

Characteristics of Post Graduate Education Research Mentoring in Universities in Nigeria: Curricular Enhancement Strategies

Eyiuche Ifeoma Olibie^{1,*}, Ngozi Nwabugo Agu¹ & Gladys O. Uzoechina²

¹Department of Educational Foundations, Nnamdi Azikiwe University, Awka, Nigeria

²Faculty of Education, Anambra State University, Uli, Nigeria

*Correspondence: Department of Educational Foundations, Nnamdi Azikiwe University, Awka, Nigeria. E-mail: utchackonsults@yahoo.co.uk

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Abstract

Globally, the post graduate education landscape simultaneously undergoes rapid and tremendous changes with emphasis on research through equipping students with the necessary skills and knowledge to foster the growth of independent, creative and lifelong researchers. Among the resources to facilitate this aim, mentoring plays a vital role. This paper investigated the characteristics of research mentoring provided to post-graduate students in universities in Southern Nigeria. Two research questions were used. Proportionate stratified sampling technique was used to select 180 post graduate students for the study. A 27 -item questionnaire was used to collect data which was analysed using frequencies and percentages. Findings indicate that research mentoring across institutions was characterized by supervisor's criticisms without providing insights, setting of unrealistic deadlines and expectations, and erosion of students' self-esteem. Focus on improving technical research skills, communicating high expectations, self-monitoring processes, encouraging active knowledge construction process, widening networks for research improvements, and supervisor-supervisee brainstorming were almost lacking. The observed characteristics would not in any way serve as catalysts for research as they are most unlikely to promote quality post graduate research. Recommendations were made to propose curricular enhancement strategies to reinvigorate research mentoring for quality postgraduate research.

Keywords: *research; curricular; mentoring; supervisor-supervisee relationship*

1. Introduction

1.1 Background to the Problem

One of the cardinal aims of University education in Nigeria is the production of skilled, high – level manpower, as a precursor of economic and national development. This is in line with the views of university education held globally. Universities the world over are recognized as institutions established for the advancement of knowledge, scholarship and innovation. In knowledge-based economies, governments see universities as engines for change and expansion of prosperity (Guri-Rosenblit & Sawyerr; Johann & Waast, 2006). Universities also play a leading role in world class research outputs. Abiddin (2012) noted that such research outputs act as a core of excellence in prioritized areas of any nation which can generate high impact research publications as well as attract the best brains for teaching and research in producing high standard graduates. Hence, Universities inherently assure research-based teaching, which is central to the provision of training and skills needed for economic and national development.

Ifedili and Ominnu (2012) defined research as studious inquiry or examination; especially: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws. It is a studious, serious and systematic investigation of facts that are crucial for developing theories, revising existing theories in the light of the new facts, application of the existing theories to evolve dependable solutions to the problems that challenge human life and human society. Bently and Kyvik (2013) saw research as a systematic investigation into any aspect of education. Knowledge acquired from research when translated into practice contributes to education through improvement in educational outcomes and refinement in skills, leading to improved standards of societal development.

Research credibility and capability are among the standards by which Universities gain acceptance as reputable members of the global intellectual community (Jenkins, 2009; Zahkri, 2006). Such research includes the ones carried out by post graduate education students. Post graduate education is the education that follows the completion of an undergraduate degree at a college or university. It includes post graduate diplomas and certificates, masters-level degrees and doctoral programmes. A high quality postgraduate program involves a range of curriculum experiences that includes coursework and research. Post graduate research is a formal area of study that is recognized in universities (Healey & Jenkins, 2009; Nyquist, 2002; Rose, 2005). Henson, Hull, and Williams (2010, p.229) highlighted that “the nature and quality of research is inseparable from the nature and quality of the graduate education and of future education researchers.” Hence, postgraduate research constitutes a vital component of a university's research effort and contributes significantly to the institution's research profile.

In Nigeria, post graduate education programmes require research work (Federal Ministry of Information, 2012). The submission of an original essay, commonly referred to as project, thesis or dissertation report is an essential component of the requirements for the fulfillment of the award of a post graduate degree or diploma. The project (for Post Graduate Diploma in Education), thesis (For Masters Degree in Education) or dissertation (for Doctorate degrees) investigates educational changes or developments that are being planned to define the way of improving situations. It encompasses many different studies all of which attempt to better understand and improve the learning and educational processes. In the research works, post graduate students are expected to identify a suitable research problem worthy of investigation from a chosen field. The identified problem is expected to meet the tripartite conditions of significance, originality and feasibility. In addition to these conditions, students writing dissertations are required to consider whatever problems they identify vis-à-vis individual competence and professional experience, and possible difficulties such as availability of data, financial constraints and limitations of time. Some institutions also insist that projects, theses and dissertations, be defended in a viva-voce oral examination where candidates present their research before an expert panel.

However, issues surrounding the poor quality of post graduate research supervision have attracted the attention of many scholars (Duze, 2013; Okebukola, 2002; Oredein, 2012). Summarizing the factors that contributed to this poor quality, Okebukola (2002) listed the following:

- Lack of research skills in modern methods.

- Lack of equipment for carrying out state-of-the art research.

- Overloaded teaching and administration schedules which leave little time for research

- Difficulty in accessing research funds.

- Diminishing ability of seasoned and senior researchers to mentor junior researchers due to brain drain.

Specifically, Obi and Agbo (2002) found that graduates of Nigerian universities rated supervised practical work and quality of academic advice received as very poor. Poor quality of research work is an indication of a deficiency in students' research skills. This deficiency has often been traced to the quality of research training the students receive (Agu & Odimegwu, 2014; Olokoju, 2002). It is common to find postgraduate students who have abandoned the programme alleging frustration and victimization among other reasons (Duze, 2010). This calls into question the quality of research supervision offered to the students and how the students characterize the mentoring they receive from their research supervisors.

1.2 Statement of the Problem

In Nigeria, there seems to be some controversy on whether post graduate research students today are prepared for the 21st century research demands. Many students have a poor understanding of the essential characteristics of research, how it influences society, and how people can and do affect its development. Moreover, studies have pointed out that there are high proportions of students who fail to complete their research works within the time given (Ifedili & Omiunu, 2012; Okurame, 2008). The most unfortunate and painful thing is the case of dropouts. In spite of laboring hard for their admission, many students drop out without completing their research works. There are some who are very casual towards doctoral research work, some are impatient, some are indifferent, and some are otherwise constrained due to work pressure relating to their jobs, transfers, etc. During their various supervisions of post graduate students, the present researchers observed that many of the students experienced a large array of problems related to writing and information retrieval skills and presenting original work. Some of these students from first year were also exposed to a culture of copying of earlier research works. They also found that the state of research at the universities of technology was poor because of the scarcity of research expertise, inexperienced supervisors, and supervisors working in fields outside their specializations. This resulted in low research outputs and generally

discouraged students who would have opted to continue with their postgraduate studies. Many post graduate students did not understand nor value research and had no knowledge of where to find information to base their research endeavours (Zakhi, 2006; Duze, 2010). The negative consequences of these post graduate research problems for building and retaining research capacity in these countries are obvious. It appears that there were some problems experienced by supervisors of post graduate research students in trying to create a balance between dominating and neglecting student's research. These problems may be caused by the characteristics and values inherent in the mentoring received during research received, which unfortunately, have not been empirically researched in South-East of Nigeria. The purpose of this study is therefore to identify the characteristics of research mentoring provided to post-graduate students in universities in Southern Nigeria and suggest some curricular enhancement strategies.

1.3 Literature Review

Post graduate research is a form of apprenticeship taken under the supervision of senior faculty members. Research supervision is one of the major avenues for sustaining students' satisfaction with the programme, preparing students to be independent researchers and effectively initiating students into the academic community (Agu & Odimegwu, 2014). The faculty member involved in the supervision of post graduate research must have the right expertise to play the role of promoter/supervisor. The skills required by research supervisors include but are not limited to: guiding postgraduate students towards sound preparation of research; assisting with methodological choices; documenting and publishing research; maintaining both supportive and professional relationships, and helping the candidate challenge dominant ideas, redefine problems, and develop a theory (Green, Hammer & Star, 2009; Healey & Jenkins, 2009; University of South Africa & National Research Foundation, 2007).

Within the context of research supervision, mentoring is very essential to guide, advise, motivate and reform these students so that they become habitual researchers in the future, and these students would contribute commendably to the growth of the literature in the field and also to the development of the nation (Chan, 2008; Harris, Freeman & Aerni, 2009). It is a nurturing process in which a skilled or more experienced person counsels a less skilled or a less experienced person (Ku, Lahman, Yeh & Cheng, 2008). The purpose is to promote a mentee's professional or personal development (Noonan, Ballinger & Black, 2007). Sometimes the mentor may even have a formal evaluative role. A mentor is therefore someone who helps another person to become what that person aspires to be. There is little doubt that having a mentor for research is beneficial for the development of the mentee. The mentee gains knowledge and skills, enhanced confidence, and a more defined plan for career and educational advancement. Benefits for the mentor are equally as important, as the mentor gains a greater sense of ability in using leadership skills, as well as the personal satisfaction of exerting beneficial influence upon the development of a novice (Persichilli & Persichilli, 2013).

There are some characteristics and traits which can be brought to bear by the supervisor. Hawley (2010), Mutula (2009) and Rowlett, Blockus, and Larson (2012) pointed out the characteristics expected of a professional supervisor as a mentor to include:

- Guiding students to realize their aspirations – the supervisor is a facilitator not a barrier;
- Utilising the students' accrued knowledge;
- Encouraging candidates pursue what they want without jealousy or disdain;
- Taking cognizance of the candidates' problems and counsel them;
- Monitoring the progress of the research to ensure that the student is using appropriate research skills and that the thesis/dissertation is likely to come to a successful conclusion;
- Serving as a good role model of what a professional researcher does;
- Developing a good working relationship with the student, with the supervisor providing encouragement, personal support and guidance at all stages; and
- Initially functioning largely like a tutor, providing much training and help.
- Operating more like a coach, building up skills and confidence, and then finally acting more like a colleague and equal.
- Providing information and advice, coaching, exposure and visibility: making connections, sharing personal stories and humor, responsiveness, validation, providing feedback, and reciprocal relationships.

There are also some values inherent in mentoring. Manathunga (2005); Joahnn and Waast (2007) and Vitae (2009)

suggested values such as: realising that people can change and want to grow, understanding how people learn, recognising individual differences, empowering through personal and professional development, encouraging capability, developing competence, encouraging collaboration not competition and encouraging scholarship and a sense of enquiry. Others are searching for new ideas, theories and knowledge, equal opportunities in the organisation, reflecting on past experiences as a key to understanding and looking forward and developing the ability to transfer/apply learning to new situations. The values are intended to foster faculty-graduate student relationships that are characterized by honesty, courtesy, and professionalism and that provide students with intellectual support and guidance in their research works. The values in a mentor's roles also include pastoral support, supervision, and sequential introduction to professional issues in education, which are crucial to recognizing that good advising and mentoring of graduate students entail a considerable commitment of time and effort on the part of the research supervisor.

These characteristics and values show that the role of a mentor is complex, involving many dimensions of the mentor as a counselor, observer, giver of feedback, instructor and assessor. Since the quality of mentoring in research supervision has a demonstrable effect on postgraduate outcomes, it is in the interest of universities to reliably improve the efficacy of postgraduate supervision. The extent to which the characteristics and values are exhibited in post graduate research mentoring as perceived by post graduate students in some Universities in Nigeria is the thrust of this study.

1.4 Research Questions

The study was based on two research questions as follows:

1. What are the characteristics of post graduate research mentoring in Universities in South East Zone of Nigeria as perceived by the students?
2. What mentoring values are exhibited by post graduate research supervisors the Universities?

2. Method

2.1 Study Area

The study was carried out in all government owned universities in South-East zone of Nigeria. The South-East zone is one of the six geo-political zones in Nigeria. It shares boundaries with the South-South, and the North East geopolitical zones. South-East zone comprised five states in Nigeria namely: Abia, Anambra, Ebonyi, Enugu and Imo State. There are nine government-owned universities in South-East zone of Nigeria as at March 2013. The Federal government owns four of the universities while State governments own five. These institutions offer various post graduate programmes in education.

2.2 Population for the Study

The population consisted of all the male and female students that were running post graduate programmes in education in the nine Universities from 2009-2013. The student body includes Post Graduate Diploma in Education (PGDE); Masters, and Doctor of Philosophy (Ph.D) students in the Faculties of Education of the Universities. The average age range of students is between 25 and 50 years.

The writing and oral defense of research work is a very significant part of each of these programmes. Upon enrolment, the students take some course works with varying credit units, which they complete within the first year of their studies. The students choose research work topics after the course work. They are expected to complete the research work and defend it before a panel of experts in order for the diploma/degree is awarded. The duration of the programmes are as follows:

Postgraduate Diploma Programme (PGD)

The full time Postgraduate Diploma programme lasts for a minimum of 12 continuous calendar months. Part time programme shall last for a minimum of 18 calendar months.

Masters Degree Programmes

The Masters Degree programmes last for a minimum of three (3) semesters for full-time. Part-Time programme shall last for a minimum of five (5) semesters.

Doctor of Philosophy (Ph.D.) Programme

Full-Time candidates will be required to spend a minimum of six (6) semesters while Part-Time candidates will be

required to spend a minimum of eight (8) semesters.

However, Agu and Omenyi (2014) there is a high level of low completion rate: less than 10% of the graduate within due date. The reason for the low graduation rate is non-completion of research work.

2.3 Sample and Sampling Technique

The sample comprised 180 respondents selected through purposive sampling from the nine universities. Eligibility for inclusion in the sample included that the student enrolled as a full-time student, is in paid employment, has finished the course work, started research work within the last year (2012) and updated his/her studentship for 2013. The first 10 students in each programme that met these criteria in the different universities were taken as the study sample. Hence 10 PGDE students, 10 Masters and 10 Ph.d students were chosen from each of the 9 Universities were purposively chosen for the study.

2.4 Instrument and Measures

A researcher developed questionnaire titled – “Characteristics and Values of Post Graduate Research in Education Mentoring of Students (CVPGREMS)” was used to collect data. The CVPGREMS comprised 27 items structured on a yes/no format. These items were descriptors of the characteristics and values expected of post graduate research mentoring.

The reliability of the instrument was determined by administering copies of the questionnaire on ten post graduate students in Faculty of Education, Delta State University Abraka, whose responses were analysed using the Cronbach Alpha Method. Reliability coefficients of 0.87 and 0.80 were obtained for the two sections of the questionnaire respectively, and were high enough for the instrument to be considered reliable for use in the study.

Copies of the questionnaire were administered with the help of nine research assistants who were students in the universities. Out of the 180 copies distributed, only 175 (97.22percent) were retrieved.

Frequencies and percentages were used to answer the research questions.

2.5 Research Design

The survey research design was adopted for this study because the study elicited and analysed information from a sample of university post graduate students on their perceptions of research mentoring in their universities. The study was carried out in all nine government-owned universities in five states of South-Eastern zone of Nigeria as at March 2013.

3. Results

Table 1. Characteristics of Post Graduate Research Mentoring In Universities in South East Zone of Nigeria As Perceived By the Students

Items	Responses	Frequency	Percent
1. Assistance with selection and planning of a suitable and manageable research topic	Yes	117	66.9
	No	58	33.1
2. Impressing upon research ethics	Yes	107	61.1
	No	68	38.9
3. Setting of realistic deadlines and expectations for research progress	Yes	19	10.9
	No	156	89.1
4. Guidance on research vigour and literature analysis	Yes	54	30.9
	No	121	69.1
5. Showing familiarity with and provides insights on theoretical aspects of research work.	Yes	72	41.1
	No	103	58.9
6. Assisting with methodological choice	Yes	66	37.7
	No	109	62.3
7. Explaining how to challenge dominant ideas, redefine problems, and develop a conceptual framework	Yes	9	5.1
	No	166	94.9
8. Providing guidance on oral presentation of research findings to experts	Yes	98	56.0
	No	77	44.0
9. Assisting with instrument construction and validation	Yes	7	4.0
	No	168	96.0

Table 1. Characteristics of Post Graduate Research Mentoring In Universities in South East Zone of Nigeria As Perceived By the Students(Continued)

10.criticizing students' written work without giving insights for improvement	Yes	166	94.9
	No	9	5.1
11.taking an interest in developing your career and well-being	Yes	69	39.4
	No	106	60.6
12.showing greater professional experience, influence and achievement in motivating you to do your best	Yes	46	26.3
	No	129	73.7
13.Communicating openly and effectively with you	Yes	66	37.3
	No	109	62.3
14.encouraging you to finish up when it is not in your best interest to extend the program	Yes	48	27.4
	No	127	72.6
15.Is accessible for consultation and discussion of academic progress and research	Yes	60	34.3
	No	115	65.7
16.responds in a timely and thorough manner to written work submitted by you	Yes	72	41.1
	No	103	58.9

The results in Table 1 shows that most of the post graduate students indicated that the research mentoring experiences from their supervisors' were characterized by assistance with selection and planning of a suitable and manageable research topic, impressing upon research ethics, providing guidance on oral presentation of research findings to experts and criticizing students' written work without giving insights for improvement.

Table 2. Mentoring Values Exhibited by Post Graduate Research Supervisors in Universities in South East Zone of Nigeria As Perceived By the Students

Items	Responses	Frequency	Percent
1. approachability and friendliness;	Yes	89	51.1
	No	85	48.9
2. supportive and positive;	Yes	49	28.2
	No	125	71.8
3. stimulating	Yes	45	25.9
	No	129	74.1
4. thorough	Yes	142	81.6
	No	32	18.4
5. being organized	Yes	157	90.2
	No	17	9.8
6. prepared to acknowledge error	Yes	67	38.5
	No	107	61.5
7. being open minded and fostering a sense of belonging	Yes	77	44.3
	No	96	55.2
8. conveying enthusiasm.	Yes	75	43.1
	No	99	56.9
9. promoting interaction with other academics to widen networks for students research improvements	Yes	74	42.5
	No	100	57.5
10. lack of obsession in supervisor with wealth and recognition	Yes	117	67.2
	No	57	32.8
11. paying attention to details	yes	142	81.6
	No	32	18.4

In Table 2, a greater percentage of the students indicated approachability and friendliness; thoroughness; being organized; lack of obsession in supervisor with wealth and recognition, and paying attention to details, as some mentoring values exhibited by their supervisors.

4. Discussion

This study was aimed at determining the characteristics and values of post graduate research mentoring as perceived by post graduate students in Universities in South East zone of Nigeria. From the finding, the research mentoring

experiences of the students from their supervisors' were characterized by assistance with selection and planning of a suitable and manageable research topic, impressing upon research ethics, providing guidance on oral presentation of research findings to experts and criticizing students' written work without giving insights for improvement. These results match the literature, in which many authors had highlighted the fact that the most prevalent mentoring role of the supervisor is to guide mentees in selection of topics, adhering to research ethics, and guidance on oral presentation (Mullen, 2005; Russell, 1996; Salmon, 1992; Sheehan, 1994; Waitie, 1994 and Whiteside et al 2007; Zhao, 2003).

However, a greater percentage of the students did not indicate that their supervisors provide guidance on research vigour and literature analysis; shows familiarity with and provides insights on theoretical aspects of research work; assists with methodological choice as well as explains how to challenge dominant ideas, redefine problems, and develop a conceptual framework. In addition, assisting with instrument construction and validation, taking an interest in developing students' career and well-being, showing greater professional experience, influence and achievement in motivating students to do their best, communicating openly and effectively with students, encouraging students to finish up when it is not in their best interest to extend the program, being accessible for consultation and discussion of academic progress and research and responding in a timely and thorough manner to written work submitted by students, did not characterize the research mentoring by the supervisors. The neglect of these areas by the supervisors is likely to impede the effectiveness of research progress and quality by the post graduate students. Such neglect contrast the responsibilities of a research mentor found in literature (Haksever, & Manisali, 2000; Jenkins, 2009; Johann, & Waast, 2007; Whiteside, Pantelone, Reel, Eland, Kliberm & Lariner, 2007; Yeatman, 1995).

This finding implies that many post graduate students in Universities in Southern Nigeria do not receive adequate research mentoring from their respective supervisors. For most of the students' opinions, the research mentoring they experienced were limited to assistance with selection and planning of a suitable and manageable research topic, impressing upon research ethics, providing guidance on oral presentation of research findings to experts.

Further, a grater percentage of the post graduate students in this study indicated that the mentoring values exhibited by their post graduate research supervisors the Universities include approachability and friendliness; thoroughness; being organized; lack of obsession in supervisor with wealth and recognition, and paying attention to details, as some mentoring values exhibited by their supervisors. However most of the students also indicated that their supervisors were not supportive and positive; stimulating; prepared to acknowledge error; being open minded; conveying enthusiasm, nor political compatibility in promoting interaction with other academics. This finding is against the stipulations of McQueeney (1996), Moses (1996), Mullen (2005), Karukstis (2012) and Sheehan (1994) who respectively stated that the supervisor should support students by placing appropriate emphasis on pastoral care and providing advice, sympathy and encouragement and that an effective supervisor must have significant knowledge and experience in the specific field of study and general research method.

The finding implies that research mentoring is underutilized at the post graduate level in Nigerian universities. In this face of this trend the Universities are highly limited in their capabilities of developing excellence in research and scholarship among post graduate students. There is therefore a need to improve the situation and develop intentional learners-researchers. One of the ways of this improvement is to use curriculum enhancement strategies and utilize research mentoring to go beyond helping students gain research knowledge for knowledge's sake to engaging students in the construction and application of research knowledge for the sake of addressing the challenges faced by a complex, global society.

4.1 Curriculum Enhancement Strategies

In the light of the findings of this study, some curricular enhancement strategies may be provided to facilitate post graduate research mentoring. These include:

- In-Service Training and Mentoring The Mentors
- Faculty Development of Post Graduate Mentoring Curriculum Guides
- Provision of an Enriched Research-Supportive Research Methods Curriculum
- Faculty Integration of Their Own Experiences and Scholarship in the Curriculum
- Provision of Extra-Curricular and Regular Open Viva-Voce with Peer Inputs

4.1.1 In-Service Training and Mentoring the Mentors

The research mentors themselves need mentoring. Post graduate supervisors especially the new ones should be regularly trained in research mentoring. There should be regularly organized intensive workshops based on an

enriched curriculum of research methodology and mentoring of research supervisors. The curriculum and programmes for these workshops should be meticulously designed and the resource persons should be carefully selected on the basis of their reputation as an authority in curriculum and research methodology. If it is required, they may be encouraged to attend a short-term in-service training program on a research methodology curriculum. Peer mentoring could also be used for cross fertilization of research ideas among supervisors. Regular exchange of experiences of the mentors at Faculty seminars and workshops is important.

4.1.2 Faculty Development of Post Graduate Mentoring Curriculum Guides

Faculties should develop and regularly update curriculum guides on post graduate mentoring in line with University policies and regulations. Whenever a student plans a research project that involves human subjects, faculty mentor shares responsibility with the student for the design and the execution of a research study that complies with University policies and regulations. The curriculum guide would therefore help the mentor to provide supervision, guidance, and oversight for entire duration of study, ensure that student researchers obtain proper approvals from all required organizations and ensure that all required reporting is completed.

4.1.3 Provision of an Enriched Research-Supportive Research Methods Curriculum

The curricular context in which students learn is central to the development of their ways of thinking and doing and, to a greater or lesser extent (depending on the discipline in question), on their ways of acting and interacting in research mentoring situations. There is a need for the enrichment of existing post graduate research methods curriculum. This would require a review of existing research methods curriculum in Universities. Universities should ensure that their research methodology curriculum is informed by cutting edge research and that it takes place in a research-rich environment. Research-supportive curricula should be provided to expose students to training in the research tools and methodology of their discipline. The curricula should be designed to impress upon students the value of learning from their mentors, understanding methods and research results, so that students undertaking scholarly work must be prepared to read and interpret primary literature. Healey and Jenkins (2009); Jenkins (2009) and Kreber (2006) articulated some strategies for enriching the research methods curriculum to include:

- Learning and teaching activities and environments that directly encourage research-like and research-actual enquiry and are seen to lead to disciplinary 'ways of thinking'.
- Research-like and research-actual outputs as forms of assessment (for example, posters, articles, literature reviews, presentations, project proposals, project reports which involve a peer and tutor review process as well as a final grade) that encourage the development of research-mindedness and the ability to express this appropriately in writing and orally.
- Utilizing the social and professional spaces in which academics generate new knowledge as the places where students learn about both ways of thinking and also ways of interacting with mentors as 'professionals' or 'practitioners' of the given discipline.

4.1.4 Faculty Integration of Their Own Experiences and Scholarship in the Curriculum

Faculty research supervisors as mentors would use their own research experiences and resources to provide students with the skills to undertake a research study and also to be able to read and interpret scientific literature. Since most faculty supervisors also teach students other courses, the supervisors can successfully integrate their research experiences and scholarly agenda into their courses. Embedding of research into other courses curricula would create a seamless transition to postgraduate study. It would ensure that every student learns in an environment that is informed by research, scholarship and up-to date practice and knowledge. The supervisors may organize the students under their supervision into small groups and develop /introduce research-enhanced curriculum practices. For example:

- Increase opportunities for presentation of relevant examples of current research in lectures
- Visiting lectures; workshops; master classes
- Units of study to develop research skills
- chapter-by-chapter research thesis + presentation
- Increase use enquiry-based activities, collecting and interpreting data
- Wider use of exercises with unknown outcomes
- Student-organised study groups outside of scheduled teaching.

They may assign students course projects that can serve as pilot studies or even produce publishable scholarly outcomes for the faculty at the same time as providing students with the transferable skills to subsequently undertake high-level scholarly projects. Such experiences can provide the scaffolding experiences necessary to equip students for future research experiences.

4.1.5 Provision of Extra-Curricular and Regular Open Viva-Voce with Peer Inputs

There should be opportunities to provide research workshops and training outside of a particular course that might serve the needs of many different course offerings. A number of research training and practice events may be organised for the students during vacations, including tours and social outings. Education Faculties and Graduate School faculty can offer extra courses, workshops or tutorials to assist graduate students who wish to enhance their research skills. Emphases in these activities should be on subject-specific research knowledge, subject-specific research skills (e.g research methodologies) and generic research skills (eg project/thesis/dissertation, management, academic writing and presentation skills). These would help the students develop the skills needed for effective research. The mentors should provide increased opportunities for students to orally present research to staff and fellow students for critiques. Research showcases/seminars by staff and postgraduate students should be organized from time to time.

5. Conclusion

Post graduate research is one of the vital services and output in any University system. Such research is often a scholarly and creative activity that takes place within a community of scholars where constructive relationships between graduate students and their advisors/mentors are essential for the promotion of research excellence and adherence to the highest standards of scholarship, ethics, and professional integrity. Successful mentoring for doctoral students should be therefore be built upon effective characteristics and values through several curricula enhancement strategies so that by improving on research mentoring, we can improve the research process and enhance the research progress of postgraduate education students. One can ask for no less than the effective and coherent integration of research mentoring into an enriched curriculum that meets both student and societal expectations for postgraduate research.

The authors acknowledge some of the limitations of this study. Although this study involved different post graduate education programmes offered in Universities in Nigeria, it focused on only public Universities. Only full time students' perspective was covered in this study and the demographic variations in the students were not taken into account. Future research study may undertake a comparative analysis of public and private universities and include part-time students' perspectives. Demographic factors which may account for students' perceptions of research mentoring need to be explored further in research.

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