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Supervisors Teaching Variables and Students' Performance in Post Graduate Thesis and Dissertation in Public Universities in Cross River State, Nigeria

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Abstract: This study focus on investigating supervisors' teaching variables and students' performance in post graduate thesis and dissertation in Cross River State, Nigeria. The study adopted the ex-post facto research design. The stratified random sampling technique was used to select 406 theses and dissertations from a population of 3,912 using proportionality of 10.37% with Faculty as basis of stratification. Theses and Dissertations supervisor variables scale (TADSVS) was used to amass information from the respondents, while the Simple Linear Regression Analysis was used to analyse the date collected from the field. The first finding showed that there is no statistical significant influence of supervisors' years of tertiary institution teaching experience on students' performance in post graduate theses and dissertations. This means that students' performance in their final year research work is the same (equal) for those supervised by the low, moderate and high experienced lecturers. The finding of the second hypothesis showed that Supervisors' area of specialization significantly influences students' performance in theses and dissertations in Cross River State, Nigeria. That is, thesis performance is not equal across supervisors' specialization. Based on the foregoing findings, the study recommends the need to assign an experience supervisor to supervise post graduate students' research theses and dissertation for excellent performance since supervisors' years of tertiary teaching experience significantly influence students' performance in post graduate research theses and dissertation among universities students in Cross River State, Nigeria.

Keywords: Supervisor, Teaching variables, Students' performance, Thesis, Dissertation, Public universities.

INTRODUCTION

The problem of the study is the poor performance of Post graduate students in thesis and dissertation. This has been a cause for concern to many in the universities as many of the students who have successfully done all course work end up not completing their theses. There are several factors that probably cause this problem. Suspected factors may include student-related causes like choice of research topic as well as knowledge of research theory and practical skills. Furthermore, school environmental factors like quality of research library may also be significant in determining research output.

Proprietors of Universities have consequently directed efforts and budgetary allocation to address graduates instruction in research by engagement of high quality lecturers and enrichment of graduate school libraries, including the e-libraries. However, in spite of all these, students' performance in theses and dissertation continue to pose challenges. This study, therefore, sought to investigate the specific supervisor variables in post graduate students' degree projects in Cross River State, Nigeria.

Statistics obtained from the office of the Registrar, Graduate School, University of Calabar, Calabar in June 2021, show that, about 43% of students who enrolled in the post graduate programmes of the

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institution over the years were not able to carry out their research undertakings, successfully. Similarly, statistics obtained from the office of the Registrar, Graduate School, University of Cross River State, Calabar in March 2021, show that, about 35% of students who enrolled in the post graduate programmes of the institution over the years were not able to carry out their research undertakings successfully. Also, statistics obtained from the office of the Registrar, Graduate School, National Open University of Nigeria, Calabar Study Center in October 2021, show that about 59% of students who enrolled in the post graduate programmes of the institution over the years were not able to carry out their research undertakings successfully. A lot more complete with low grades. It is so alarming to know that, these set of students heap blames on their supervisors for lack of attention, over demanding on the part of some supervisors and poor attitude to supervision. The supervisor, on the other, hand attribute non-completion and poor grades to students' poor attitude to research, poor student supervisor relationship and supervisor's high workload. Proprietors of the Nigerian Universities are aware of this problem and this may be why the Federal Republic of Nigeria established the National Universities Commission (NUC) to formulate polices and manage the universities. This body (NUC) has clearly made rules spelling out qualifications for graduate teaching and supervision of theses, which excludes the lower cadre academics.

The university system has made it compulsory for research courses to be taken at graduate level during course work which is meant to assist them during thesis writing. These efforts have not really produced the desired results, as poor thesis and dissertation performance still persists. Whereas some of the students attribute the problem to the supervisors, others point to the task difficulty, inadequacy of resources for research and paucity of funds. Some attribute the poor performance to undergraduate deficiencies in research theory and practice, others point to students' competing interest and occupation, while others accuse the thesis supervisors. To what extent are the supervisor variables responsible for poor student's performance in Post graduate degree thesis and dissertation? This is the question this work promises to answer.

REVIEW OF RELATED LITERATURES
The improvement and quality of theses usually centered on the supervisors teaching and supervisory experience (The University of British, Columbia, 2016). James, (2018), assessed the Research Skills among Undergraduates in the University of Calabar, Nigeria. The study found that supervisors' teaching experience and students' performance in research skills in the University of Calabar were significantly high as students consult research experts. It was recommended in the study that every student should have a mentor, someone who is more knowledgeable and can guide them, not just in the area of academic success, but to also excel in the

area of research. It was concluded that universities and other tertiary institutions across the world are recognized as citadels of learning and centers of research. Research occupies the center stage in all the activities of universities. This is to guarantee continuity and advancement of the society at large through research development. Research skills are taught to undergraduates to keep hopes alive and retain the tradition of using research as the search light to the unknown. Research skills then become the source of energy that keeps the search light on. If you consider the place of research in the overall development of the society, you will be properly positioned to appreciate the need to build, develop and sustain research skills in the future generation of any nation. It is important to emphasize mentoring in the university system. Every student should have a mentor, someone who is more knowledgeable and can guide them not just in the area of academic success but to also excel in the area of research.

Charumbira, (2013), conducted a study to Assess the Supervisor's Teaching Experience, Philosophical and Methodological Challenges Facing Sport and Business Management Student Researchers in Zimbabwe. The results show that in most of the studies, the selection of research methodology was out of sync with the nature of the research problem and the use of positivist research tended to dominate. The results strongly mirror the incompatibility of quantitative and qualitative theses purists which posits that qualitative and quantitative methods cannot be mixed.

The continued emphasis on positivist approaches by Zimbabwean management researchers tends to limit their ability to discover the hidden complexities and dynamic socially constructed business and cultural contexts of the country's management environment. In the light of this, a paradigm shift towards Mixed Research Approaches and consultation of other mentorship outside the main supervisor was advice to be used since it can enhance the ability of Zimbabwean social researchers to effectively understand the complex and ever-evolving socially constructed processes associated with such fields of education as Business and Sports Management. And was recommended that important prerequisite towards the realization of this paradigm shift be used to equip academic practitioners in the country with Social Research skills since there is a general lack of appreciation of Social Research Methodologies in the country with adequate supervisor's teaching experience especially in research related issues.

Halse and Malfroy's (2009) study on Retheorizing doctoral supervision as professional work shows that competitive higher education environment is marked by increased accountability and quality assurance measures for doctoral study and structured training of doctoral supervisors. The study also highlighted the need to clearly articulate and delineate the work of supervising doctoral students and response

to this imperative by examining the question: in the contemporary university, what do doctoral supervisors do and how might their work be theorized? The response draws on life history interviews with doctoral supervisors in five broad disciplines/fields, working in a large metropolitan university in Australia. Based on empirical analyses, doctoral supervision is theorized as professional work that comprises five facets: the learning alliance, habits of mind, supervisor expertise, teaching experience, contextual expertise and student consultation of online materials which enhanced a better dissertation performance. The study proposed that this model offers a more precise discourse, language and theory for understanding and preparing for the work of doctoral supervision in the contemporary university.

Meerah, Osman, Zakaria, Ikhsan, Krish, Choo Lian & Mahmod (2011), measured graduate students research skills in the Universiti Kebangsaan Malaysia and reported the research knowledge and skills of a random sample of postgraduate students. The results indicate that the graduates in general have moderate knowledge from textbooks and online materials which aided in the competencies to conduct their final research. The implication of the study was the further enhancement of the research training needed in order to produce very knowledgeable and skillful researcher in the students' field of specialization.

Koppi, Nolan, and Field, (2010), averred that an outcome of research activities is learning. Engaging in diligent searching, studious inquiry, discovery of facts, or collecting information all lead to learning. Academic researchers extend learning in their discipline by engaging in one or more of these aspects of research to solve a particular problem or simply to find out more about the discipline. By the time tertiary students' graduate, they are expected to have some experience of research and to have engaged in a research project individually or collaboratively. If research experience is provided, it usually occurs in the more senior years. Research activities in higher education may be reserved for more advanced students who are deemed to have sufficient background knowledge for participating in research practices (Jenkins, Breen, Lindsay & Brew 2003) in Koppi, Nolan, and Field, (2010). The students responses mirror the process through which academic researchers usually work and learn in that a problem is identified and clarified by discussion with peers and experienced research mentors (often collaborative) is carried out with the aim of finding a solution.

Alys Wyn, Heather and Vardy, (2015) study on the Role of a Supervisor and the Impact of Supervisory Change during your PhD found out that the most influential aspect of a PhD is choosing a supervisor as this shapes PhD experience, subject area and research methods. However, as anyone doing a PhD knows, it's not necessarily a smooth ride from start to finish. While it is unlikely that students start their journey anticipating

a change in supervisory team, this can happen, and for a variety of reasons. The study concludes that for a supervisee to survive Postgraduate Study, his or her supervisor must have expertise in the research area. It is important that supervisors have up-to-date knowledge of the subject matter and are expected to have supervised similar theses in the past, which can usually be accessed through University libraries or the world-wide web.

Tooba and Nasir, (2017) sought to investigate the influence of some supervision related background variables on the supervisees' experiences. The findings highlighted the importance of supervisors' expertise and research skills on the supervisees' area of research. The supervisees who were not given choice for the selection of the supervisor reported negative supervision experiences. Giving choice to the selection of a supervisor probably improved the supervision experiences of supervisees and can minimize the potential personality and research interest related anomalies. Supervisees from the social sciences disciplines reported the problem of being supervised by a supervisor who supervises outside his area of specialization leading to his poor performance during the supervision process.

Fraser and Mathews, (1999) Carried out a study on an Evaluation of the Desirable Characteristics of a Supervisor. The study concluded that students clearly rank non-expertise-related characteristics of supervision which provide support and which balance creativity with criticism as more important overall than expertise-related characteristics. They use these results to argue for staff development opportunities to be enhanced to enable academics to receive training in these areas of supervision competence which are ostensibly unrelated to expertise. They further opined that a supervisor with a secondment in a similar area may be helpful as a second supervisor who may have more time to dedicate to the thesis supervision. It is difficult to supervise a graduate student in a research title that is not related to the area of supervisor's specialty.

Mukail, (2016), study on supervisors' experience and area of specialization as determinates of the quality of students' project report writing skills in tertiary institutions also maintained that Project report writing is important and compulsory for every final year student in tertiary institutions, however adequate attention has not been given to the supervision of project report writing. Some teething problems always accompanied project report writing. The study employed the expo-facto design to investigate the effects of supervisors' experience and area of specialization on the quality of students' project report writing skills. The population for the study comprised all the 60 supervisors in the school of science, out of which 42 were sampled. One research question and three hypotheses were formulated for this study. The statistics used for data analysis was multiple regression analysis. The main

hypotheses verified the extent to which: the quality of students' project report was predicted by Supervisors experience and Supervisors area of specialization. The results revealed that most participants, as faculty members, managers, and students have experienced some difficulties in this regard, due to poorly structured rules and regulations and its impact on the thesis supervision and that it is not only the rules themselves but also the way they are implemented that mather. One of the faculty members expressed confusion over the rules related to the dissertation as follows: "It should be made clear what one must do exactly. It is obvious regarding supervision on the work of students; there are not the same expectations from an Assistant Professor, Associate Professor, and a professor. Most problems occur as a result of the gap in legislation; For example, the rules imply a full Professor does not need a statistical consult, while many supervisors do not have enough knowledge and skills in statistical analysis". Failure to implement the rules also increases the sense of this ambiguity, and there are no specific rules for verifying capability and audits to determine inadequate experts in thesis supervision. The rale ambiguity or unclear rales and responsibilities of the supervisor and student in the thesis process were other limitations that were emphasized by the majority of participants.

The results further reviled that there was significant main effect of supervisors' experience on the quality of students' project report and also there was significant main effect of supervisors' area of specialization on the quality of students' project report. As a result of these findings, it was recommended that there should be a format for project writing, research report requirements/ guidelines should be part of students' handbook and mentoring should be encouraged in project supervision.

Louis, Barbara, Zarus, and Kim, (2011) evaluated school counselors' perceptions of their preparedness, professional identity, and perceived supervisor effectiveness related to specialization-specific supervision (SSS). School counselors from American School Councilor Association (ASCA) southern region were asked to respond to the Specialization-Specific Supervision Questionnaire (SSSQ). The findings of this study demonstrated that school counselors who received specialization-specific supervision felt better prepared to begin an entry-level school counseling position, had a stronger sense of their professional identity, and expressed feeling more positively regarding their perceptions of supervisor effectiveness than school counselors who did not receive specialization-specific supervision. These results support the conclusions of previous research, which indicated that supervision serves the following purposes: varies from discipline to discipline and is a conduit for professional identity development and a contributing factor to the overall supervisory experience.

Tooba and Nasir (2018), study on the Influence of the Supervision Related Background Variables on the Supervisees' Supervision Experiences at Postgraduate Level averred that in some cases of ambiguities, candidates are bound to work with a supervisor probably with whom they have a mismatch of academic expertise or personality traits. Such types of situations can also influence the supervision experiences of supervisees regarding their different supervision needs. However, these practices vary from one institution to another and within one institution is also not practice uniformly.

Also having pertinent research skills and expertise for a supervisor in supervisee's research topic is one of the most essential supervision aspects at postgraduate level. Cullen, Pearson, Saha and Spear (1994) produced a list of good supervisor characteristics namely: approachable and friendly, supportive, positive attitude, open minded, prepared to accept or acknowledge errors, organized, thorough, stimulating, and conveys enthusiasm for research. Ismail, Majid and Ismail (2013) explored the supervision role from the supervisees' side particularly focusing on the tensions that arose between research students and their supervisors when faced with problems at different stages of their research process. The study examined the role of supervision from the perspective of research students, which is a departure from previous literature that centers more from the perspective of supervisors and institutions. Specifically, the study examined tensions that arose between research students and their supervisors when faced by troublesome knowledge at different stages of their doctoral learning journeys. The case study involved four participants from various higher institutions in Malaysia. Semi-structured interviews contributed to the overall volume of the data collected in the study. Findings of the study highlighted the three main issues of supervisees namely: lack of positive communication, lack of necessary supportive skills and power conflicts. In addition, identifying tensions described by research students can help supervisors to improvise their supervisory skills and deliver effective supervision throughout the various stages of students' research development.

Supervisor's area of specialization as an expert is significant in helping the 'novice', supervisee, comes to a level of understanding expected by the academic community. Thus, the importance of the supervisor's role cannot be under-estimated. It is one that needs to be exercised with insight and understanding in terms of the student needs, strengths and weaknesses based on the feedback presented to the supervisee. Perceptions of what supervisors consider to be appropriate feedback may vary from supervisor to supervisor and from discipline to discipline. Additionally, their perceptions may be further influenced by the status of the student.

Various functions of feedback have been proposed in the literature. According to Hyland (2009) and John (2010), thesis feedback helps students understand 'the norms and values of their particular disciplines, and thus facilitate students' enculturation into disciplinary literacies and epistemologies'. Providing feedback on a one-to-one level, namely, supervisor-supervisee pairings is one way in which the challenges associated with thesis supervision can be approached. Other functions of feedback, Sofoulis, (1997) in John, (2010), include helping a student 'discover his/her own standpoint', 'gain recognition for one's "own work"', and 'find ways of expressing it in one's "own voice"'. In other words, feedback is important for helping students become independent researchers and writers. Achieving a level of independence is not something that materializes overnight: it is developed over time as supervisors interact with their students and provide feedback on their drafts. A socio-cultural theory of learning (Vygotsky, 1978 in John, 2010), provides one useful way of conceptualising the help that thesis students need as they progress towards independence.

Wisker, (2008) identified three stages in the thesis supervision process and described the duties of the supervisors in each of them. Pearson and Brew (2005), stated that maturation in specialist skills, generalist skills, self-reliance skills, and group/team skills are the major areas that need to be promoted in the student. Moreover, these are the generic processes in which the supervisors should be involved for efficacious supervision if they aim to help the students develop in various institutional, disciplinary and professional settings; acquire appropriate expertise and features needed for employment; and make an outline of what might form a flexible professional development program for supervisors in this setting.

Vygotsky (1978) emphasized novice supervisors' approaches to reach expertise in supervision and explained the relationship between practice and dilemmas among novice supervisors. Regrettably, despite the importance of expertise in higher education and particularly research supervision, research abilities are not considered as one of the priorities in the employment of the academic staff.

One of the most important factors contributing to the thesis and research quality is the process of developing expertise in research supervision. However, most studies in our country Nigeria have focused on research abilities during the research, and fewer studies have focused on the process of expertise acquisition in thesis supervision, and no actual model has been proposed for this. The quantitative researches could not explain exactly how and through which process the faculty members, as thesis supervisors, become experts in thesis supervision since the expertise process is multi-factorial and has many unknown aspects.

RESEARCH METHODS

Research Design: The study adopted the ex-post facto research design. This design is chosen because at the time of data collection, the independent (causal) variable namely supervisor variables had already happened and there is nothing the researcher could do to control them. It is an "after-the-fact" study.

Population of the Study: The population of the study consists of all the 3912 Post graduate degree students who completed their theses defence between 2019 to 2021 academic year among Universities in Cross River State, with specific reference to the University of Calabar, University of Cross River State and the Calabar center of the National Open University of Nigeria.

Using Taro Yamane (1967 formula to justify the sample size, the equation used was:

$$\frac{n=N}{k+N\,(e)^2} \, ,$$

$$\frac{3912}{1+3912\,(0.05)^2} = \frac{3912}{1+3912\,(0.0025)}$$

$$\frac{3912}{1+9.780} = \frac{3912}{10.7800}$$

n = 362.894

n = 363 minimum sample size

Where:

n = signifies the sample size

N = signifies the population under study (no. of supervisors or students only)

e = signifies the margin error (0.05)

k= constant (1)

Hence a sample size of 406 used is adequate, having exceeded the 363 minimum required by this formula.

Sampling Procedures: The stratified random sampling technique was used to select 406 theses and dissertations from a population of 3,912 using proportionality of 10.37% with Faculty as basis of stratification. Of the population, 110 were dissertations (2.8%) while the remaining 3802 were non- doctoral students (97.2%).

The Sample: For each University, about 10.37 percent of the population of students in a Faculty was selected by simple random sampling. The theses and dissertations were numbered serially from one to three thousand nine hundred and twelve (1-3,912). Each number was written on a slip of paper folded and placed in a box. After shaking it, one slip of paper was selected each time with replacement. This was done until the 406 sample theses and dissertations were selected. This is shown in Table 3. The sample of this study consist of forty nine (49) students alongside Supervisor(s) from Cross River University of Technology, Calabar, one hundred and ninety five (195) students alongside Supervisor(s) from the University of Calabar and one hundred and sixty two (162) students alongside Supervisor(s) from National Open University of Nigeria, Calabar study center. This

gives a supposed sample of four hundred and twenty (420) students alongside Supervisor(s) drawn from three (3) Universities in the study area from 2019 – 2021. However, fourteen supervisors (3.3%) provided incomplete data leaving the real sample size at 406 students, with the fourteen as mortality figure.

Instrumentation: The study made use of both primary and secondary data sources. The secondary data is the set of scores (grades) of theses and dissertations students obtained from the respective universities in the Post Graduate School as was obtained from the assessment report of the external examiner(s) of the candidates examined. The major instrument used in the study was the researcher – designed Theses and Dissertations supervisor variables scale (TADSVS); comprising sections A and B. Section A elicited information on the supervisor's personal data, including name of respondent, name of the university, faculty, department and sex. While section B comprised twenty (20) items measuring supervisor's attitude to thesis supervision using a five point agreement Likert scale; Very Strongly Agree (VSA), Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). Typical items include; I discuss research problems with my supervisees, I help my students to choose research topics, I provide critical feedback on my students written work time and I guide the students to present their work at seminars/conferences. The supervisor is expected to check the extent to which he/she exhibits the listed attitudes.

Procedure for Data Collection: The researcher solicited permission from the post graduate school authorities of the three universities used in the study which include University of Cross River State, (UNICROSS), Calabar, University of Calabar and National Open University, Calabar Study center. In each of the sampled schools, the researcher met the Dean and Secretary to Graduate School and sought for permission to obtain theses and dissertation supervision data for research purpose. Consequently, theses and dissertation scores were obtained with the supervisor's name written on each copy of the instrument. The instrument was then administered through the Dean's office. At the end of the exercise, copies of the instrument were retrieved from the Dean's office after some days.

METHOD OF DATA ANALYSIS
Hypotheses one: There is no significant influence of supervisors' attitude to supervision on students' performance in Post graduate research theses and dissertations.
Independent variables: Supervisors' attitude to and dissertations supervision (metric variable).
Dependent variable: Performance in research theses and dissertations (metric).
Statistical Technique: Simple Linear Regression Analysis (since both dependents and independent variables are continuous or metric).
Hypotheses two: Supervisors' workload does not significantly influence students' performance in Post graduate research theses and dissertations.
Independent variables: Supervisors' workload (metric variable).
Dependent variable: Performance in research theses and dissertations (metric).
Statistical Technique: Simple Linear Regression Analysis.

RESULTS AND DISCUSSIONS

For each hypothesis, the procedures used in testing it are explained briefly, followed by the presentation and interpretation of the results. All decisions were taken at .05 level of significance, such that a null hypothesis was rejected if the P-value associated with the computed test statistic was less than .05, but retained if otherwise.

Hypothesis one: There is no significant influence of supervisors' years of tertiary institution teaching experience on students' performance in post graduate thesis and dissertation.

To test this hypothesis, since the dependent variable is continuous variable and the independent variable (years of experience) is multiply categorical. One-way (univariate) ANOVA was used. The F-ratio test was used to test for the significance of the overall influence model. The results are presented in Table 1.

Table 1: Univariate ANOVA of student' thesis and dissertation performance by supervisors' years of teaching experience

supervisors' years of experience	N	Mean	Standard deviation	Standard error
1-7 years	21	71.690	7.960	1.758
8-14 years	38	70.303	7.301	1.307
15-21 years	99	70.089	8.205	.810
Above 21 years	248	70.452	8.114	.512
Total	**406**	**70.413**	**8.034**	**.598**
Source of variation	**Sum of squares**	**df**	**Mean square**	**F - value**	**P -value**
Corrected model	45.419	3	15.140	.233	.873
Intercept	906402.343	1	906402.343	13961.450	.000
Years of experience	45.419	3	15.140	.233	.873
Error	26098.560	402	64.922		
Total	2039105.330	406			
Corrected Total	**26143.979**	**405**			

Not significant at .05 alpha level (P>.05)

The results in Table 1 show that students under supervisors who had taught for 1-7 years had the highest mean score ($\bar{x} = 71.690$) followed by those under supervisors who had above 21 years of teaching experience ($\bar{x}=70.452$) and the least were those under supervisors who had 15- 21 years teaching experience ($\bar{x} = 70.089$).

The p-value (.000) associated with the intercept is less than .05. The p-value (.873) associated with the computed F-value (.233) for both corrected model and years of experience are greater than .05. As a result, the null hypothesis was rejected for the intercept but retained for the corrected model and years of teaching experience. This means that there is no significant influence of supervisors' years of teaching experience on post graduate student's performance in thesis. The LSD test results are therefore not reported because all the paired comparisons were not significant.

Hypothesis two: Supervisors' area of specialization does not significantly influence students' performance in post graduate theses and dissertations.

To test this hypothesis, since the dependent variable (performance) is continuous and the independent variable is more than two categories, the one-way ANOVA was used, with results as shown in Table 2.

Table 2: Univariate ANOVA of student' thesis performance by supervisors' area of specialization

supervisors' area of specialization	N	Mean	Standard deviation	Standard error
Science	62	70.196	8.044	1.149
Arts	35	69.946	8.003	.725
Communication	24	70.164	9.545	1.909
Education	100	71.123	7.695	.675
Management	80	70.048	9.194	1.532
Basic medical	35	68.084	6.162	1.400
Engineering	2	77.812	4.224	1.056
Agriculture	6	67.324	7.760	1.597
Social Science	62	70.196	8.044	1.149
Total	**406**	**70.413**	**8.034**	**.399**

Source of variation	Sum of squares	df	Mean square	F - value	P -value
Corrected model	1100.074	7	157.153	2.497*	.016
Intercept	1085460.647	1	1085460.47	17250.20*	.000
Specialization	1100.074	7	157.153	2.497*	.016
Error	25043.905	398	62.924		
Total	2039105.330	406			
Corrected Total	**26143.979**	**405**			

*Significant at .05 level (P <.05)

The results in Table 2 show that students under supervisors whose specialization was Engineering performed highest ($\bar{x} = 77.812$) followed by those under specialization in Education ($\bar{x} = 71.123$) and the least were those in Agriculture.

The p-values (.016, .000 & .016) associated with the computed F-values (2.497, 17250.239 * 2.497) for corrected model, intercept and area of specialization respectively, are less than .05. As such, the null hypothesis was entirely rejected. This means that supervisors' area of specialization has significant influence on students' performance in Post-graduate thesis and dissertation.

To locate the pair of group means responsible for the observed significant results, LSD test was applied. The results are shown in Table 3.

Table 3: LSD multiple pairwise comparison of student thesis performance by supervisors' area of specialization

Area of specialization	Science	Arts	Comm	Edu	Mgt	Med. science	Engr	Agric
Science	70.196	.250	.032	.927	.148	2.112	7.616*	3.636*
Arts	.236	69.946	.218	1.777*	.102	1.862*	7.866*	2.622*
Communication	.571	.402	70.164	.959*	.116	2.080	7.648*	2.840*
Education	.124	.046	.038	71.123	1.075*	3.039	6.689*	3.799*
Management	.213	.334	.260	.032	70.048	1.964*	7.764*	2.724*
Med. Science	.000	.000	.000	.000	.000	68.084	9.728*	.760
Engineering	.000	.000	.000	.000	.000	.000	77.812	10.488*
Agriculture	.000	.000	.000	.000	.000	.056	.000	67.324
Social Science	.000	.000	.000	.000	.000	.000	.043	53.172

Significant at .05 level (P <.05)

Values along main diagonal are group mean, above it the mean difference and below it are corresponding P-values.

The results in Table 3 show that the performance of students under agricultural science specialist is significantly different from all others except those in Medical Science. Similarly, those under Engineering specialists are significantly different from all other groups ($6.764 \leq MD \leq 9.728$, p = .000). The same pattern was observed for specialists in Medical Sciences. All other differences are as indicated in the table (Table 3).

DISCUSSION OF FINDINGS

The first finding showed that there is no significant influence of supervisors' years of tertiary institution teaching experience on students' performance in post graduate theses and dissertations. This means that students' performance in their final year research work is the same (equal) for those supervised by the low, moderate and high experienced lecturers. This may be true because of the open access possibility for supervisees to the academic community. A research student is free to consult and interact with a custodian of knowledge anywhere in the world whether he is his supervisor/or not. Furthermore, open access to the global internet, social media and virtual facilities may also explain this phenomenon.

The finding of the first hypothesis is in line with the study conducted by James, (2018) on Research Skills among Undergraduates in the University of Calabar, Nigeria. The study found that wide student consultation in research conduct, led to high performance in the subject, not necessarily the supervisors' experience. It was recommended in the study that every student should have a mentor, someone who is more knowledgeable and capable of guiding the researcher, not just in the area of academic subject matter, but also in the area of research. It was concluded that universities and other tertiary institutions across the world are recognized as citadels of learning and centers of research. Research occupies the center stage in all the activities of universities. This is to guarantee continuity and advancement of the society at large through research and development.

Also, Charumbira, (2013) assessed the Supervisor's Teaching Experience, Philosophical and Methodological Challenges facing Sport and Business Management Student Researchers in Zimbabwe. The results strongly mirrored the incompatibility of quantitative and qualitative theses purists which posit that qualitative and quantitative methods cannot be mixed. In the light of this, a paradigm shift towards Mixed Research approaches and consultation of other mentors outside the main supervisor was advised to enhance the ability of Zimbabwean social researchers. This is because there are complex ever-evolving socially constructed processes associated with research in such

fields as education, Business and Sports Management. It was recommended that important prerequisite towards the realization of this paradigm shift be used to equip academic practitioners in the country with Social Research skills since there is a general lack of appreciation of Social Research Methodologies in the country with adequate supervisor's teaching experience especially in research related issues.

The study carried out by Meerah, Osman, Zakaria, Ikhsan, Krish, Choo Lian & Mahmod (2011), on Graduate Students Research Skills in the University of Malaysia and their supervisors utilized a questionnaire developed and validated with a moderately high reliability coefficient in the construct measured. A random selection of degree and graduate students graduating at the end of 2010/2011 was asked to fill a questionnaire to measure the outcomes in research knowledge and skills of their supervisors. The results indicate that the graduates in general have moderate knowledge from textbooks and online materials which aided in the competencies to conduct their final research. This probably means that the teaching experiences of the supervisors did not significantly impact supervisees' skill acquisition. The finding has imperatives for urgent training and retraining of both graduate supervisors and their supervisees on the subjects of research and supervision.

The finding of the second hypothesis showed that Supervisors' area of specialization significantly influences students' performance in theses and dissertations in Cross River State, Nigeria. That is, thesis performance is not equal across supervisors' specialization. Specifically, only Engineering, and Education had mean scores above sample average of 70.413. Engineering had a mean of 77.812 and Education 71.123. Other specialization areas scored below the total mean. This may be so because the field of Engineering and Education have greater relative environmental professionalism than the others, having evolved over decades from Council for the Regulation of Engineering in Nigeria (COREN) and Teachers Registration Council of Nigeria (TRCN) respectively and from inherited resource legacies of the Polytechnic, Calabar and the Cross River State College of Education, Akamkpa.

The findings of the second hypothesis are in line with the study of Alys Wyn, Heather and Vardy, (2015) who conducted a study on the Role of a Supervisor and the Impact of Supervisory Change during the PhD. The study supported the findings of this work as it found out that the most influential aspect of a PhD is choosing a supervisor, as this shapes PhD experience, subject area and research methods. The study emphasized the role of a supervisor's area of specialization, the importance of maintaining a good relationship with supervisory team, as well as providing helpful advice on why a change in supervisory team may be required when problems occur. The study concludes that for a supervisee to survive

Postgraduate Study, his or her supervisor must have expertise in the research area.

Another support to this finding is the work of Tooba and Nasir, (2017) who sought to investigate the influence of some supervision related background variables on the supervisees' experiences. The study which adopted the survey design found that supervisors' expertise and research skills are potent factors in students' performance. The supervisees who were not given choice in the selection of the supervisor reported negative supervision experiences. Giving supervisees the choice of selection of supervisor probably led to improved experiences the potential personality and research interest related anomalies. Supervisees from the social sciences disciplines reported the problem of being supervised by a supervisor who supervises outside his area of specialization leading to his poor performance during the supervision process. On the basis of the findings it was suggested that in supervision allotment procedure, alignment between supervisors' area of specialization and supervisee research topic and discipline are critical, and the specific supervision trainings may be imperative.

Fraser and Mathews (1999) also supported this hypothesis based on their Evaluation of the Desirable Characteristics of a Supervisor. The study proposed a model of postgraduate supervision which broadens the traditional focus on "expertise" to include support for the student and the capacity to balance creativity with criticism by the supervision. Based on this model, survey of postgraduate students in the Faculty of Agriculture at UWA was carried out, investigating the desirable characteristics of a supervisor. The study concluded that students clearly ranked non-expertise-related characteristics of supervision which provide support and which balance creativity with criticism as more important overall than expertise-related characteristics per se. They use these results to argue for staff development opportunities to be enhanced to enable academics to receive training in these areas of supervision competence which are ostensibly unrelated to expertise. They further opined that a supervisor with a secondment in a similar area may be helpful as a second supervisor who may have more time to dedicate to the thesis supervision. It is difficult to supervise a graduate student in a research title that is not related to the area of supervisors' specialty.

CONCLUSION AND RECOMMENDATIONS

The finding of the study implies that in education and measurement as in other fields, every research student should be encouraged to be free to consult and interact with any reliable custodian of knowledge anywhere in the world whether he is his supervisor/or not because it can also help to promote educational research in Nigerian Universities. Consequent upon this finding, faculty managers and the graduate school should prioritize theses and dissertation

supervisory engagement on the basis of expertise. That is research titles should be matched with supervisors' areas of specialization, thus ensuring "a square peg in a square hold". The following recommendations are discernable:

i. There is need to assign an experience supervisor to supervise post graduate students' research theses and dissertation for excellent performance since supervisors' years of tertiary teaching experience significantly influence students' performance in post graduate research theses and dissertation among universities students in Cross River State, Nigeria.

ii. There is need to ensure that different department and faculty assign a supervisor to their post graduate student base on their area of specialization for excellent performance since Supervisors' area of specialization significantly influence students' performance in post graduate research theses and dissertation.

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