify doubts regarding their duties with colleagues, 43.8% agreed, 1.9% disagreed, and none strongly disagreed. The responses yield a mean value of 3.52. Furthermore, 56.2% of respondents indicated their ability to identify academic errors, while 40.0% strongly agreed with this statement. Conversely, 3.8% disagreed, and none strongly disagreed. The average responses yield a mean value of 3.36. The weighted mean is 3.44, indicating that respondents expressed agreement regarding the significance of concrete experience in lifelong learning strategies. This data indicates that practical, real-world engagement significantly influences professional development and learning processes.

As shown in Table 4.5a, for abstract conceptualisation, 56.2% of the respondents agreed they could treat the course material as a starting point; 41.9% of respondents

expressed strong agreement, while 1.0% disagreed and another 1.0% strongly disagreed. The responses yield a mean value of 3.39. In the subsequent item, 49.5% of respondents strongly agreed that they considered innovative ideas for coursework development, 46.7% agreed, 3.8% disagreed, and none strongly disagreed. The responses yield a mean value of 3.46. Furthermore, 58.1% of respondents indicated they were able to identify strong supporting evidence when a theory is presented in their coursework; 38.1% strongly agreed; 1.9% disagreed; and an additional 1.9% strongly disagreed. The average responses yield a mean value of 3.32. The weighted mean is 3.39, indicating that respondents perceive abstract conceptualisation as a significant component of lifelong learning strategies. With a weighted mean of 3.39, respondents agreed they use course information as a basis, generate unique ideas, and find supporting evidence for theories. These findings imply that staff appreciate critical and conceptual thinking as part of their professional growth.

For reflective observation, Table 4.5a reveals that 48.6% of the respondents strongly agreed they collaborate with other colleagues to complete the academic assignments; another 48.6% of the respondents agreed; 2.9% of respondents expressed disagreement, while no respondents indicated strong disagreement. The responses yield a mean value of 3.46. Furthermore, 53.3% of respondents indicated that they allocate time to engage in discussions about academic work with senior colleagues; 41.9% strongly agreed; 3.8% disagreed; and 1.0% strongly disagreed. The average responses yield a mean value of 3.36. Furthermore, 49.5% of respondents indicated that they observed senior faculty members influencing academic tasks; 36.2% strongly agreed; 14.3% disagreed; and none strongly disagreed. The responses yield a mean value of 3.22. The weighted mean is 3.35, indicating that respondents expressed agreement with highly reflective observation in lifelong learning strategies. This

further suggests that employees learn a lot by seeing, talking about, and analysing other people's experiences, which is known as "reflective observation." The significance of mentorship, observational learning, and collaboration among peers in their professional development is emphasised.

According to Table 4.4a, for active experimentation, 51.4% of respondents strongly agreed that they could relate the course material to their prior knowledge, 45.7% agreed, 1.9% disagreed, and 1.0% strongly disagreed. The responses yield a mean value of 3.48. Furthermore, 54.3% of respondents strongly agreed that they could articulate what they understood in their own words rather than merely reiterating the text, 44.8% agreed, 1.0% argued, and no respondents strongly disagreed. The responses yield a mean value of 3.52. Additionally, 49.5% of respondents strongly agreed that they understood how to apply ideas from study experiences to other course activities; 48.6% agreed; 1.9% disagreed; and none strongly disagreed. The responses yield a mean value of 3.48. The weighted mean of 3.49 indicates that respondents strongly endorse active experimentation as a significant component of lifelong learning strategies. The overall weighted mean of 3.42 indicates that high lifelong learning strategies are in place for OTM teaching staff in public polytechnics in Southwest, Nigeria. This value suggests high lifelong learning strategies in place for OTM teaching staff in public polytechnics in Southwest, Nigeria. The most prevalent indicator of lifelong learning strategies for OTM teaching staff in public polytechnics in Southwest, Nigeria, is active experimentation (mean = 3.49). This rating is followed by concrete experience (mean = 3.44) and abstract conceptualisation (mean = 3.39).

Active experimentation is the most prevalent strategy among the four phases evaluated, employed by the OTM teaching staff, with a moderate to high score of 3.49. The prominent levels of agreement suggest that staff are not simply absorbing information but are actively assessing, applying, and integrating it into their professional practice. This experiential and reflective approach enhances retention, adaptability, and creativity within academia. The overall weighted mean of 3.42 for all lifelong learning strategies signifies that these practices are well embedded in the professional culture of OTM teaching staff. Although classified as "moderate to high," abstract conceptualisation is ranked the lowest at 3.39, suggesting that while staff engage in theoretical thinking and idea development, they may prefer more practical, experiential learning approaches.

Responses to Interview Questions on the Most Prevalent Lifelong Learning Strategy adopted by OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria.

Table 4.4b presents the thematic analysis of responses to interview questions on prevalent lifelong learning strategies (LLS) in place for OTM teaching staff in public polytechnics in Southwest, Nigeria.

Table 4.5b: Thematic Analysis on Most Prevalent Lifelong Learning Strategy adopted by OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

Themes	Codes	Theme descriptions
Professional Development and Networking	Conferences, seminars, and idea exchange Attending conferences and publishing papers Collaborative research engagement	Focuses on engaging in professional development activities such as attending conferences, exchanging ideas, and collaborating on research. These activities help in career advancement and networking.
Self-Directed Learning and Personal Growth	Personal learning targets and workshops Continuous reading and certification Writing and publishing for learning Scheduling time for learning	Emphasizes initiative-taking learning, setting personal learning goals, pursuing certifications, and allocating time for continuous learning and skill enhancement.
Digital and Technological Engagement	Digital research tools knowledge	Focuses on adopting digital tools and technologies as part of lifelong learning, ensuring that teaching staff stay updated with current trends and research methodologies.
Time Management and Work-Life Balance	Time management for learning	Addresses the challenge of balancing professional responsibilities and personal commitments while dedicating time to continuous learning.

Source: Field Survey, 2025

According to the participants, OTM teaching staff engage in professional development activities such as attending conferences, workshops, and seminars. These events serve as opportunities for knowledge exchange, skill enhancement, and networking. However, participants noted that teaching staff self-directed their work by setting targets, engaging in continuous reading, and staying updated with the latest trends. They reported that their effort is in a bid to enhance knowledge by getting certifications and attending workshops, seminars, and conferences in and outside the network, as well as engaging with collaborative research to broaden their research

insights. With the increasing importance of digital tools, participants immersed themselves in familiarising themselves with research tools and engaging with emerging technologies, such as artificial intelligence (AI). These activities can help them stay current with global trends in the OTM profession. Nevertheless, participants pointed out that they are faced with different challenges, such as funding, time management, and generational differences, which serve as barriers to effective lifelong learning.

The quantitative analysis revealed that active experimentation is the most prevalent strategy, aligning it with the professional development and networking theme identified in the thematic analysis. Participants reported that staff members established personal learning goals, earned certifications, and dedicated time to continuous improvement. The low statistical result for abstract conceptualisation may indicate that teaching staff engage less with theoretical thinking, which is related to self-directed learning and personal growth in their academic careers. These themes encourage practical participation, such as using digital tools and managing study time, rather than abstract or theoretical pursuits. The participant also mentioned concerns about management and work-life balance, as these require conscious time allocation. They stressed that teaching staff may experience pressure with tasks, which could hinder their ability to deliver effective teaching.

Participant addressed the challenge of balancing professional responsibilities and personal commitments while dedicating time to continuous learning. Participants recounted that their job would require them to watch, discuss, and learn from others, especially senior colleagues. The thematic findings emphasise real-world professional

development, personal growth, and digital technologies, which support a dynamic and applied approach to lifelong learning.

4.2.2 Test of Hypotheses

This section covers the regression analyses conducted on hypotheses one to three. Linear regression analysis was adopted, and the preset and acceptable level of significance for this study was 0.05.

$H_0$1: There will be no significant influence of mentoring relationship on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

The null hypothesis one was evaluated using simple linear regression analysis. Data measuring the research competence of OTM teaching staff was regressed on data measuring mentoring relationships. The results of the regression analysis are presented in Tables 4.5a, b, and c.

Table 4.6: Regression Analysis for Influence of Mentoring Relationships on the Research Competence of OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.452[a]	.204	.196	.52864

a. Predictors: (Constant), Mentoring Relationship

b. ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.378	1	7.378	26.401	.000[a]
	Residual	28.784	103	.279		
	Total	36.162	104			

a. Predictors: (Constant), Mentoring Relationship
b. Dependent Variable: Research Competence

c. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.223	.400		3.057	.003
	Mentoring Relationships	.619	.120	.452	5.138	.000

a. Dependent Variable: Research Competence

Source: Field Survey, 2025

Table 4.5a demonstrates that the mentoring relationships has a favourable correlation (R = 0.452) with the research competency of OTM teaching staff at public polytechnics in Southwest Nigeria. Furthermore, the coefficient of determination (Adj. R^2 = 0.196) indicates that the mentoring relationship predicts 19.6% of the overall variance in research competency. Factors not examined in this study explain the remaining 80.4% difference in research competency. Table 4.6b indicates the model's overall significance (F (1, 103) = 26.401, $p < 0.05$). Table 4.6c shows that a unit change in a mentoring relationship leads to a 0.619 increase in research competence at

a 95% confidence level (B = 0.619, $p < 0.05$), assuming all other parameters remain constant. Thus, based on the results of the regression analysis, the first null hypothesis, which claims that there will be no significant influence of mentoring relationships on the research competency of OTM teaching staff in public polytechnics in Southwest Nigeria, is rejected.

The evidence further suggests that while mentoring relationships play a significant and measurable role in enhancing research competence, they are only one part of a broader ecosystem influencing academic development. Although mentoring explains 19.6% of research skill variance, highlighting its value but also the need for a more holistic capacity-building approach. Mentoring relationships explain 19.6% of the variance in OTM teaching staff research competence, according to regression analysis. However, the thematic and descriptive data support mentorship as a significant driver of professional development through collaborative research, idea sharing, and peer learning. However, the remaining 80.4% of unexplained variance shows that institutional support, resource access, digital engagement, and self-directed learning also play crucial roles. This emphasises the necessity for a comprehensive approach that combines strong mentorship systems with broader professional development initiatives to completely boost academic staff's research capabilities.

$H_0$2: There will be no significant influence of lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

The second null hypothesis was evaluated by simple linear regression analysis. Data assessing the research competence of OTM faculty were regressed against data

evaluating lifelong learning initiatives. The outcomes of the regression analysis are displayed in Tables 4.6 a, b, and c.

Table 4.7: Regression analysis for Influence of Lifelong Learning Strategies on the Research Competence of OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.612[a]	.375	.369	.46856

b. Predictors: (Constant), lifelong learning strategies

b. ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.549	1	13.549	61.713	.000[a]
	Residual	22.613	103	.220		
	Total	36.162	104			

a. Predictors: (Constant), lifelong learning strategies
b. Dependent Variable: Research Competence

c. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.316	.378		.837	.404
	Lifelong Learning Strategies	.862	.110	.612	7.856	.000

a. Dependent Variable: Research Competence

Source: Field Survey, 2025

Table 4.6a indicates a strong positive correlation (R = 0.612) between the lifelong learning strategies and the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria. The coefficient of determination (Adj. R^2 = 0.369) indicates that lifelong learning strategies account for 36.9% of the total variance in research competence. The variables not examined in this study account for the

remaining 63.1% of the variation in research competence. Table 4.6b indicates that the model demonstrates statistical significance ($F(1, 103) = 61.713$, $p < 0.05$). Table 4.7c shows that if everything else stays the same, changing lifelong learning strategies by one unit leads to an increase of 0.862 in research competence with 95% confidence. As a result, the regression analysis shows that we can reject the second null hypothesis, which claims that lifelong learning strategies do not have a significant effect on the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria.

The regression analysis shows a strong positive relationship between lifelong learning strategies and research competence ($R = 0.612$, Adj. $R^2 = 0.369$), backed by both descriptive and thematic findings. The predominant lifelong learning strategy identified was active experimentation (mean = 3.49), closely succeeded by concrete experience (mean = 3.44). Both strategies highlight the importance of applying knowledge, reflecting on practice, and adapting learning to real-world academic tasks, which enhances research competence. The thematic findings substantiate this assertion, particularly through themes such as professional development and networking, which highlight collaborative research and conference participation, and self-directed learning and personal growth, which emphasise continuous reading, writing, and personal learning objectives. The observations align with the behaviours indicated in the descriptive data, demonstrating that lifelong learning strategies significantly contribute, accounting for 36.9% of the variance in research competence nearly double the impact of mentoring alone. This suggests that while mentoring provides crucial support, it is the ongoing, self-directed, and experiential learning efforts that significantly improve research capabilities among OTM teaching staff.

$H_0$3: There will be no significant combined influence of mentoring relationship and lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria.

Multiple linear regression analysis was used to evaluate the third null hypothesis. Data measuring research competence of OTM teaching staff were regressed on data measuring mentoring relationship and lifelong learning strategies (LLS). The results of the regression analysis are shown in Tables 4.8 a, b, and c.

Table 4.8: Regression Analysis for Combined Influence of Mentoring Relationship and Lifelong Learning Strategies on the Research Competence of OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria

a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.613[a]	.375	.363	.47062

a. Predictors: (Constant), mentoring relationships, lifelong learning strategies

b. ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.571	2	6.785	30.636	.000[a]
	Residual	22.591	102	.221		
	Total	36.162	104			

a. Predictors: (Constant), mentoring relationships, lifelong learning strategies
b. Dependent Variable: Research Competence

c. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.348	.393		.887	.377
	Mentoring Relationships	-.052	.166	-.038	-.316	.753
	Lifelong Learning Strategies	.903	.171	.641	5.288	.000

a. Dependent Variable: Research Competence

Source: Field Survey, 2025

Table 4.7 presents the results of null hypothesis three. Table 4.8a indicates a strong positive correlation (R = 0.613) between lifelong learning strategies, mentoring relationships, and the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria. lifelong learning strategies and mentoring relationships account for 36.3% (Adj. $R^2 = 0.363$) of the total variance in the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria. Unexamined factors accounted for the remaining 63.7% of the variation in the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria. Table 4.8b indicates the overall significance of the model, with $F(2, 102) = 30.636$ and $p < 0.05$. Table 4.8c shows that, with 95% confidence, if all other factors stay the same, a one-unit increase in lifelong learning strategies will lead to a 0.903 increase in the research competency of OTM teaching staff in public polytechnics in Southwest Nigeria ($B = 0.903$, $p < 0.05$). The unstandardised coefficient B is not significant for mentoring relationships. However, the data on research competence of OTM teaching staff together with both mentoring relationships and lifelong learning strategies, found a significant influence. Therefore, based on the results of the regression analysis, we reject the idea that mentoring relationships and lifelong learning strategies do not have a significant effect on the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria.

The combined influence of lifelong learning strategies and mentoring relationships showed that they both significantly influence the research competence of OTM teaching staff in public polytechnics in Southwest Nigeria. This positive correlation ($R = 0.613$) and adjusted R^2 of 0.363 suggest that the two factors account for 36.3% of the variance in research competence. The regression coefficient indicates that lifelong learning strategies ($B = 0.903$, $p < 0.05$) serve as the main driver, whereas mentoring

relationships do not exhibit a statistically significant individual influence when both variables are analysed concurrently. This finding indicates that while mentoring enhances research competence, its effect is indirect or mediated by lifelong learning behaviours, including active experimentation, professional development, and self-directed learning, all of which were emphasised in the descriptive and thematic findings. The null hypothesis is rejected, indicating a significant synergistic effect between mentoring and lifelong learning, with lifelong learning strategies emerging as the more influential factor. Institutions should prioritise the development of a culture that encourages ongoing learning and incorporate mentoring as a supportive mechanism for improving research competence.

4.3 Discussion of Findings

The aim of this study is to examine the influence of mentoring relationships and lifelong learning strategies on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria. To achieve this aim, three research questions were answered and three hypotheses were evaluated, respectively. The demographic findings revealed that gender distribution among respondents shows a marginally higher number of female participants, indicating a relatively balanced workforce. Although there is no significant gender-based differences in the research competence results, it underscores the opportunity to improve inclusive guidance and professional development initiatives that address diverse experiences and needs. These findings correspond with prior research implying that women get greater support in higher education, a trend linked to an increasing awareness among women regarding the significance of education for career progression[1]. Literature examines women's involvement in science, technology, engineering, and mathematics (STEM) fields, with the objective of addressing the gender disparity in academia. The study

posits that promoting women's participation in the male-dominated field can foster equity across various professions, including OTM[2].

This study's findings contest the dominant narrative regarding female under-representation in higher education leadership by demonstrating that women are, in fact, predominant in the OTM teaching profession within polytechnics in southwest Nigeria[3]. The balanced gender distribution indicates that both male and female personnel are equally poised to benefit from mentoring and lifelong learning programmes, hence promoting inclusive capacity building tactics. Furthermore, study revealed that a significant proportion of the OTM teaching staff hold postgraduate degrees, while very few have MPhil/PhD qualifications. The gap indicates that although the workforce possesses intermediate qualifications, there exists potential for academic enhancement to augment research proficiency. In addition to this, the fewer staff with doctoral degrees from the results may partially clarify the moderate research competence noticed, hence underscoring the need for governmental endorsement of doctoral studies to strengthen academic leadership and international research participation at the polytechnic level[4].

A study revealed the necessity for institutional support beyond accreditation, which can incorporate funding and capacity building as well as a strong evaluation system for continued improvement at the polytechnic level[5]. This suggests that the OTM teaching staff can be equipped with leadership qualities when they have government backing to operate. Studies have validated the significance of doctoral degrees in polytechnic institutions, especially in fostering professional development, academic legitimacy, and research proficiency[4,6]. These authors contend that PhD qualifications equip academics with advanced knowledge, enhance teaching quality, and foster institutional development through research production and innovation.

Studies conducted in Nigerian polytechnics indicate that doctoral level teaching staff do exhibit superior performance, suggesting a favourable correlation between advanced certification and job satisfaction[4,5]. Nonetheless, some schools of thought argued that polytechnics may not really require PhD degrees since they only focus on practical and vocational training instead of academic research[7,8,9]. These studies suggested that requiring a PhD may result in acquiring more academic qualifications than necessary, thereby diverting attention from the primary focus of the polytechnic. Additionally, concerns regarding infrastructure, funding, and the compatibility of PhD training with industry needs also make some question how useful these degrees will be outside of universities[7]. The findings further revealed that while obtaining a doctorate degree is essential for career growth for teaching staff, there is a need for institutional considerations to know how these certificates can be useful within the polytechnics.

The demographic findings, an unexpected trend was observed with the absence of data regarding current academic grade levels of respondents may reflect concerns about privacy or institutional transparency. This gap limits the ability to thoroughly assess the relationship between academic rank and research competency, while simultaneously underscoring the importance of fostering trust and openness in future data collection efforts[9,10]. This perspective supports a societal shift toward transparency, facilitated by supportive infrastructure and incentive systems. However, critics of open data practices highlight persistent challenges, including lack of recognition, insufficient training, and concerns about data misuse[11]. For instance, a national survey revealed that many researchers felt undervalued for their efforts in data sharing, with a significant number stating that the credit received did not adequately reflect the work invested[12]. These findings suggest that while accessible

data can enhance research quality and build trust, its implementation must be ethically grounded and supported by institutional policies and researcher incentives[13,14,15].

In analysing the demographic profile of OTM teaching staff in the studied polytechnics is essential for understanding the thematic findings associated with research competence, mentoring, and lifelong learning. From the findings, a significant proportion of mid-career professionals in the mid-age category reflects the focus on professional development and networking, as individuals in this demographic frequently pursue advancement in their academic careers through collaborative research and conference participation. Only a small percentage of these teaching staff investigated were under the age of 30, which shows that there isn't enough generational renewal. These demographics could make it harder to use digital technologies and new research methods, which is something that was brought up in the theme of self-directed learning and personal growth. This trend aligns with literature on the ageing academic workforce, indicating that competitive salaries for early-career academics and structured mentoring programs may effectively attract younger professionals to academia[16]. The retention of experienced and highly qualified academic staff is recognised as a global concern across all educational levels[17,18]. Their study demonstrates that highly skilled educators frequently leave the profession first, highlighting the necessity for specific retention strategies.

Analysis on research question one identifies the level of research competence possessed by OTM teaching staff in public polytechnics in Southwest, Nigeria. The outcome of this study revealed that there is a moderate level of research competence possessed by the OTM teaching staff in public polytechnics in Southwest Nigeria. However, data analysis and referencing skills recorded the lowest mean scores, highlighting a significant gap in their ability to gather, analyse and interpret research

data, search relevant literature and cite them accordingly. This gap could be linked to the thematic results from the study with challenges such as lack of strong knowledge of research, low funding for research, inadequate institutional support, and facilities. The results suggest that while there is a growing interest in research competence, stakeholders need to consider systemic improvements to sustain OTM teaching staff research competence. The overall result on the level of research competence of the OTM teaching staff aligns with recent studies on teachers' competence frameworks and research efficacy, emphasising the need for research competence for educators and postgraduate students[19,20,21]. Particularly, these studies found that teaching staff confidence in research could be enhanced through institutional support and individual capacity.

A study pointed out that while teaching staff may have moderate capabilities in certain areas of research, they might possess greater skills in other aspects, such as manual or technical tasks[22]. The result aligns well with the findings of this study, as polytechnics are technically based. However, the study also itemised challenges such as limited time and low level of competence, identifying that some teaching staff prefer salary increases and promotion, which motivates them to learn more. In contrast to previous studies, a recent study revealed that 90 percent of educators investigated struggled in the aspect of publishing and choosing appropriate tools[23]. Another study highlights the importance of the support from the institutions in fostering a collaborative and reflective environment as well as developing research competence practices[24]. This study further implies that institutions can utilise a supportive environment to bridge the gap between teachers' competence and their actual practice.

The second research question focuses on examining the prevalent mentoring relationships of OTM teaching staff in public polytechnics in Southwest, Nigeria. The results indicate that OTM teaching staff in public polytechnics in Southwest Nigeria value mentoring at a moderate level. However, the separation phase scored lowest, aligning with qualitative findings that highlight limited access to mentors and the absence of a structured mentoring system. These results suggest that it requires institutional support to establish and sustain effective mentoring frameworks within the studied polytechnics. To support this result, the qualitative data also revealed emerging themes such as structural forms of mentoring, challenges to effective mentorship, availability, benefits of mentoring relationships, and accessibility of mentors in the OTM field. The absence of relevant expertise among senior staff has led to many junior staff searching for external mentors or going after self-development. The findings from this research align with other existing studies on the benefits and challenges to effective mentoring for academics[25,26.]

A study found that participants in mentoring programmes may exhibit a strong capability in critical analysis writing while prioritising structured mentoring programmes to improve research skills[27]. The initiation stage is the least practised, but a in contrast, a study shows that the separation phase is the hardest, which has caused disappointment and frustration[28]. Additionally, a study argued that the separation stage is less supported, which gives mentees autonomy without guidance and negatively impacts overall mentoring outcomes[29]. Despite a positive result in this research regarding the phases of mentoring relationships practised, in contrast to previous studies, a study posits that mentoring programmes can be ineffective in certain situations[30]. Their study further reemphasise that mentors and their mentees

must ensure that the relationship is context-sensitive and of high quality if they want to benefit from it.

The third research question identifies the prevalent lifelong learning strategies in place for OTM teaching staff in public polytechnics in Southwest, Nigeria. The result revealed a moderate level of lifelong learning strategies in place with active experimentation as the most prevalent indicator of lifelong learning strategies. According to the results of the theme analysis, members of the OTM teaching staff often seize in professional development opportunities, including conferences, seminars, and workshops, which facilitate networking, skill development, and information sharing. OTM teaching staff face finance, time management, and generational disparities that hinder lifelong learning. Other relevant studies on educators emphasise the relevance of information literacy and continual learning for improving research competency, supporting the current study's conclusion that lifelong learning is a vital driver[31,32,33]. However, a study on the contrary argued that for lifelong learning to be more effective, it should be intentional and personal to the individual engaging in it[34]. This further reemphasise that engaging in a lifelong learning process can improve the research competence of OTM teaching staff within the studied polytechnics.

The findings of regression analysis for hypothesis one looked at the influence of mentoring relationships on the research competence of OTM teaching staff in public polytechnics in Southwest, Nigeria. The result revealed that mentoring relationships have a moderate and positive correlation with the research competence of the OTM teaching staff. This investigation has support in empirical literature. For instance, a study on the mentor-mentee relationships in higher education revealed that there are some unmet expectations within mentoring relationships, which may explain the weak

statistical influence on research competence[26]. Particularly, the research reveals that academics go into mentoring relationships with lofty expectations, such as career development, guidance on research writing, and institutional navigation. Highlighting these indicates further that despite their prior and lofty expectations, these expectations are often not met due to limited time or interest from senior academics, unclear goals or roles in the relationship, or lack of formal mentoring structures.

It is obvious, therefore, that this mismatch between mentees' expectations and their reality may lead to dissatisfaction in the relationship with a ripple effect on the actual impact of the mentoring relationship on their career growth[25]. Another related study investigated how mentors perceive their identities and the development of their competencies[27]. Their findings highlighted the importance of critical reflective practice, demonstrating that such reflection can lead to transformative learning experiences. The study emphasises the impact of mentoring, which is highly dependent on the quality of the relationship; these include, but are not limited to, trust, alignment of expectations, and communication. Based on these data, it can be explained that mentoring relationships are key towards acquiring research competence, which is truly relevant for professional development[26,30].

Hypothesis two examined the influence of lifelong learning strategies on the research competence of OTM teaching staff in the public polytechnic in Southwest, Nigeria. The results suggest that OTM teaching staff are willing to apply what they have learnt in practical situations while relating innovative ideas to their previous job experiences. This finding aligns with a study on universities' lecturers and experiences and reflections for educators in higher institutions where the experiential learning theory was employed to explain how educators can develop their competencies in research

through their experiences, reflection, and a continuous engagement in learning performance[20]. With reference to these expert evaluations, the most central lifelong learning strategies, which are key to enhancing research competence, are reflective practices, self-directed learning, and active continuous skill development[32,35]. This implies that for the OTM teaching staff to gain the required global recognition in research, more support is required from the management to create a more enabling environment to foster continuous learning behaviour. This study's findings also relate to existing studies; for example, a study conducted on the research competence of postgraduate students at public institutions in Nigeria demonstrates that pedagogical development and lifelong learning strategies are relevant for personal growth and educational outcomes in Nigeria[20].

In support of this, another study reflecting on lecturers' experiences on the development of pedagogical competency found that student learning and faculty development are interwoven[30]. Their results suggest that research competence and personal growth could be enhanced if the government of these polytechnics could invest in both the students and the faculty members while they promote an enabling environment or culture of continuous learning. The thematic results from the present study add to the quantitative findings where broader insights are being brought forward regarding how lifelong learning strategies can influence the research competence. The study revealed that staff are gradually improving their research competence and engagement while highlighting their readiness for acquiring additional qualifications at postgraduate levels where research is taught.

Participating in conferences and seminars to enhance their research outputs is also one of their personal efforts in benefiting from research competence[28]. However, concerns

were expressed about limited interest in research, institutional factors such as no funding and support for staff to engage in research publications in reputable journals, limited inadequate facilities to gain access to resources for conducting research, and a lack of structured evaluation techniques. These concerns, if not addressed, may hinder research competence development of the faculty members with a ripple effect on the students. Overall, the findings of this study suggest the need for institutional and systemic improvement to sustain personal motivation for research competence.

Multiple regression analysis was used to evaluate the third null hypothesis on the influence of mentoring relationships and lifelong learning strategies on research competence. The results of the multiple regression analysis indicated that mentoring relationships and lifelong learning strategies together significantly influence research competence in the studied polytechnics[20,32]. Conversely, the result revealed that lifelong learning strategies have the strongest level of significance while mentoring relationships alone do not have a direct significant influence on research competence[25,27]. To provide a plausible explanation for this result, previous studies suggested that mentoring relationships are most effective when embedded in structured programmes that could enhance professional development[26,35]. For instance, a study on integrated professional development for peer mentoring investigated how mentoring relationships can be more effective for teachers[36]. The study stressed that mentoring relationships can be more effective when embedded with other professional programmes such as peer learning, training, and workshops, which strongly impact the academic competencies of math teachers.

Furthermore, another study suggests that lifelong learning strategies should be incorporated as a mediator for mentoring relationships to enhance the research

competence of teaching staff[34]. While highlighting the value of lifelong learning in higher education, the study recommends that institutions of learning should provide lifelong learning opportunities for their academics. This aligns with the findings of the current study, which suggests that mentoring alone may not adequately enhance research competence; therefore, it is necessary to adopt a well-structured lifelong learning approach. These approaches may include continuous learning, reflective thinking, and active learning.

Conceptually, this study considered research competence the ability of OTM teaching staff in public polytechnics to conduct independent research, provide its findings, and their willingness to use the knowledge of research in their professional activities. This definition aligns with exiting studies where research competence was viewed as both skill and willingness to carry out independent research[20,21]. In addition, mentoring relationship in this study is defined as the relationship that exists between a more knowledgeable or experienced academic staff member and a less experienced one. This definition corresponds with this study's premise about the significance of mentoring relationships in developing research competence for academic staff[25,26]. Despite the contextual contrasts in previous research with those of this study, academics have consistently positioned the significance of mentoring relationships for reaching a greater degree of research competence and career growth[28,29].

In addition, the study provides definitions for lifelong learning strategies as a self-initiated continuous process engaged by OTM teaching staff in public polytechnics to acquire the required knowledge, values, and skills throughout their lifetime to achieve personal fulfilment. This definition finds support in literature where the concept of lifelong learning was described as a continuous and self-initiated learning process[37,38].

Their studies affirm the value of lifelong learning in sustaining professional development and personal achievement. This highlights how OTM teacher's positive attitudes, professional training and reading motivation towards lifelong learning can foster career growth in academic.

From the theoretical standpoint, the Kram's model of mentoring phases postulates that for a mentoring relationship to be effective, it must go through all four phases29. This indicates that a mentoring relationship is developmental and should not be viewed as a one-time intervention. According to the theory, mentoring progresses through the four phases, which are initiation, cultivation, separation, and redefinition. The current findings suggest that mentoring relationships in the OTM profession did not reach the cultivation or redefinition phases, and these are the most impactful stages where academic development occurs. This study's outcome is in concomitance with these theoretical approaches coming from the thematic results, which indicates that the moderate influence may be because of a lack of institutional support, structure, or time, which shows that mentoring remains at the initiation phase. This study's findings align with Kram's theory, showing that mentoring plays a facilitative role in providing necessary guidance, encouragement, and support, which can spur academics into skill development[29]. This result shows the benefits of employing lifelong learning strategies, which is considered a vital success factor that drives professional and career development among the teaching staff.

Furthermore, Kolb's theory of experiential learning, explains a learner-centred approach by emphasising the ability of the OTM teaching staff to engage, reflect, and apply acquired knowledge to help students in retaining, processing, and applying the knowledge more effectively[32]. The use of the experiential learning theory in this study

explains the different strategies employed by the investigated polytechnics to create unfamiliar environments that can influence not only the teaching staff but also the learners' existing knowledge as they develop new skills within practical contexts[33].

The thematic results from this study offered the empirical foundation to demonstrate the challenges confronting the OTM teaching staff in public polytechnics from achieving research competence. Foremost among the concerns are limited availability and access to mentors, lack of a structured mentoring system, lack of research knowledge, minimal participation in research projects, issues with publishing trends, and low qualifications and experience in research. This aroused the awareness that concerns of research competence faced by OTM teaching staff are likely to the root cause of the inefficiencies regarding research competence. The themes provided empirical support for the perceptions as affirmed by all the heads of OTM departments across the 12 polytechnics that the raised issues as consistently hinder their competences in research.

Evidence of this is found in the low level of writing and publishing quality research, low qualifications and experience in conducting research. Despite these challenges, the findings further suggest emerging themes such as professional development and networking, self-directed learning and personal growth, digital and technological engagement, and time management and work-life balance appeared as strategies to enhance research competence. Therefore, based on the support discovered in conceptual, empirical, and theoretical contributions in current literature with this present research's outcome, the study contends that mentoring relationships and lifelong learning strategies significantly influence research competence of OTM teaching staff in the public polytechnic in Southwest, Nigeria.

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Chapter Five

Summary, Conclusion and Recommendation

This chapter offers and examines the summary of results and conclusions and gives beneficial recommendations, additions to knowledge, and proposals for subsequent study.

5.1 Summary of Findings

The main purpose of this research is to examine the influence of mentoring relationships and lifelong learning strategies (LLS) on research competence of office technology and management (OTM) teaching staff in the public polytechnics in Southwest, Nigeria. The study has five chapters to achieve its main objective. Chapter one offered the introduction to the research, which argues that effective mentoring and lifelong learning strategies are essential to improve the research competence of academics and for them to remain relevant in the field. Previous studies conducted on the variables considered in this study were reviewed. Also, an empirical submission has been made concerning the impact of mentoring relationships and lifelong learning strategies on research competence, although researchers have indicated the need for more studies on these constructs.

The data obtained were sorted, coded, and analysed to establish the statistical significance of the influence of mentoring relationships and lifelong learning strategies on the research competence of the OTM teaching staff in the public polytechnics in Southwest, Nigeria. The final acceptance of the hypotheses was determined by interpreting the analyses of data obtained as well as the conclusions of the research. The following may be summed up as the primary empirical findings of this study:

The results of the first research question revealed that there is a moderate level of research competence among OTM teaching staff in public polytechnics in Southwest Nigeria. Data and referencing skills have the lowest mean scores for research competence. However, the thematic findings indicate that although research skills are increasingly being recognised, challenges still exist, such as a lack of research knowledge, minimal participation in research projects, issues with publishing trends, and low qualifications and experience in research.

The second research question revealed that the initiation stage is the most dominant phase of mentoring relationships among the OTM teaching staff, which reflects their strong willingness to engage with mentors. However, the separation phase emerged with the lowest score, which aligns with the thematic findings that highlight issues related to limited availability and access to mentors, as well as lack of a structured mentoring system.

Research question three findings revealed that active experimentation emerged as the most prevalent strategy for lifelong learning, whereas abstract conceptualisation has the lowest mean score among the teaching staff at public polytechnics in southwest Nigeria. This result corresponds with emerging themes of professional development and networking, self-directed learning and personal growth, digital and technological engagement, and time management and work-life balance.

Mentoring relationships significantly influence research competence of OTM teaching staff at public polytechnics in Southwest Nigeria. The thematic interpretation supports this result by identifying mentorship as a significant driver for themes such as professional development, networking, and collaborative learning.

Lifelong learning strategies significantly influence the research competence of OTM teaching staff in the public polytechnics in Southwest, Nigeria. Thematic findings support this result by emphasising the importance of continuous, experiential, and self-directed learning initiatives to enhance research proficiency among OTM faculty members.

Mentoring relationships and lifelong learning strategies significantly influence the research competence of OTM teaching staff in the public polytechnics in Southwest, Nigeria. However, lifelong learning strategies emerged as the highest predictor of research competence, while mentoring does not sufficiently influence it. These quantitative findings align with the thematic insights that mentoring is important, but it should be combined with themes such as institutional support, digital resources, professional development, and self-directed learning to enhance its effectiveness.

5.2 Conclusion

This study examined the influence of mentoring relationships and lifelong learning strategies (LLS) on the research competency of Office Technology and Management (OTM) teaching staff in public polytechnics in Southwest Nigeria. The results demonstrated a statistically significant correlation, suggesting that both mentoring and lifelong learning activities are essential for improving research skills, especially in methodological, analytical, communication, and referencing skills. However, lifelong learning strategies emerged as the primary predictor of research competency, highlighting the necessity of institutional support for ongoing staff development. Thematic insights substantiated the quantitative findings, highlighting the crucial role of active experimentation, self-directed learning, and professional networking in enhancing research ability. Themes such as professional development, personal

improvement, and continuous education point out the importance of teamwork and active participation in academic pursuits.

Despite the acknowledged importance of mentoring relationships, respondents perceived that presently it has a minimal influence on their research competency. This underscores a significant gap in the mentorship frameworks of these polytechnics. Given the importance of research competence for institutional exposure, global rankings, and academic quality, this discrepancy is significant. To address this, it is necessary for institutional leaders and policymakers to develop well-structured and sustainable mentorship programmes. Such frameworks will promote mentor-mentee relationships and foster a culture of constant professional development. Ultimately, this would boost the quality and reputation of polytechnics, promote lifelong learning among staff, and contribute to the greater aims of educational advancement and global competitiveness.

5.3 Recommendations

Based on the findings in this study, the following recommendations were made:

1. To enhance research proficiency among OTM faculty, polytechnics must focus on capacity-building to improve data analytical and referencing skills for strong academic background. This could start with frequent workshops and training on research methods, academic writing, and grant proposal creation. Polytechnics should also create mentorship programmes where senior scholars mentor junior faculty through collaborative projects, peer evaluations, and conferences. These continues academic culture will improve research skills

and promote a collaborative, vibrant, and research-driven academic environment.

2. Polytechnics should promote continuous learning by using mentoring relationships to improve research capacity in a planned manner. A structured mentoring programme should be in place to match senior researchers with junior staff to promote feedback, goal setting, and collaborative learning. Although such programme would require mentor guidelines, training, and recognition, it can create a supportive environment that boosts research capability and academic excellence.

3. Addressing the shortage in global publications to reinforce continuous learning for the OTM teaching staff, government should enhance leadership in academia by supporting doctoral studies. Attaining this goal necessitates the availability of completely or partially supported doctoral scholarships especially in research-intensive fields. In addition to this, polytechnics should engage in the formation of collaborations with both domestic and international universities to improve access to advanced research training to enhance continuous learning amongst OTM teaching staff.

4. Management of the public polytechnics should reaffirm their commitment to structured mentoring as a strategic priority and appoint a dedicated coordinator or committee to oversee its implementation. Pairing experienced faculty with early-career staff who share common interests can establish a mentor buddy system, while also promoting peer-to-peer support among mentees. Furthermore, institutions should implement time allowances, recognition, and incentives to enhance engagement among active mentors.

5. Polytechnics may provide study leave, flexible schedules, and research grants to support staff in obtaining PhDs while fulfilling their teaching duties. The integration of doctoral study support within comprehensive academic development policies improves individual research capabilities and acquaints staff with international academic standards, scholarly networks, and publication practices. This will foster a research-orientated culture and improve engagement with international publications and collaborations over time.

6. Stakeholders in the polytechnics should develop reflective practice techniques to integrate research training into structured mentoring programmes. To achieve this, providing different opportunities for parties involved in mentoring relationships is important, and this can enhance their research skills. Pairing mentors should be based on their research areas, and the selection process should include key criteria to foster effective mentoring relationships when combined with a continuous learning culture.

5.4 Contribution to Knowledge

This study makes a significant contribution to literature in conceptual, theoretical, and empirical dimensions by identifying gaps in it regarding mentoring relationships, lifelong learning strategies, and research competence. The conceptual framework in this study provides a significant contribution, having been developed by the researcher through an analysis of identified gaps in the literature. This model is the first to integrate independent variables, such as mentoring relationships and lifelong learning strategies, with dependent variables, specifically research competence. Additionally, the adopted measures encompass phases of mentoring theory, including

initiation, cultivation, separation, and redefinition, as well as the experiential learning theory (ELT) measures, which consists of concrete experience, abstract conceptualisation, active experimentation, and reflective observations, along with research competence in methodological, analytical, communication, and referencing skills. Other researchers can adapt this model to suit future studies.

The European Research Competence Model (ERCM) was employed from a theoretical perspective, delineating seven competence areas with associated learning outcomes aimed at enhancing researchers' skills for successful careers in academia and other fields. The study utilised Kram's developmental theory of mentoring phases to elucidate how effective and structured mentoring relationships can facilitate goal realisation and definitions of success for both mentors and mentees. The experiential learning theory (ELT) was further reinforced. The ELT, a learner-centred approach, emphasises engagement, application, and reflection, aiding individuals in skill identification, offering insights into opportunities, and fostering learning motivation. This approach provides transferable skills that facilitate professional development and career advancement. The study's results align with these theoretical perspectives.

The study empirically contributes to the existing literature on the interaction of mentoring relationships, lifelong learning strategies, and research competence. While there is an abundance of studies on these variables in developed economies, empirical research from developing countries such as Nigeria appears to be limited in this area. This result indicates that there is limited understanding of the impact of mentoring relationships and lifelong learning strategies west Nigeria. Consequently, the results of the three null hypotheses and the thematic explanations analysed establish a foundation for future research on mentoring relationships, lifelong learning strategies,

and research competence. The study offers findings that subsequent researchers can use to support the empirical claims in their investigations. Overall, this study significantly contributes to knowledge and has practical and policy implications for the investigated polytechnic governments. In addition, the self-developed instrument in this study reflects the realities and terminologies familiar to the specific population, improving comprehension and accuracy.

5.5 Area of Suggestion for Further Studies

This study examined the impact of mentoring relationships and lifelong learning strategies on the research competence of office technology and management (OTM) faculty in public polytechnics in Southwest Nigeria. To expand the boundaries of knowledge, the following areas of study are proposed for further research:

1. The study was conducted in public polytechnics located in Southwest Nigeria. Future research on lifelong learning strategies, mentoring relationships, and research competence should be conducted in other regions of Nigeria.
2. This study analysed the influence of mentoring relationships and lifelong learning strategies on research competence in specific public polytechnics in Southwest Nigeria. Future research should consider research on comparative analysis of both public and private public polytechnics in Nigeria as a whole.
3. Lifelong learning strategies were researched as an independent variable to evaluate their effect on the research competence of the polytechnics under examination. Future research may investigate alternative lifelong learning strategies as a moderating variable to analyse the interaction between

mentoring relationships and the research competence of the population under study.

4. A cross-sectional survey design was used in this study, which indicates that causality cannot be established. Future research should employ a longitudinal design to examine causality over an extended duration.

5. The present research was conducted in polytechnic institutions. Future research should investigate universities, considering the increasing number of institutions providing OTM, to examine how mentoring relationships differ across various educational levels.

6. This study employed primary data to collect information from the selected polytechnics. A subsequent study may be conducted using secondary data from published papers authored by the teaching staff under investigation.

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Appendix 1

Questionnaire

Lead City University, Ibadan, Oyo State

Dear Respondent,

As part of the requirements for my Doctor of Philosophy degree, I am conducting a study on "Mentoring Relationship, Lifelong Learning Strategies, and Research Competence of Office Technology and Management (OTM) Teaching Staff in public Polytechnics in Southwest Nigeria." This research is solely for academic purposes, and all information provided will be treated with the utmost confidentiality. Therefore, please provide your genuine responses to the following questions. Below is the questionnaire designed to address the objectives of this study. Kindly tick the option that best represents your response.

Thank you.

Section A: Demographic Information
Please carefully go through each item and tick (√) in the appropriate boxes.

1. Gender: male [ ] Female [ ]
2. Age bracket: 21- 30 [ ] 31- 40 [ ] 41-50 [ ] 51 – 60 [ ] 61 - 65 [ ]
3. Highest academic qualification: B.Sc./BA/HND [ ] PGD/MBA/MSc/MA [ ] MPhil [ ] PhD [ ] others, (please specify)……..
4. Current Level ……..
5. Length of Service: Below 5yrs [ ], 6-10yrs [ ], 11-15yrs [ ] 16yrs + [ ]

Section B: Research Competence
The statement in this section concerns research competence measures as observed in faculty. Using the four-point Likert-type scale provided, please indicate the extent to which each statement applies to you by selecting one of the options provided (4, 3, 2, 1). Please tick only one option per item.

4 = Highly Skilled; 3 = Moderately Skilled; 2= Weakly Skilled; 1 =Not Skilled

I	**How would you rate your research competence in the following areas?**	**HS**	**MS**	**WS**	**NS**
		4	**3**	**2**	**1**
	Methodological Skills				
1.	Identifying the choice of research design base on the objectives of the study	4	3	2	1
2	Determining the appropriate sample size using appropriate techniques	4	3	2	1
3	Selecting a sample that represents the population of a study	4	3	2	1

4	Conducting interviews for the purpose of data collection	4	3	2	1
III	**Data Analysis Skills**	**HS**	**MS**	**WS**	**NS**
5.	Interpreting a quantitative analysed data	4	3	2	1
6.	Interpreting a qualitative analysed data	4	3	2	1
7.	Conducting interviews for the purpose of data collection	4	3	2	1
8.	Collecting scientific data in a systematic manner	4	3	2	1
III	**Communication Skills**	**HS**	**MS**	**WS**	**NS**
9.	Expressing research ideas using effective oral communication	4	3	2	1
10.	Confident in presenting my research findings at conferences	4	3	2	1
11.	Presenting key findings from research in academic gatherings	4	3	2	1
12.	Effectively communicating research ideas through oral presentations	4	3	2	1
IV	**Referencing Skills**	**HS**	**MS**	**WS**	**NS**
13.	Identifying different referencing styles for conducting research.	4	3	2	1
14.	Paraphrasing words to avoid plagiarism in research	4	3	2	1
15	Using digital scientific systems to search for relevant literature	4	3	2	1
16.	Synthesizing relevant information in the required format from multiple sources	4	3	2	1

Section C: Mentoring Relationship

The statement in this section relates to the mentoring relationship measures as observed within OTM department in your polytechnic. Using the four-point Likert-type-scale provided, please indicate the extent to which each statement applies to you by selecting one of the options provided (4, 3, 2, 1). Please tick only one option per item.

4 = Strongly agree; 3 = Agree; 2= Disagree; 1 = Strongly disagree

I	**How can you describe the distinct phases of your mentoring relationship in the OTM teaching profession?**	**SA**	**A**	**D**	**SD**
		4	**3**	**2**	**1**
	Initiation phase				
1.	I make conscious effort to establish a link with a potential mentor	4	3	2	1
2.	I have expectation of having a mentor to guide me in my field of study	4	3	2	1
3.	I interact well with my mentor around work tasks	4	3	2	1
II	**Cultivation Phase**	**SA**	**A**	**D**	**SD**
4.	I am recognized by my mentor for performing optimally	4	3	2	1
5.	My mentor makes work easier	4	3	2	1
6.	I have a stronger interpersonal bond with my mentor in the institution	4	3	2	1
III	**Separation phase**	**SA**	**A**	**D**	**SD**
7.	I can function effectively without close guidance from my mentor	4	3	2	1
8.	I try to solve issues myself when I encounter setbacks rather than turn to my mentor for help.	4	3	2	1
9.	I receive career supports from my mentor when there is limited opportunity for career advancement	4	3	2	1
IV	**Redefinition phase**	**SA**	**A**	**D**	**SD**
10.	I can operate effectively without the guidance of my mentor or senior colleague	4	3	2	1

11.	My mentor has confidence about my competence	4	3	2	1
12.	I have no reservations in talking to my mentor about common work problems	4	3	2	1

Section D: Lifelong Learning Strategies

The statement in this section concerns lifelong learning strategies measures as observed in your institution. Using the four-point Likert-type-scale provided, please indicate the extent to which each statement applies to you by selecting one of the options provided (4, 3, 2, 1). Please tick only one option per item.

4 = Very high, 3 = High, 2= Low, 1 = Very low

I	**To what extent do you agree with the following lifelong learning strategies processes?**	**SA**	**A**	**D**	**SD**
		4	**3**	**2**	**1**
	Concrete Experience (Gathering New Experience)				
1.	I can combine fresh and previous knowledge to determine academic concepts not understood	4	3	2	1
2.	I can clarify my doubts in my studies with my colleagues	4	3	2	1
3.	I can identify academic errors	4	3	2	1
II	**Abstract Conceptualization (Learning from the experience)**	**SA**	**A**	**D**	**SD**
6.	I can treat the course material as a starting point	4	3	2	1
7.	I think about innovative ideas for course work development	4	3	2	1
8.	I can decide good supporting evidence when a theory is presented in course work	4	3	2	1
III	**Reflective Observation (Reviewing the Experience)**	**SA**	**A**	**D**	**SD**
9.	I collaborate with other colleagues to complete the academic assignments.	4	3	2	1
10.	I set aside time to discuss academic work with senior colleagues.	4	3	2	1
11.	I observe senior faculty members to influence academic tasks	4	3	2	1
IV	**Active Experimentation (Trying out what you have learnt)**	**SA**	**A**	**D**	**SD**
12.	I can relate the course material to what I already know.	4	3	2	1
13.	I can express what is learned in my own words, instead of repeating what the book says.	4	3	2	1
14.	I understand how to apply ideas from study experience in other course activities.	4	3	2	1

Appendix 2

Interview Questions and Responses

Research Competence

What is the level of research competence possessed by OTM teaching staff in public polytechnics in Southwest, Nigeria?

Question 1

How do you rate the current level of research competence among the OTM teaching staff?

Response to Question 1

P1: I think if you must assess that, we need to look at the area of academic qualifications of staff first for the teaching staff. People are willing at such time at least develop themselves academically. I mean, there are degree with Master holders or PhD holders, but you know, when you look at these levels, they are research oriented. Staffs, they will be involved in one way or the other in a research work it helps them.

P2: Just to add to what my colleague I just said you will agree with me that OTM was restricted to only Polytechnics before now. And the level of awareness of the publication of Polytechnic lecturers are limited. This has only recently changed where universities now offer it as OIM. To be sincere with you. Polytechnic teaching staff tends to be contented with their local publications due to their levels. But the focus should be for those that are in the Polytechnic to look outside their network, move out and then compete with their colleagues at the university level. I know that gene is

already broken, that a lot of people will now want to go to impact factor, journals, where the relevance of the OTM or OIM will be visible.

P3: To objectively assess the current level of research competence requires analytical approaches, my discussion with other colleagues shows that many lecturers do not have sufficient knowledge in terms of research processes. Some have limited experience in publications in global journals and relationships, failed to attain training. You cannot give what you do not have and where there is no willingness to learn, it will be difficult to learn. I took up an intentional learning approach to develop myself in the field though.

There is need for the proper understanding of what research itself is all about. Formally, some projects were done using descriptive analysis which is not allowing for different methods but now many of the lecturers are now exposed to some activities to update their knowledge in research. This is an ongoing process, as time goes on, we are learning and would gradually get to the level of using different.

P4: Overtime or in the past, research competence level is in two ways, overtime in the past it may be low but with exposure over the year, it has confirmed that based on several recommendations from studies previous carried out, an updated information and trend shows that there is moderate level. For instance, my own research is the same on research outputs and the findings shows that it has increased. The notion of low level of research competence is in the past as many are now publishing and upgrading their knowledge through attending seminars and conferences.

P5: Can I add that Significant increase in research output may be because of published research for lecturers to improve due to global collaboration with mentors and mentee

relationships, getting access to grants both internationally and locally, there is improvement in research output, but the area of institutional supports needs to be investigated. Sponsoring the lecturers for grants and improvements on the facilities available for conducting research and organizing programme to train staff can boost the level.

Question 2

In the OTM field, share your perspective on the importance of research competence in the teaching profession.

Response to Question 2

P2: The importance of research in the field of OTM is very much relevant now in terms of technological solution and technology explosion involve making use of the modern technologies to train our students. This is because if they are not trained with all these gadgets, they will not be marketable or be able to secure the appropriate job. And in that respect, there is need for them to be well trained to adapt to the new technologies so that they can build global practise.

P5: Research competence in teaching is very important in the OTM field because competences in research on the part of the lecturers and instructors can really improve the effectiveness of the teaching staff as it will enable them to adjust and adapt teaching concepts to students' needs which would literally improve their competence in teaching. Research competence is key as it fosters critical thinking on the part of both lecturers and students and they will be able to apply this concept being thought and things around to contemporary situations such as critical situations of able to

critically analyse problems and bring solution to such problems that might be arising in the field of teaching.

P1: In addition, research competence of the teaching staff can make teaching innovative, the classroom will not be stereotyping teaching style, you can query the style and apply different situations to practical classroom to make it interactive and interesting to improve teaching and learning. These are factors that makes research competency so important in the OTM field.

Question 3

How do we bring in the relevance of all of this into enhancing our research competence in the OTM field?

Response to Question 3

P2: I will still say that the curriculum of OTM encompasses all this. It talks about the communication scheme because OTM is centres on communication, keyboarding, typing. The curriculum of OTM revolve around the communication competence, because without communication, I believe that the graduate of OTM will not be able to function as it will be.

P4: Looking at the importance of a research competence as far as this discipline is concerned, we need to know that it is a tool that strengthens our teaching. It supports us, particularly in dissemination information and other things to our students and for their success. And aside that it advances the profession, but I want to say this that looking at this course it is on its own it is dynamic.

P1: Just like what doctor said and driven by continuous technological advancements.

And because of that research competence will enhance the quality of teaching. It will help us to be able to at least discover innovative teaching methods, and this will be able to apply in the reward scenario. It will help us in our critical thinking and problem solving and you know. When that one is there, it will be able to help us to pass same to our students. It will help them in their thinking capacity. You know it will help us to be able improve it, will improve our effectiveness both in the classroom and in our administrative practises.

P5: In addition to what has been said, being competent in research enables lecturers to write quality papers of international standards, particularly, they are able to publish journal articles that conforms to global trends, identify gaps in body of literature, identify researchable topics, search for academic sources directing them to their teaching areas. Competency in drafting the research findings is also part of the importance of research competence.

P6: Research competence will enable lecturers to guide and inspire students in getting research problem, topics, develop objectives with questions and hypothesis with theories and measures. This will enable lecturers to guide their mentees, colleagues, and students in advancing their skills. The relevance will bring quality and publishable papers in the OTM profession that can stand out and meet global standards. This will promote what OTM stands for such as identifying the problem and its rationale including all the research processes.

P2: Research competence can help in identification of pressing concerns without duplications and repetition of papers to make it researchable. Research conducted by our students in the polytechnic levels lack the substances to make good research. It will help in identifying missing link or gaps in the existing body of literature to

proffer solutions to them. There are different methods of conducting result for a robust result and the relevance will help us to be able to learn different methods to use in conducting germane study. Not all research problem will be suitable for a particular design; this will help us to know the best methodology to use for the research that is being conducted in the field.

P3: To enhance research competence in the OTM field, there is need for collaboration, mentoring, getting involved in training and development, attending workshops and conferences to gain the required experience and research knowledge. How to enhance research competence is by applying the strategies into our research efforts and provide trainings, workshops, attending conferences and providing mentoring for less experienced and collaborate with others from different field. These can enhance our level of competence in the field.

Question 4

Do you think that the demographic factors (qualification, age, and levels) could impact or affect the level of research competence at the Polytechnic level?

Response to Question 4

P2: When we are talking of qualifications in my own perspective, yes, qualification has to do with the with the. An adage says, 'what you don't have, you cannot give it out in the same measure'. A low qualification cannot won't even trigger anybody to go into it because I could remember as a novice when they talk of recitation, I don't even say anything because I don't understand it initially, but when I have the opportunity to come up, I am now realising the meaning of research so and that when we are in the departments or it seems as if only few teaching staff that knows the

importance. Research and if I am to add to the work my. There may be need to sensitise staff on research competence because there are some of them that does not have zeal.

P1: Can I say what they want is to author paper in local journal just to get their promotion. But what other will gain from that research? They do not even care about it, so we still need, apart from qualification, those that even have more to give in terms of research knowledge. But I can say more than 50% teaching staff do not have interest in research may be because OTM programme has a humble beginning which impacted on the Interest shown to research, but I can say that now that we are now coming up.

P6: Yes, I support that, additional qualification can impact on the research competence, this is seen like when I went for my MSc but during and after the programme, I could see myself understanding and enhancing my research knowledge which reflects on my performance till date at my place of work. It is the same with others, this may be because at master's level, research is taught and understood specifically in identifying the problems to completing the research. I have also relay this to all my mentees and project supervisees because the impacts enable me to transfer the knowledge. Now I have started my PhD, and I can say I am doing better with my readiness to learn so additional qualifications have a lot to do with our level of research knowledge or skills.

P4: For age, we do have many experienced academic staff who are in the OTM field. Although this is because of the recent part way but I can say that everyone is now getting more knowledge and improving daily.

Question 5

Generally, could it be that it is because if you published in local journal, which would suffice for your promotion?

Response to Question 5

P1: I still do not believe that Polytechnic teaching staff are not publishing papers. I have a personal experience please. I do not think you know there are some cases where those in the universities, the number of published articles they have, withstand those in the Polytechnic sector. This is only because of the way we see it in this country, people believe that when you are in the Polytechnic, you are inferior to those people in the universities. Yet there are scholars in the polytechnics as well who have published articles in Scopus journals, Google scholars, Web of science and recognized international journals. I think we have more than 200 PhD holders in my own institution, but the problem is from the country where you look at your PhD qualification and ask if it is relevant? These lies in our educational policy in this country. Because of the challenges, the Polytechnic system, this is the major one that is affecting the teaching staff, even those people who have made headway.

P6: The plain truth is that if you see any teaching staff from the Polytechnic or colleges of education that is publishing in any high impact journal, they have other reasons why they are doing that, this maybe they are trying to Japan or they are planning to transit into university as an academic.

P3: Another reason is that if you want to transit to the university with all your publications from polytechnics and at the peak of the cadre like, you are a chief lecturer in the Polytechnic, the highest you can get is the senior lectureship level at the university. I have only heard of just one person given associate professorship grade.

So, the fact is that some of us have international papers, there is no doubt but went into it because of what we are interested in. I do not want to end my career in the Polytechnic just like that.

P4: Well, at the polytechnic level, I can say local journals do suffice however, we tend to do more by publishing in international journals, but sometimes the money is the reason some may settle for the local journals and easy to go by.

Research Mentoring Relationship

QUESTION 2

Which phase of mentoring relationship is most dominant among OTM teaching staff in public polytechnics in Southwest, Nigeria

Question 6

Can you describe your personal experience about mentoring other junior teaching staff who have recently joined the teaching profession in the OTM field? How do they get mentored?

Response to Question 6

P4: I cannot really say that we have enough mentors within this great profession within because those who are at the peak still believes in the old ways like keyboarding and shorthand for students. These are the people with the expected qualifications in the field, but they have recently gotten it after being to different field of study. So, I can say we lack mentors in the OTM field because it is what you have that you give. So, in the aspect of mentoring relationships, it is not visible in the Polytechnic sector, except if we just want to deceive ourselves, because even those

people that want to mentor others do not have the correct qualification. Looking at the OIM at the university level, they have different kind of courses which has been imputed while at the Polytechnic levels, we still battle with these shorthand and keyboarding that to me is not relevant to an extent. So, to me, mentoring is not effective.

P1: Based on personal experience in the recent time, there are no mentors because we had some tough time trying to come up which fuelled the zeal to mentor those coming behind. One of the strategies is to bring less experience mentee into collaborations like giving them tasks in research and collaborating with them. Taking steps like carrying them along when attending trainings or programme to sharpen their competence which is what I do personally and encourage them to further their career like getting additional qualifications in the right direction can also help a lot. The mentee is beginning to produce different questions regarding how to go about things and show the progress in feedback. Mentoring them has really helped them to improve.

P5: Mentoring is what we give priority to in my institution because any new employee cannot just go into the classroom directly but will be peered with another senior colleague who will guide him or her through the process. All these would make the mentor to pass on the right teaching techniques, and we see through this act that the mentees are encouraged this way.

Question 7

(Mentoring relationship. You do not think it does exist?)

Response to Question 7

P2: Not in OTM I must say, now there is name discrepancy, universities call it OIM, and they are just springing up while it is known as OTM at the polytechnic level. This is a big issue for me as we have out degrees in different names. The name is not uniform at all. Then when we come under association too, we do not have it as uniform. It is really an issue, to have a unified name.

P5: Yes, it does but not in all institutions, some do it like in my own institution, we engage in it regularly especially for the less experienced faculty staff.

Question 8

So, we have identified that the discrepancies in name at various levels of education within the Nigerian education has impacted on the effectiveness of mentoring relationships in the field.

Response to Question 8

P1: Yes, yes, yes. Yes. OK, that reminds me, we have mentorship in place at my institution because recently they have recruited some Junior academic staff who are mentored by the Senior academic staff. Anytime you go to the class, you, you go with them so that they will understand. Yes, that's mentoring relationship; by watching the way you do it and they too can develop the teaching techniques. Whether we like it or not, Polytechnic is for skill acquisition.

P3: We discover that even in the university, the universities that are only OTM, but they do not emphasis on these skills. For example, those who are doing very well in the in the universities as teaching staff in the OIM department are those with their background from the Polytechnic before they go to the universities. Let me say here

that notwithstanding the issue with the name discrepancies at different level of education, OTM and OIM still stands for the same meaning.

P2: We can say because of technological advancement which will be advantage in society. So, I think with that nature of mentorship relationship like Dr has rightly said, we cannot just rule it out from the polytechnics. It depends on the environment we find ourselves in. So, we practice it in some polytechnics others they are just coming up or maybe because of one challenge or the other. It may not be visible. Yes, there are some of us that have started very long. Truly we may not have so many mentors in the field like me I say to myself, I do not have mentors because I started on a solitary note, but with the help of God and I developed myself. However, I now have people have people I mentor in the field.

P1: Whatever the different name given to the programme, mentorship is always at the centre part, it will still head to the same structure, goal, and objectives. Mentoring exists at the university, polytechnic, and lower level of education.

P5: I do not agree, name discrepancy does not have any negative effect when it comes to OTM, we do have some mentors in some institutions in the OIM/OTM field with responsibilities to mentor the less experienced and enhance knowledge and skills as well as overcome their challenges.

Question 9

How do you perceive mentoring relationship in the OTM field and what action do you think we should take because of not having enough mentors?

Response to Question 9

P2: Human beings, as we all know, that mentoring relationship is the provision of guardians on career planning and even good and leading the junior ones or junior colleagues. I have mentor that mentors me and put me through everything concerning the classroom teaching coming from a secretarial background. And I thank God today. So, when we are talking of mentoring relationship, it is very essential which all Polytechnic need to take note of.

P4: In terms of mentoring relationships in the OTM field, we might not generalize it because what is obtainable in one department or school may differ. Nevertheless, when I discovered I could not get the necessary coaching or mentoring expected, I moved out of my institution to connect with other people from different institution to get the right knowledge and skills of research to broaden my mind. There is no way you can avoid research writing or acquiring the skills, I looked for mentor for myself in the field, but I can say mentors are not adequate as some of the senior colleagues do not have the right competence in research so they cannot give what they do not have specifically in this technological age.

P3: Today, in the OTM field, the zeal has been removed saying we do not have adequate mentors because people are not getting the right mentorship. Join different professional bodies that can boost your knowledge and interact and network to learn new skills and trends. This has really improved the exposure with attending different programmes. The narrative is beginning to change now.

P1: Personally, I think the challenge of disparity in nomenclature of OTM programmes in the Nigerian tertiary institutions posed some challenges on my own career journey through the learning progression ladder. But with the determination,

consistency endurance and doggedness, I was able to scale through buy the grace of God.

Number 4:

Question 10

Can we discuss the benefits or how can mentoring relationship enhance research competence of the teaching staff at the Polytechnic level?

Response to Question 10

P6: Effective mentoring relationship enhances research competence because you are trying to bring a novice for instance, when you are writing, you put your name and theirs, then you ask them to also go through so that they are learning and gaining publications. They are learning, they see the way you write and tomorrow also when it their turn to mentor someone, they do it the same way.

P1: From my personal experience, becoming a mentor is beneficial, bring the joy of accomplishment and satisfaction. Mentorship can be of benefit to both the mentor and mentee in networking. People come from all spheres of life, and it give opportunities to collaborate and contact others in the field.

Question 11

(Do you mean research collaboration, Sir?)

Response to Question 11

P5: Yes, because I know before now people do solo publication. You do not want anybody to see it or to know what you have written. But now we are free from that era and now, we collaborate. And it will bring efficiency, advancement in career, corporation, peace and harmony within the system and everybody will be moving together.

P1: Can I emphasis on collaborating with others in writing research? Those in marketing, those in accountancy and others depending on the on what we are researching. Additionally, effective mentoring relationship benefit helps others to be able to redevelop their research competence. People we are mentoring they will develop professionally. At the initially start, they do not have that stamina or confidence in themselves or the required competency. This enhances research skills, and it will be able to help them to improve in their teaching qualities when they are well mentored.

P3: Yes, I can say research collaboration is now the order of the day and the awareness to cross boundaries and learn from other field is the trend now in research.

Question 12

Do you want to talk about what mentors get back from mentoring the less experienced or newly recruited teaching staff in the OTM field.

Response to Question 12

P6: Of course, when you train others who do not have same level of expertise like you, you build a legacy, and it stands on. This brings great advantage to both the mentor and the mentees with joy for doing something great.

P2: Mentoring is capable of building confidence in the mentee to progress and going into conducting research, presenting it, and advancing in the career. Mentors progress career wise, and they get to the peak. It gives opportunities of sharing virtues, knowledge to build the next generation with confidence that they can carry on with the right legacy.

Lifelong Learning Strategies

What is the prevalent lifelong learning strategy adopted by OTM teaching staff in public polytechnics in Southwest, Nigeria?

Question 13

Do you want to explain to us - what is your perception about lifelong learning within the context of your role as head of department in the OTM field?

Response to Question 13

P2: Lifelong learning strategies are the various approaches an organisational use. Learning is a continuous thing throughout lifetime which can enable one to adapt to rapidly changing world and remain relevant professional. There is an adage that says, 'the moment you stop learning, then you start dying.' Learning should be the motive behind any academic staff because when you continue to learn, you continue to refresh knowledge. This is continuous at any stage of life, irrespective of your age. We should make it part of our aims in this profession because even when you are retired, people will still be mentioning your name and makes you relevant. Recently we were we attended a conference and invited retired lecturer for over 10 years ago

because we know that this person is still current and he would always have something new to offer anytime he is invited.

P4: From my perspective, Lifelong learning is concerned with a continuous development of knowledge, skills, and competence. Availability of opportunities is therefore important for lifelong learning to take place. This can be in form of mentorship, formal learning opportunities and informal support systems. Embracing lifelong learning can therefore sharpen our research competence in the field of OTM.

P5: Lifelong learning is an ongoing voluntary and self-motivated pursuit for knowledge and skills for professional development. It goes beyond formal education such as studying, taking online course, or engaging in discussions. To give oneself to this has numerous advantages that can help to improve the career, stay updated, additional certificates, making advancements, staying updated with the trend in OTM. With continuous learning it advocates to curriculum development and push us to plan more for the future. It will also help us to mentor the students taking them through all phases of mentoring relationships. It helps to improve self, others, and students.

Question 14

What are the lifelong learning strategies that you have adopted over time in your institution?

Response to Question 14

P2: Well, it has to do with updating of knowledge and acquiring more skills if we are living. Yes, the strategies should be setting some personal learning targets and engaging in professional development through workshops, conferences, and seminars

as a teaching staff. You cannot do without these, as they are places, we learn new things, exchange ideas, and develop yourself. So, it has. It has really been my method, participating in a research activity, which is why we a saying that publishing papers even in the academic something cycle is necessary, or you perish. So, we encourage teaching staff to do this. I have been doing that personally because that is my path and has become a hobby to collaborate with others in drafting article and publishing same. But again, we must tell those coming up that even when they do not need publications, they should keep write something. At least it keeps you going, updating your knowledge in all these areas.

P4: Some of these strategies are being courageous and setting targets, continuous reading and getting updated with the latest trend, enhancing knowledge, certifications, attending workshops, seminars, and conference in and outside the network, engaging with collaborative research to broaden the insights and practicing reflective thinking. Learning research tools will be of importance which is what I am giving myself some targets like getting knowledge with digital research.

Question 15

On a final note, can we all mention those challenges that we have faced in our lifelong learning journey and how were we able to overcome them just briefly.

Response to Question 15

P3: At the stage in my life, as you are moving up in age and you now see your younger ones being your teacher, being your supervisors. If you do not have resilience, and you are not ready to humble yourself, you cannot go far in the lifelong learning journey

Guys, the plain truth, during my own programme, I know what I face. but at the end of the day, God help me to have a focus that helped me in achieving it. With high level of digital literacy, we have to strategise to remain relevant.

P6: Well, I think. I want to talk about funding, you know, in academics, part of the challenges in academics, if we want to say the truth is funding. No, there are some institutions, they do not have much funding about that, but this is a critical concern to me if you want to make progress. We have talked about attending conferences, seminars and publishing or papers in more reputable journals, talking of this coming of that our personal experience. I have a lot of them bombarding me from all these, something we have been sent to party. A lot of them in my emails, but when I consider the converting rate, looking at dollars, looking at pounds, I will say no, where would I get the money? This is a genuine issue which may affects us as teaching staff who desires to publish in reputable international journals? If these funds are there, even little support, sponsorships, we can get more encouraged. It is a major limitation or barrier to getting engaged with lifelong learning.

P5: Yes, I am still on it. Time constraint is my major issue to learning. My major problem in the sense that combining work with family and there's so many commitments in the society. In fact, I faced a lot of problem in the sense and then you know that adult learners also face more responsibility which is not easy. In fact, at times I consider travelling to where I learn, consider my children who are still small that would require care, family care combine with my office responsibilities.

P1: One of these I would say is time because we need it to remain effective. We should schedule regular time for reading and enhancing skills, find a way to gather

resources and not rely on the institution to help. Getting to know the search engines and how to use them and engage in technology as we approach the AI globally.

P3: One more point to add is financial limitations, cost of education especially because of the Nigerian situation, academic activities are now expensive. This is a constraint, and we should encourage ourselves to apply for sponsorship, scholarships home and abroad, I benefited this in my institution for my master's but had to sponsor my PhD myself.

Outside the Specific Interview Questions, but Connected to question 1 and 2

Question 16

Do we have any other thing that we like to mention regarding enhancing our research competence in the OTM field?

Response to Question 16

P2: Funding is a very major aspect and very key. Yes, I want to mention the aspect of lack of power like light when there is no light, there are many things you cannot do without it. Sometimes we do not have light in a week two weeks, when you get to the to the office after the normal class you are tired then everywhere is hot and you do not have anything to do about it. But if that is light and then you have data all these things would be very seamless and easy to do.

P6: Please, I like to talk of a conducive environment. When the learning environment is conducive, your office environment and other things are made available for you as a staff, I want to tell you that the issue of just attending your class and carry your bag, and you move away will not be there. You will love to stay, if possible, extra hours

since the environment is conducive for you to draft research. Normally the office should be able place of haven, but at least for you to be able to stay, relax and carry out some study and go home. But when the office environment is not even cohesive, you do not stay there.

P3: Yes, I think teaching facilities should be effective because OTM or OIM is a technical course, situated in technological equipment like computers, another modern equipment in the classroom. But there is nothing like that, there is no facility.

P1: I think conducive environment and having access to funding. You have people, institutions that are willing to just go extra mile to support you and that gives you the zeal that that encourages and motivates you. Here you pay through your nose to get access to data, all these means a lot to us as researchers. You have joy in what you want to do or what you are doing, but when you don't have all these things around enabling environment, you don't have access to funding you of course you get tired, and you get fed up. You do not want to stress yourself. You just pack your bag and go home honestly.

Recap: Interview for OTM Teaching Staff 11 May | Meeting | Microsoft Teams

Bio-data

A. Personal Data

1.	Name:	**Oluwakemi Esther, IBIRONKE**
	Address:	No 1, Suberu Sekoni Street, Ibadan
	Email:	oluwakemiibironke01@gmail.com
	Phone Nos:	08035672018 / 08163768002
2.	Date and Place of Birth:	June 18, 1980 / Shomolu, Lagos State
3.	Nationality:	Nigeria
4.	Marital Status:	Married
5.	No of children & their ages:	3 (14, 12, 9)
	Name & Address of Spouse:	Ibironke Agboola Sunday No 1, Suberu Sekoni Street, Ibadan
	Name and Address of Next of Kin:	Same as above
6.	Date of Assumption of Duty	28th May 2025
7.	Status of First Appointment:	Confirmed
8.	Present Position:	Project Course Tutor
9.	Date of last promotion:	2025
10.	Date of Confirmation:	N/A
11.	Faculty:	Communication & Information Sciences
12.	Department:	Information Management

B. Educational Background

1. Educational Institutions attended with Dates and Qualifications

- Lagos State Government Ministry of Education - Certificate of Testimonial, 1991
- Ajumoni Grammar School Okota, Isolo – Senior School Certificate (WAEC) 1997
- The West African Examinations Council (WASSCE), 2000
- Osun State Polytechnic, Iree – National Diploma in Secretarial Studies, 2001
- Osun State Polytechnic Iree – Higher National Diploma Secretarial Admin, 2004
- Lagos State University Postgraduate School – PGD in Public Administration 2008
- Lead City University, Ibadan – BSc. Office & Information Management, 2019
- Lead City University Ibadan – M.Sc. Office & Information Management, 2021
- University of Lincoln, UK – MA Educational Research & Development, 2024
- Lead City University Ibadan – PhD. Office & Information Management, 2025
- University of Lincoln UK – PhD Educational Research & Development (In View)

C. **Work Experience with Dates**

Acts Trust **June 2025 – Till Date**
Position: Project Course Tutor

- Facilitate course delivery.
- Adult course delivery
- Contributes to curriculum development and revision of course materials
- Monitoring and reporting of session deliveries and participant progress

Position: Cover supervisor 2023- 2025

- Providing support with other team members to the pupils
- Assisting with achieving planned objectives within the school
- Supporting pupils with their special needs
- Teaching and learning with pupils with disabilities.

SPS Security Limited UK. (The University of Lincoln General Library) May 2023 –2024
Position: Library Assistant

- Greeting students and answering their inquiries
- Allowing access to visitors who hold library cards.
- Signing in visitors who do not hold library cards.
- Empty book bins and place on relevant trollies/shelves

Postgraduate Aca. Rep MA Education, UK (University of Lincoln) 2023 – 2024
Position: (Volunteering Role)

- Working closely with the VP Education Executive towards achieving the Objectives of the Union
- Conducting assigned duties as appropriate.
- Ensuring equality amongst students within the department

Lead City University, Ibadan, Nigeria 01/2020 – 01/2023
Position: Lecturer

- Performing administrative roles at the faculty and departmental levels,
- Marketing the University through different media
- Distributing fliers across different platforms,
- Supporting with the coordination of seminars, workshops, conferences in the faculty
- Delivery OIM courses for students from 100-400 levels

Lifepath Consult, Ibadan, Nigeria
Jan.2018 – Dec 2022
Position: Volunteering Role

- Sharing knowledge and expertise experience with secondary school students on how to
  grow their skills.
- Guiding students in their chosen careers.
- School-to-school coaching

Access Bank Plc (Lagos & Ibadan, Nigeria), 2006 – 2019
Position: Branch Administrator

- Supervision of Office Assistants, Drivers, Generator Operators, and Vendors coordination.
- Maintaining office functions by organizing and monitoring staff.
- Keeping the office organized to increase office efficiency.
- Maintaining critical records for the company and maintaining a procedure for the handling of sensitive data including storage and disposal

D. Membership of Academic Professional Bodies

Member, The British Academy Early Career Researcher Network, UK 2024

Member, Women in Higher Education Leadership Lincoln United Kingdom 2023

Member, National Institute of Office Administrators, and Information Managers 2020

Member, Institute of Corporate Administration of Nigeria - Professional Member 2019

E. Publications

Published Journals

Ibironke O.E. (2025): Innovation Capability Influence on Learning and Growth. What is the Role of Knowledge Retention? Asian Journal of Economics, Business and Accounting, 2025, 25(11), pp 28-39.

Ibironke O.E. Mentoring Relationship: A Strategy for Sustaining Office Technology & Management Profession. A Festschrift Submitted in Hounour of Prof. Eseza Akiror Erwat Published by the department of Information Management, Lead City University Ibadan, Nigeria. ISBN 978-697-535-1, 2025, Pg185.

Ibironke O.E Mentor-Mentee Relationships in Higher Education: The Expectations of EarlyCareer Female Academics. Impact 2024, e-journal of Higher Education Research. The Scholarship of Teaching and Learning, ISSN:2516-7561, 7(4), 1-21 https://lalt.lincoln.ac.uk/impact-e-journal

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Ibironke O.E. Creative Learning, Innovative Teaching and Career Development of the Female-Child Journal of vocational Education (JOVEK) Federal college of Education, Kontagora, Niger State. September 2021

Ibironke O.E. Influence of Work-Life Balance and Role Ambiguity on Occupational Stress Among Office Managers at the University of Ibadan, Nigeria. *International Journal of Management, Social Sciences, Peace, and Conflict Studies* (IJMSSPCS), Vol.4 No.1 March 2021; Pg. 383 - 393; ISSN: 2682-6135 www.ijmsspcs.com

Ibironke, O.E. Workplace Mentoring: Tool for Sustaining Organizational Culture and Productivity. Faculty of Arts and Education NPCC *Journal, Lead City University,* Ibadan, Oyo State, Nigeria. www.pastoralcounsellors.com

Ibironke O.E. Modern-day knowledge management tools in Nigeria. Journal of Humanities, Science and Technology (JOHSAT), 5, 1, 2020, ISSN: 0794 - 8735.

Ibironke, O. E.Promoting Sustainable Development in Nigeria through Information Communication Technology, published by OYSCATECH, Igboora, Oyo State." The Polytechnic, Ibadan for the 2019 International Conference on Technology, Security and Socio-Economic Development in Africa

Dissertation/Thesis Unpublished

Ibironke, O.E. Mentoring Relationships, Lifelong Learning Strategies and Research Competence of OTM Teaching Staff in Public Polytechnics in Southwest, Nigeria. Thesis Submitted to the Department of Office and Information Management, Faculty of Communication and Information Sciences, Lead City University, Ibadan, Nigeria

Ibironke, O.E. Early Career Female Academics in Private Universities in Ibadan, Southwest Nigeria: A Case Study to Explore the Effectiveness of Mentor-Mentee Relationship in Higher Education. Dissertation submitted to the Department of Education, University of Lincoln, United Kingdom, for the award of Master of Art in Education (Leadership and Management). 2021

Ibironke O.E. Innovation Capability and Organizational Performance of Deposit Money Banks in Ibadan, Oyo State. Submitted to Postgraduate School of Lead City University, Ibadan for the award of Master of Science in Office and Information Management. 2021

Ibironke O.E. Effect of workers' motivation on Organizational Development in Diamond Bank Plc, Ibadan Region. Submitted to the Department of Office & Information Management Lead City University for the award of Bachelor of Science in Office and Information Management 2019

Ibironke O.E. Corporate Governance and Administrative Capability of Employees in Ejigbo Local Government Council, Lagos State. Submitted to the Department of Public Administration, Lagos State University Postgraduate School for the award of Postgraduate Diploma in Public Administration, 2007

F. Notable Scholarly Professional Accomplishments

- Project Management Professionals (New Horizon Institute, Lead City Campus), 2019

G. Major Conferences/Workshops Attended and Paper Presentations

- Equity, Diversity and Inclusivity in Research, 2nd Multidisciplinary International Conference, Postgraduate College, Lead City University Ibadan on October 06 -09, 2025.
- East Midlands Doctoral Conference (EMDOC) – Creating and Sustaining Research Conversations Within and Across the Disciplines, University of Lincoln, UK – September 19, 2025
- Contemporary Trends and Transformations in Management, Education, Social Sciences, Sciences, and Engineering" on Saturday, May 03, 2025, at Dewan VS Group of Institutions Meerut, India jointly organised by Dewan VS Group of Institutions Meerut India and International Council for Education, Research and Training (ICERT), India & USA
- International Conference on Internet, E-Learning and Education (ICILE-25), Johannesburg, South Africa, 15 – 16 January 2025
- International Seminar on UN and UNESCO World Day for Cultural Diversity for Dialogue and Development on "Diversity & Inclusion: Driving Force to Innovation for Sustainable Development" on May 21, 2024, jointly organized by Postgraduate College, Lead City University, Ibadan, Nigeria, and International Council for Education, Research and Training, ICERT, India and USA.
- EARNIA International Conference, Cameroon, September 2021
- Library Literacy Virtual Conference organized by American Centre Lagos In conjunction with University of Lagos Library September 2021

- Capacity Building (National Institute of Office Administrators and Information Managers) 2021
- National Pastoral Counselling Conference (NPCC), Faculty of Arts & Education. 2020
- The polytechnic, Ibadan for 2019 International Conference on Technology, security and socio-economic development in Africa. February 2019

H. Services at Lead City University

Services within the University Department (Information Management Department)

- Treasurer-National Institute of Office Administrator and Information Managers NIOAIM)
- Staff Adviser – Office and Information Management Student Association, 2021-2022
- Staff Adviser – Library and Information Science Student Association, 2022
- Staff Liaison Officer – 100 and 200 level students in Information Management, 2021

Services within the Faculty of Communication and Information Sciences

- Member, Inter-departmental lecture committee, 2022
- Member, Faculty orientation committee, 2021

I. Extra-Curricular Activities

- Engagement Compere, guidance and counselling, training, and development

J. Trainings

- Moving & Handling Train the Trainer certification, 2024
- First Aid Train the trainer Certification 2024
- The Article Publishing Process: Elsevier Author Workshop Research 2020
- Book Publishing Process: Elsevier Workshop, Research Academy 2020
- Building Responsible Leaders, Liprorich Consulting Limited 2020
- Tone of Voice, Access Bank Plc 2019
- Sustainable Banking, Diamond Bank Plc 2018
- Ebola Awareness, Diamond Bank Plc 2018
- Stress Management, Diamond Bank Plc 2018

G. References

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The University Compliance Certification

This is to certify that this thesis written by **Oluwakemi Esther IBIRONKE** with Matriculation No. **LCU/PG/001351** in the department of Information Management of the Faculty of Communication and Information Sciences, Lead City University, Ibadan is in full compliance with the approved University format and style.

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Signature **Date**