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Assessment of Graduate Students' Competencies in Research Process: A Case of Statement of the Problem Development among Master of Arts in Natural Resource Assessment and Management at the Open University of Tanzania

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Abstract

Statement of the problem is the major component of any research proposal or a thesis. The purpose of this paper is to examine level of competencies achieved by graduate student in development of statement of the problem. The study employed longitudinal survey design involving 32 graduate students of Master of Arts in Natural Resource Assessment and Management executive programme at the Open University of Tanzania. The instruments employed in data collection include documentation, questionnaires, and Focus Group Discussions. The study revealed that most of the graduate students in the programme perceived research methods as the most difficulty area in the research process. In addition, the study found that only 15.6 percent of the submitted research proposals were somehow good. The major problems associated with expression of the statement of the problem were lack of consequence of the knowledge gap and justification. Finally, the paper noted insignificant importance attached to research methodology course by graduate students in the development of statement of the problem. The paper concludes that there are inadequate efforts made to ensure that graduate students develop required competencies in development of statement of the problem at the Open University of Tanzania. The paper recommends a need for both university and students to increase their involvement and commitment in research process.

Key words: Competencies, Research Process, Statement of the Problem, Natural Resources Management, Graduate Students, the Open University of Tanzania

INTRODUCTION

Globally, it is acknowledged that statement of the problem is the major component of any research proposal or a thesis (Riazi, 2000 as cited by Jalilifar *et al.*, 2011). According to Bwisa(2008) as cited by Khalid *et al.* (2012) statement of the problem is a discrepancy which exist in the researcher's mind between what is and what ought to be on the considered issue. In most cases, the discrepancy represents a knowledge gap which needs to be filled by the proposed study. It is from this background, Hernon and Schwartz (2007) add that once the statement of the problem is written other parts of the research project should either compliment it or flow from it. In that case, statement of the problem is very useful in any research project as it provide a direction for carrying out investigation by focusing efforts and ensuring the available resources is effectively used (Sreejesh *et al.*, 2014). Besides, the well expressed statement of the problem guarantee the researcher to come out with meaningful results of the planned research. Yet, despite all the importance identified, Hernon and Schwartz (2007) in their review of manuscripts for publication found that statements of the problems are either absent or incomplete in many of the manuscripts submitted. In the context of novice researchers such as graduate students of Master in Natural Resource Assessment and Management (MA.NRAM), the absence or incomplete statements of the problems in their research proposals imply their failure to set the realistic yardstick of what they plan to study.

Similarly, Komba (2016) in review of 103 research reports from three universities in Tanzania found that 67 percent of the statements of the problems in the theses and dissertations were poorly constructed. Furthermore, analyzing the statements of the problems in those research reports, Komba (2016) revealed that they were either too long or not clearly presented. Besides, in some cases, the analyzed statements of the problems failed to reflect the title, lacked link to the background of the study or did not have justification of why the research should be undertaken in the identified problem. Further analysis of the sampled statements of the problems and other parts of theses and dissertations, Komba (2016) is convinced that the challenges student face in report writing among other things crop up from lack of academic writing skills. This comes as most faculties assume that basic undergraduate research and writing skills are sufficient for graduate students to undertake scholarly writing demanded for development of statement of the problem (Caffarella and Barrett, 2000; Harris, 2006). In some cases, as reported by Desrosiers *et al.* (2015) instructors knowing the situations are reluctant to tackle the writing deficits among graduate students for fear of increased workload.

In order to overcome the deficits identified by Komba (2016) in statement of the problem, many universities graduate programmes, end up issuing research books, thesis and dissertation writing guidelines, and run research methodology courses which offer definitions and examples of research cases. Other support services offered by a number of universities to increase critical thinking abilities required for development of statement of the problem among graduate students

include in-class writing exercises, departmental writing handbooks, peer review, writing centres, library research orientations, and in-class writing workshops (Burgess-Protocor *et al.*, 2013; Elmedni and Lyons, 2015). Even though, the writing workshops are of shorter time of two to four days (Burgess-Protocor *et al.*, 2013; Elmedni and Lyons, 2015) they are still of beneficial to graduate students as they offer opportunity for them to ask question and clarify their understanding on the writing tasks (Torrance and Thomas, 1994; Burgess-Protocor *et al.*, 2013). This emerging student-centred learning approach not only motivates and empowers students (Storch and Tapper, 2009; Rahman *et al.*, 2014; Elmedni and Lyons, 2015) but also act as a foundation for them become strategic learners. This is so as asserted by Piercy *et al.* (1996) that graduate students learn best by being supported, engaged and challenged, have good models and opportunities to practice and receive feedback. These conditions which are prerequisites in learning how to learn are in line with the demand of postgraduate students at the Open University of Tanzania (OUT). Since, the graduate students as those in Master of Arts in Natural Resource Assessment and Management (MA.NRAM) programme not only have limited contact with their colleagues, instructors and supervisors but also are isolated and dispersed to support services offered by the university.

The efforts made by universities though important are not sufficient as graduate students at any university come from diverse socio-economic and academic backgrounds (Burgess-Protocor *et al.*, 2013). In most case, as reported by Caffarella and Barrett (2000) graduate students get too little or are too late exposed to scholarly writing. This instruction deficiencies found in postgraduate programmes (Harris, 2006), manifest as difficulties graduate students continue to face on how to write a statement of the problem (Rahman *et al.*, 2014). The illustrated situations found in other higher learning institutions call for review of state of art in development of statement of the problem in the Master of Arts in Natural Resource Assessment and Management at the Open University of Tanzania. Since, the students in the programme not only come from different disciplines but also work in diverse institutions and professionals which range from game scouts, park rangers, forest guides, tour operators, and teaching. It is from this background that this paper explores aspects of research process perceived to be difficulty by students, determine students' competencies in development of statement of the problem and examine effectiveness of teaching and learning support services offered by the Open University of Tanzania if they real support capacity building of students' expression of statement of the problem.

METHODOLOGY

This study employed longitudinal survey design where 32 Master Arts in Natural Resource Assessment and Management (MA. NRAM) Executive Programme students at the Open University of Tanzania were purposively selected from a cohort of two intakes of 2013/14 and 2014/15. Some of the students in the two intakes have graduated while others are still struggling with their research report writing. The students participated in a compulsory research methodology course which involved attending lectures and individual research proposal

development. At the end of the lectures, students were required to fill the course evaluation questionnaire prior to attempt their research proposal assignment. One of the items in the evaluation questionnaire demanded them to identify three aspects of research process they are not comfortable in handling. In addition, they were required to explain how the research methodology course will be useful in development of their dissertations. Then, the developed research proposals were analyzed based on three aspects of statement of the problem as illustrated by Booth *et al.* (2003) and Hernon and Schwartz (2007). Another instrument employed to collect data was documentation based on OUT prospectus, postgraduate student handbook and various notices issued from time to time by the Directorate of Research, Publications and Postgraduate studies. Both descriptive statistics and content analysis were used to analyze data.

RESULTS AND DISCUSSION

Aspects of research process perceived to be difficulty by students

Results (Table 1) present students' perception on areas they consider being difficulty in research process. The results (Table 1) show that more than seventy percent of the MA. NRAM students considered research methods which include data collection and analysis techniques to be the leading difficulty area. The importance given to research methods by students is in line with Crotty (1998) suggestion that research methods is the starting point in development of research proposal.

Table 1: Areas in Research Process Perceived to be Difficulty by Students

Variable	Frequency	Rank
Introduction	2(6.2)	6
Statement of the problem	15(46.9)	2
Literature review	5(15.6)	4
Theoretical framework	4(12.5)	5
Research design	11(34.4)	3
Research methods	26(78.1)	1

In bracket are percentages

Source: ORM 606: Course Evaluation Questionnaires 2014-2015

The students' perception on the areas of research process considered to be the most difficulty indicates sources of problems which students face in development of research project. In most cases, this perceived difficulty end up in trapping researchers in what Booth *et al.* (2003) term to

be a rush from a topic to a data dump. This academic trap dominate among the novice to research as for our Master of Arts in Natural Resource Assessment and Management students who are preparing for their first academic writing assignment. The novices find themselves in this trap as to most of them research is equated to mere data collection. This implies that they take little time to consider about research question to which the study will focus on as they move from topic to data collection. In most cases, experience show that graduate students end up with a pile of data but not knowing what to do with. In this paper, the tendency of rushing to data collection is manifested by 17 out of 26 (65.4%) respondents in course evaluation who suggested that data analysis as an area in research methods which demand further clarification. These respondents came from category of those who indicated research methods to be the most difficulty area in research process.

Furthermore, in terms of difficulty in research process, research methods were followed by statement of the problem. The difficulty in development of statement of the problem was perceived by about half of all respondents (Table 1) in the course evaluation questionnaire. This students' perception is also shared with findings by Kerlinger and Lee (2000) as cited by Ellis and Levy (2008) who regard identification and definition of the problem as the most difficult part of the research process. The perceived difficulty in statement of the problem emerge as the process of identification and definition of the problem demand an advanced writing competencies such as conceptualization as stipulated by Ondrusek (2012). The conceptualization demand critical thinking and probing on issue at hand in order to build argument. Since, we regard statement of the problem as the foundation of any research project, the perceived difficulty among graduate students need to be given due attention so that they can build this important competence.

Students' competencies in development of statement of the problem

In order to ascertain attained student level of competence in expression of statement of the problem, submitted research proposal assignments were analyzed based on presence or absence of the items given in Table 2. The results (Table 2) show that only five statements of the problems out of the 32 submitted research proposals were judged to be well expressed. The majority of the submitted statements of the problems in the research proposals lacked both consequences as the result of lack of full knowledge and justification of why there is a need to study the identified problems now. In addition, 10 out of the 32 submitted research proposal papers failed to show the discrepancy or knowledge gap which need to be filled by the planned research project. In that case, the absence of the discrepancy in submitted research proposal implies that graduate students were fighting a blind war and they lost the fight before going to war. This could be the reason why most of the graduate students in two intakes have taken too long to finish their studies. But, as they were given comments for correction before meeting their supervisors, then, we hope the final dissertation are going to be in good order.

Table 2: Level of Competence in Expression of Statement of the Problem

Variable	Frequency
Too long	2(6.2)
Lack of condition of incomplete knowledge	10(31.2)
No consequence of lack of full knowledge	15(46.9)
Lack of justification	15(46.9)
Not related to title	2(6.2)
Not related to background of the study	1(3.1)
No statement of the problem at all	2(6.2)
Well expressed	5(15.6)

In bracket are percentages

Source: ORM 606: Course Evaluation Questionnaires 2014-2015

Moreover, the results (Table 2) show that more than eighty percent of the postgraduate students in the programme had real difficulty in development of statement of the problem. This concurs with Komba (2016) findings where more than sixty percent of the statements of the problems found in the submitted theses and dissertations in other three universities in Tanzania were not well done. Besides, two of the submitted research proposals did not have content we could figure as statement of the problem as portrayed by the title of the section. The results (Table 2) indicate the extent of the problem among the postgraduate students in the programme which are manifested when you combine the lack of research gaps, absence of consequence due to lack of fully knowledge, failure to justify the research and length of the statement. The observed difficulties are similar to those reported by Singleton-Jackson *et al.* (2009) cited by Chittum and Bryant (2014) where 25 to 30 percent of graduate students demonstrated academic writing deficiencies comparable to those facing high school seniors. Since, both categories of students failed to build argumentation based on evidence from the text which imply failure to define the problem.

Effectiveness of teaching and learning support services offered by the university

According to document analysis, a number of support services are availed by the university to postgraduate students. First, in all master programmes offered by course work and dissertation,

all students are obliged to undertake a compulsory research methodology course. In most cases, for executive programme as was for our Master of Arts in Natural Resource Assessment and Management students, the programme start with a four days face to face (F2F) session, then continue with individual reading for about three months before they sit for their examination. When asked on the usefulness of the course on research process, the responses were as given in Table 3.

Table 3: Usefulness of Research Methodology Course in Dissertation Development

Variable	Frequency
Title selection	6(18.7)
Problem statement	2(6.2)
Objectives setting	12(37.5)
Research proposal writing	5(15.6)
Development of research methods	4(12.5)
Writing research report	4(12.5)
All areas of research process	2(6.2)

In bracket are percentages

Source: ORM 606: Course Evaluation Questionnaires 2014-2015

The results (Table 3) show that students attached relative low importance of the course to development of the statement of the problem. However, they appreciated the usefulness of the course to objective setting, title selection, and research proposal development. This implies that the students did not realize the role of statement of the problem in provision of direction of the study nor did they grasp how the objectives emerge out of the statement of the problem. This is contrary to Leedy and Ormord (2005) as cited by Ellis and Levy (2008) who assert that objectives of the study and types of research design have to emerge out of the statement of the problem. The manifested insignificant usefulness of the research methodology course on construction of statement of the problem among graduate students confirms the perceived difficulties identified in Table 1 where statement of the problem ranked second to research methods. Similarly, the relative low usefulness of the research methodology course attached to development of the statement of the problem by graduate students is also reflected in the inadequacy of the statements of the problems provided in their research proposal development assignment. This implies that the research methodology course which are taken for granted to be

panacea to challenges facing graduate students in research process do not provide what Pantiru *et al.* (2012) term to be meaningful and memorable experience for student to master expression of statement of the problem. This come as formal teaching of research methodology course is divorced from hands-on techniques to research process.

Besides, as stipulated in OUT (2015), the university organizes an addition two sessions of face to face on research methodology for all postgraduate students per academic year. Each of this voluntary face to face programme involve three to five days. For that matter, apart from the compulsory four days for programme session in research methodology, in a two years programme one would be expected to have a total of twelve to twenty contact days with instructors in research methodology. In that case, the face to face as asserted by Miliszewska (2007), could be an opportunity for graduate students to share knowledge and ask questions related to difficulties related to research process. However, in most cases, the attendance to these sessions especially for executive students is either poor or non-exist. In that case, it is not surprising to see persistent difficulties which graduate students face in expression of the statements of the problems. It is probably from doubtfulness on the usefulness of the voluntary research methodology sessions that the university decided to replace them with on demand face to face for research methodology course beginning 2016/17 academic year.

CONCLUSION

The paper concludes that although statement of the problem is considered to be the core component of any research work, there are inadequate efforts made to ensure that graduate students develop required competencies at the Open University of Tanzania. This is manifested by the ways graduate students perceive the problems related to research process, their demonstrated competencies in development of statement of the problem, and how effectively they attach to support services provided by the university. In that case, the paper recommends that in order to improve the quality of theses and dissertations produced by graduate students especially on aspect of statement of the problem there is a need for both university and students to increase their involvement and commitment in research process.

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