



Assessment of the Challenges Facing Post-graduate Students in Research: A Study of Universities in Arusha Region

Fatuma Kadoke

Teacher: Muriet Secondary School, Arusha City

P.O Box 12376- Arusha.

Email: mabulawhitney77@gmail.com

Dr. Kennedy Omondi Otieno

Coordinator Postgraduate Studies Research & Publications

St. Augustine University of Tanzania (SAUT), Arusha.

P.O Box 12385 - Arusha, Tanzania.

Email: omondiken2016@gmail.com

Abstract: *This study investigated the challenges facing post-graduate students in conducting research in Universities in Arusha Region. The study assessed the significance of post-graduate students to conduct research in universities and suggested the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha Region. The theory of Communicative Exchanges in Supervision guided the study. Convergent mixed methods design was adopted whereby the researcher collected both quantitative and qualitative data, analyzed them separately, and then compared the results to see if the findings confirm or disconfirm to each other. Data were collected using the questionnaire and structured interview. The study targeted 600 master students and 34 post-graduate lecturers. The sample size consisted of 130 respondents (10 Postgraduate Lecturers and 120 Postgraduate students). The instrument was tested for reliability where Cronbach coefficient Alpha was found to correlate at $r = 0.858$. While the trustworthiness of instrument for collecting qualitative data was done by ensuring its credibility, transferability and dependability indicating that the instruments were fairly reliable for the study. Quantitative data was analyzed using descriptive statistics in the SPSS version 25 and results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions. The study revealed that Post-graduate research provides students with decision making and problem solving skills. The study suggested that research experts should disseminate enough knowledge and skills on research methodology to the post-graduate students and the number of research experts in universities in Arusha region should be increased.*

Keywords: *Post-graduate, Students, Research, University, Arusha*

How to cite this work (APA):

Kadoke, F. & Otieno, K. (2022). Assessment of the Challenges Facing Post-graduate Students in Research: A Study of Universities in Arusha Region. *Journal of Research Innovation and Implications in Education*, 6(3), 47 – 57.

1. Introduction

According to Claudius (2016), postgraduate research is a form of study offered by a university or an institution of advanced learning such that, the emphasis of postgraduate research is to develop systematic skills of investigation in research process. It is not necessarily aimed at producing ground breaking innovation or extending knowledge as is commonly perceived. Most postgraduate research involves basic and to a lesser extent applied or collaborative research.

NurAfiqah & Nadwah (2019) carried out a study to investigate the relationship between research method skill and autonomous learning among 125 postgraduate students from the Department of Arabic Language and Literature at the International Islamic University Malaysia, by using Pearson Correlation Coefficient. The study found that the knowledge of research methodology and the skills of applying it in research are two important things required by postgraduate student in producing a good research. A postgraduate student who is equipped with research skill or knowledge of research methodology and able to apply it while conducting research therefore, should be autonomous in research writing.

According to Bhome, et al., (2015), research is an essential and powerful tool in leading man towards progress. Without systematic research there would have been very little progress. Research is significant both in scientific and non-scientific fields. It is important for the following reasons: A research problem refers to a complexity which a researcher or a scientific community or an industry or a government organization or a society experiences. It may be a theoretical or a practical situation. It calls for a systematic understanding and possible solution, research on existing theories and concepts help us recognize their range and applications, it is the bank of knowledge and provides strategy for solving problems, mathematical and logical research on business and industry reduces the problems in them, it leads to the identification and categorization of new materials, new living things and new stars. Note that inventions can be done through research. Social research helps find answers to social problems (Kikula & Quorro, 2007). They explain social phenomena and try to find solution to social problems. Thus, research is the fountain of knowledge for the sake of understanding and an important source of providing guidelines for solving different business, governmental and social problems. It is a category of formal training which enables one to understand the new developments in one's field in a better way.

Mapolisa & Mafa (2012) stated that in the world over, universities are recognized as places where knowledge generation, research and innovation are advanced. Postgraduate programmes are considered conduits

through which universities develop research capacity and also generate high skills needed for a functional economy and in addressing complex issues such as global financial recessions, climate change and poverty alleviation. Postgraduate research takes various forms but generally requires those admitted to such programmes to have completed bachelor's degree or a diploma (Botha & Simelane, 2007).

Consequently, nomenclatures such as postgraduate diploma, master's degree, master of philosophy, PhD or higher PhD are now commonly encountered in tertiary education systems. Postgraduate qualifications may be classified as traditional/academic or professional degrees. The traditional postgraduate qualifications tend to be generic while professional ones reflect a deeper understanding of a discipline (Mapolisa & Mafa, 2012). The requirements for admission into postgraduate programs vary from institution to institution or from one jurisdiction to another. Universities the world over are recognized as places where knowledge generation, scholarship and innovation are advanced (Kearney, 2008).

Postgraduate students have faced the challenges in writing their research project. In spite of the existence of the challenges in conducting research; there are limited studies which have been conducted to investigate the nature and scope of this phenomenon (Claudius, 2016). Therefore, this study was triggered by the limited knowledge on the nature and scope of challenges facing the majority of postgraduate students in Tanzanian in the context of writing theses and dissertations.

1.1 Research Questions

To fulfill the purpose of the study the following research questions guided this study:

- i. What is the significance of post-graduate student to conduct research in universities in Arusha Region?
- ii. What are the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha Region?

2. Literature Review

The theoretical and empirical literature was reviewed with reference to research objectives. The study was anchored on Communicative Exchanges in Supervision.

2.1 Theory of Communicative Exchanges in Supervision of Dissertations

Communicative Exchange Theory is understood as an aspect of power. The theory emphasise a multi-dimensional responsibility to support knowledge development in scientific writing and todo so in a way that leads to academically desirable outcome. Augustsson and Jaldemark (2014) argues that it is significant to recall that through the application of written statements in the drafts of the dissertation, the supervisor exercises a unique influence on the student's work by linking her or his opinions towards the student's specific situation. However, it is crucial to emphasize that the analysis is performed in the middle of a supervision process, which means that the statements from the supervisor for analysis constitute a reaction to a draft that the student has sent to the supervisor. In the next stage of the process, the students' reactions to the supervisor's statements would be included in the next draft, which, in turn, should be submitted for supervision at a later date. Supervision includes at least two geographical locations. This means that participation takes place on campus, usually during a one-to-one meeting and in classroom (De Beer & Mason 2009; Mac Keogh, 2006).

The theory succeeded to show that, Supervision is a relevant teaching practice for almost every student and teacher who participates in higher education. This practice includes supervisory meetings between students and teachers. During these meetings, students and teachers discuss drafts of the students' dissertation work (Sirajul. & Samsudin, 2020). By participating in such practice, the students are supposed to perform academic work that they cannot do alone, or in the words of Vygotsky (1987), do "more in the intellectual sphere than he/she is capable of doing independently". Therefore, students' participation in this practice should develop their academic research and writing skills, as they learn from more experienced writers, such as the supervisor, and more knowledgeable peers, such as other students.

2.1.1 Application of the Theory to the Current Study

The theory shows that the quality of supervisors' utterances embraces the difference between the application of comments, points of view, instructions, and questions. Supervisors use comments to increase students' independent responsibility for their work and are, as such, open for the students' own words. However, it is up to the student to closely read between the lines to interpret the message. This also means that supervisors can use questions formulated on the basis of a teaching curriculum to demand students to take independent actions. That is, supervisors allow students from a relatively authoritative supervision to independently come up with suitable

solutions to identified problems. Nevertheless, this depends heavily on the wording of the questions that they pose. Three types of identifications were revealed in the study: recommendations, developments, and problem solving. These types differ in that one is an opinion in favour of something. Whereas one asks for more details about something, the other one is an explanation of how these details may be related to each other and the topic in question. The outlined theory is enlightening because if the supervisor of a course about scientific writing, for example, would like to increase the degree of student autonomy, he or she could strategically do that in two stages. Firstly, it can be done by changing the quality of utterance for example, by increasing the number of comments and reducing the number of points of view and instructions. Secondly, it can be done by combining the chosen quality with the most suitable identification.

2.3 Empirical Literature Review

The empirical literature was reviewed with regard to research objectives namely;

2.3.1 The Significance of Post Graduate Students in Conducting Research

A study by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University observed that research undertaking help post graduate students to comprehend nature and normalize phenomenon, offers strategies and guidelines for finding solutions, assists to discover solutions for social problem, develop innovative thinking creativity and professional skills, adds new knowledge to the researchers, expand theoretical and practical knowledge and develops critical thinking. Similarly, a study by Mahammoda (2016) on factors affecting the quality of undergraduate research work in Bahir Dar University Ethiopia contend that conducting research for universities student is very significant because it allows disproval of lies and support of truth, build knowledge and facilitate learning, discover solutions to social problems and develop creativity.

A study by Olibie, Ngozi & Uzochina (2015) on Characteristics of Post Graduate Education Research Mentoring in Universities in Nigeria: Curricular Enhancement Strategies where 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 indicated 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.

A study by Pillai, et al., (2015) on the significance of research in post-graduate education and ways to facilitate used survey design, the findings revealed that, there are various reasons why it is necessary to give attention and emphasis to postgraduate research. Postgraduate training lays a scientific, rational and ethical foundation for practice of medicine in the future. Most of the colleges have strengthened infrastructure and taken initiatives to foster postgraduate research. They include training in research methodology, establishment of institutional research and ethics committees, promoting students and teachers to write research projects and even providing funding for implementing research and presenting the same in conferences and meetings. However, some postgraduates prefer to walk on the trodden path, their mentors and teachers don't find enough time to guide them and strong funding options to support postgraduate research are practically nonexistent in the majority of the medical institutions in the country. There is a need for a radical reform in all these areas. Incentive approach both for students as well as teachers and sizeable funding for postgraduate research might significantly improve the quality and output of postgraduate research. According to Singh (2021) on the study Significance of Research Process in Research Work revealed that, Research process consists of a series of steps or actions required for effectively conducting research while formulating the research problem. Research encourages scientific and inductive thinking, besides promoting the development of logical habits of thinking and organisation.

A study by Sirajul & Samsudin (2020) focused on Characteristics, Importance and Objectives of research: An Overview of the Indispensable of Ethical Research. The main aim of their article is to emphasize on research ethics. Knowledge in characteristics, importance and objectives of research motivate to be ethical in research. It is the utmost importance knowing these three basic subjects of research for researchers especially for novice researchers. Ruchina, et al., (2015) researched on the Role of Research Work in the Training of Master Students Studying at Technical University. Thus, the main purpose of higher education is the development of new educational content ensuring relevance and competitiveness of graduates in the labour market. In this article, the authors investigated the research work of technical university students studying at Master's programs in the context of innovative changes in modern education. Research work is the process of shaping the future cognitive activities of individual aimed at obtaining new knowledge, solving theoretical and practical problems, self-education and self-realization.

2.3.3 Possible Measures to Address Challenges Facing Post-Graduate Students in Conducting Research

A study by Jeyaraj (2020) on academic writing needs of postgraduate research students in Malaysia, Used-structured exploratory interviews were carried out with six postgraduate students, so that a deeper understanding of their research writing needs could be obtained. Interviews were then analysed using a general inductive approach. It was found that students required support in three main areas: writing, supervision and ICT. Students sought English language support and more workshops and programmes which specifically dealt with thesis writing. They also believed that peer support groups would be beneficial. Secondly, more guidance was needed from supervisors to enable greater clarity on writing and institutional processes and procedures. Finally, students wanted greater access to ICT writing tools to facilitate writing and language learning. Ismail et al., (2011) researched on Improving the Development of Postgraduates' Research and Supervision. The study reported that, research and supervision have become a vital process in the successful of postgraduate studies. Building an academic career path needs intensive training and preparation. This culminates in writing of thesis or dissertation. In this process, the supervisor is designated to facilitate the student's research development based on good resources offered by the institution. At this stage, one of the most common complaints from research students concerns are infrequent or erratic contact with supervisors, who may be too busy with administrative or teaching responsibilities, have too many students or be away from the university too often. Developing skills towards an effective supervision needs to be tackled in various ways. Effective supervision is essential to guide postgraduate students during their progress in postgraduate study.

Panadero et al., (2020) revealed that, the important strategies towards the challenges facing the postgraduate students when conducting their research is through structuring postgraduate students self-efficacy in research process that give them confidence in writing the research project. Also, the postgraduate students must be confident enough to work on the supervisor's feedback and to communicate presentation improvements that they could have to further develop general skills and knowledge to become better and able to cope with challenges facing them in writing research. Noor & Barudin (2017) conducted a study on the Role of Supervisor in the Performance of Postgraduate Research Students. Using social learning theory as support, the study aims to empirically quantify the role of the supervisor in determining the performance of postgraduate research students. Thus, the study concludes that the better the quality of research supervision the more capable and confident the postgraduate research students are in learning and conducting research independently.

Chukwuere, et al., (2020) conducted a study on improving postgraduate nursing research output: A South African nursing science perspective. The study reviewed the relevant literature obtained from a computerised database search that focused on improving postgraduate nursing research throughput in South Africa (SA) to synthesize ideas and draw conclusions regarding the topic being discussed. The study revealed that postgraduate nursing research could be improved through enrolment of a greater number of Master's and doctoral students across universities and adequate provision of structures for accessing information, the latest technologies. The study also revealed the need for adequate support of supervisors with the necessary resources and continuous training of more supervisors in innovative methods for appropriate development of the requisite skills to strengthen research supervision. The study concludes that, there is a dire need to promote postgraduate nursing researchers owing to the importance of professional growth, development of new knowledge and university funding.

Ismail, Osman & Akramin (2020) did a research on the strategies of postgraduate students in completing studies and determined that, face-to-face interaction learning strategies among postgraduate students and their supervisors is one of the good strategy to be employed for the selection of the thesis title in order to judge decision whether the topic is relevant or not. Face-to-face meetings should continue for planned or unplanned series, especially bilateral discussions are preferred to be conducted in pleasant situations. The advantage of face-to-face plans is that the postgraduate students are not easily uninterested because the job of the supervisor is to act as a facilitator so that students would fully comprehend the thesis writing. Bushesha, et al., (2012) discusses problems facing supervisors and students in writing dissertations/theses. The paper refers to the Open University of Tanzania as the case study. The paper established that communication, supervisor- student relationship, access to literature, plagiarism, and poor writing skills among some students are some of the key challenges facing students and supervisors in writing dissertations/theses at the Open University of Tanzania. The paper recommends that communication between students and supervisors need to be strengthened through both parties abiding by professionalism. Strengthening the use of progress reports and arrangement of supervision seminars more frequently would minimize problems related to miscommunication. Students are encouraged to maximally utilize online sources of literature. The use of internet would enable the student and supervisor to

exchange ideas and opinions much easily and this will reduce unnecessary delays of supervisors' feedback.

3. Methodology

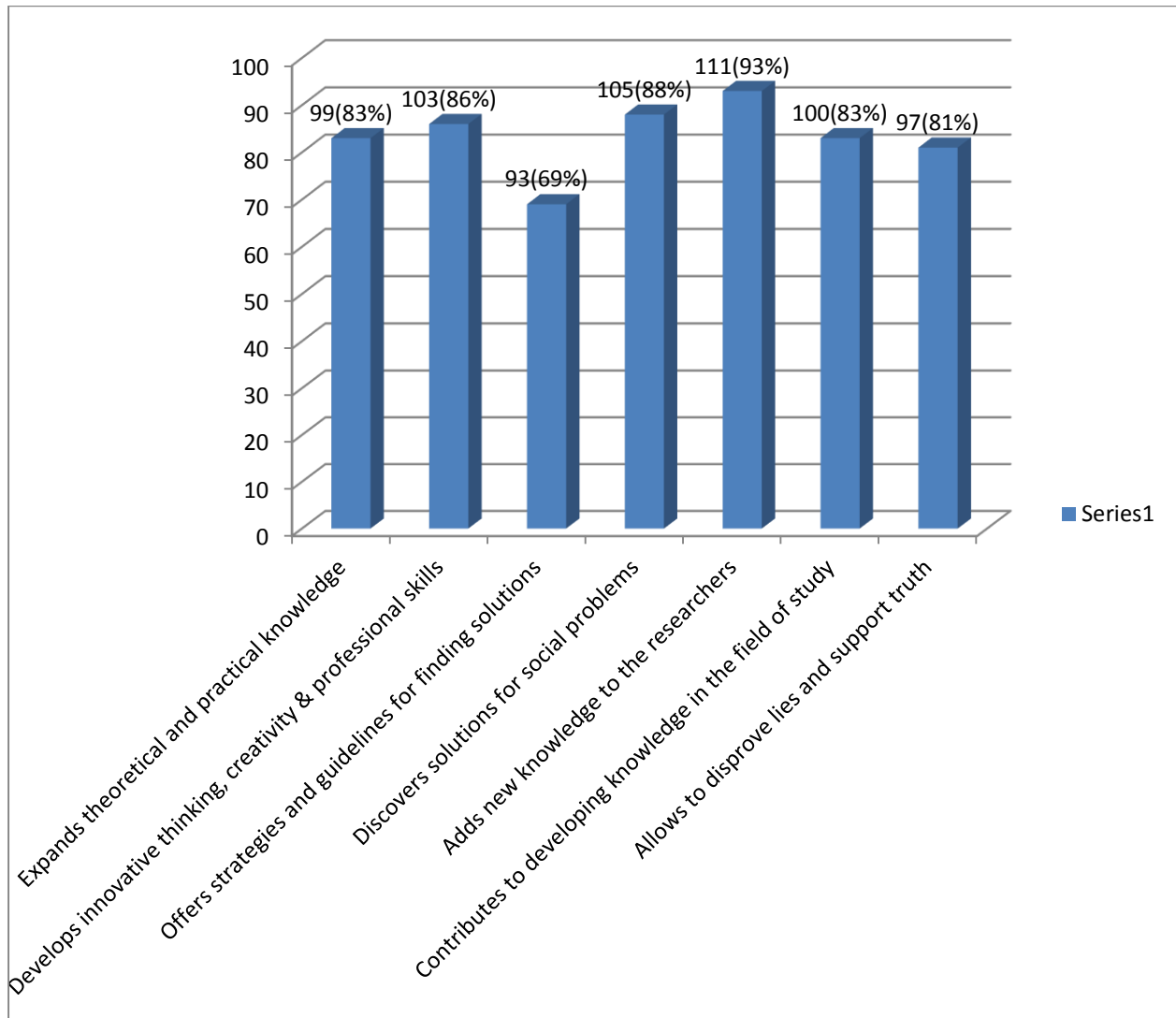
Convergent mixed methods design was adopted whereby the researcher collected both quantitative and qualitative data, analyzed them separately, and then compared the results to see if the findings confirm or disconfirm to each other (Creswell and Creswell, 2018). Data were collected using the questionnaire and structured interview. The study targeted 600 master students and 34 post-graduate lecturers. The sample size consisted of 130 respondents (10 Postgraduate Lecturers and 120 Postgraduate students). Simple random sampling was used to select 10 Postgraduate lecturers in university who were randomly selected from different departments while both stratified (gender) and simple random sampling was used to select 120 master students. From each university, two lecturers were chosen while 24 (12 female and 12 male) students were chosen from five Universities in Arusha region. Thus, a total of 130 respondents were involved in the study. The instrument was tested for reliability where Cronbach coefficient Alpha was found to correlate at $r = 0.858$. While the trustworthiness of instrument for collecting qualitative data was done by ensuring its credibility, transferability and dependability indicating that the instruments were fairly reliable for the study. Quantitative data was analyzed using descriptive statistics in the SPSS version 25 and results were presented in charts, tables of frequencies and percentages. Qualitative data was analyzed thematically alongside research questions.

4. Results and Discussion

The findings were discussed with regard to research objectives.

4.1 Findings on the Significance of Post-graduate Students in Conducting Research in Arusha region

Figure.1 presents the summary of the respondents' responses and the results of quantitative findings using questionnaires on the significance of post-graduate student to conduct research in universities in Arusha region.



Values in brackets are percentage of post-graduate students who agreed with the statement. Those with contrary opinion to the statement are implied.

Figure 1: Quantitative Findings on the Significance of Post-Graduate Students to Conduct Research in Universities in Arusha region

In Figure 1, the results show that the significance of post-graduate students to conduct research in universities in Arusha region is that it expands the theoretical and practical knowledge as 83% of post-graduate students agreed to the statement while 17% held contrary opinion. The majority of respondents indicated that, when conducting research the researchers follow guideline and procedures to identify the problem and finding solutions through the guide of the theories, therefore, it is the way to use theories for practical knowledge whereby theories are used to test and discover the hypothesis and answer research questions. The findings are in agreement with the findings by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University. The study observed that research undertaking helped post graduate students to comprehend nature and normal phenomenon, offers strategies and guidelines for

finding solutions, assists to discover solutions for social problem, develops innovative thinking creativity and professional skills, adds new knowledge to the researchers, expands theoretical and practical knowledge and develops critical thinking.

The respondents also indicated that, through the procedures of conducting research among the researchers, especially post-graduate students acquitted with innovative skills in the identification of the problem, creating the methods and measures for solving the identified problem through their creativity and which in turn develops professional skills in research. Again, the findings supported by the study by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University observed that research undertaking help post graduate students to comprehend

nature and normalize phenomenon, offers strategies and guidelines for finding solutions, assists to discover solutions for social problem, develop innovative thinking creativity and professional skills, adds new knowledge to the researchers, expand theoretical and practical knowledge and develops critical thinking. Therefore, this shows that, when conducting research the post-graduate students in universities in Arusha region should be acquainted with creativity in finding the problem solving skills and creativity in completing the research problem.

Also, the results in figure 1 show that majority (69%) of respondents indicated that, before undertaking the research there are procedures which should be followed and likewise when conducting research there are procedures and guidelines which should be followed. Therefore, through research guidelines and strategies for solving the identified problem it offers the researcher to follow protocols and methods in undertaking the study which enhances excellent results and proper decision making as well as critical thinking among post-graduate students. The findings above concur with NurAfiqah & Nadwah (2019) who revealed that, the knowledge of research methodology and the skills of applying it in research are two important things required by postgraduate student in producing a good research. A postgraduate student who is equipped with research skill or knowledge of research methodology and able to apply it while conducting research therefore, should be autonomous in research writing.

Figure1 further shows that 88% of post-graduate students indicated that research helps to discover solutions for not only social but also scientific problems. Similarly, 93% of post-graduate students indicated that, research is the way out to discover solutions for social problems through strategies of carrying out research whereby it starts from problem identification, following research methodologies and later provide the solutions for the identified problems. The findings are supported by Ruchina, et al., (2015) who researched on the Role of Research Work in the Training of Master Students at University and the findings revealed that, contemporary society needs initiative and independent specialists capable of improving their professional skills continually.

In addition, the results show that, 81% of post-graduate students agreed that undertaking research allows disproving lies and supporting the truth. The majority of respondents indicated that, research is about finding the solutions pertaining social and scientific problems, therefore, this is to say that, finding the hidden solutions about the problems disproving the lies and revealing the truth through practical evidence is a significance of post-graduate student to conduct research in the universities. The findings are in agreement with a study by Mahammoda (2016) on factors affecting the quality of undergraduate research work in Bahir Dar University

Ethiopia. The study contend that conducting research for university students is very significant because it allows disproval of lies and supports of truth, build knowledge and facilitate learning, discover solutions to social problems and develop creativity.

During the interviews on the significance of post-graduate students to conduct research in universities in Arusha region, the study discovered that there is a great significance of post-graduate to conduct research in universities in Arusha region as majority of postgraduate lecturers (PLs) had the same ideas. In this regard PLs commented that:

Post-graduate research provides students with great skills of decision making, and problem solving skills since their researches are mostly focused on identifying the problems affecting the society and finding the solutions for those problems. Also, when conducting research the post-graduate students identify the gaps between scholars and reveal the truth about a certain phenomenon (Personal Interview, April, 2022).

PL 7 indicated that:

Post-graduate research is significantly to academicians and the policy makers since it provides the literature review to the coming researchers and also it may be used in policy making and taking government or institutional actions for development (Personal Interview, April, 2022).

The findings above are in agreement with a study by Rajasekar (2013) on factors affecting completion of research projects by students at Cambridge University. The study observed that research undertaking help post graduate students to comprehend nature and phenomenon, offers strategies and guidelines for finding solutions, assists to discover solutions for social problem, develop innovative thinking creativity and professional skills, add new knowledge to the researchers, expand theoretical and practical knowledge and develops critical thinking.

4.2 Findings on the Intervening Measures to the Challenges Facing Post-graduate Students in Conducting Research in Universities in Arusha Region

Table 1 presents the summary of the respondents' responses and the results of quantitative findings using questionnaires on the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha region.

Table 1: Quantitative Findings on the Intervening Measures to the Challenges facing post-graduate students in conducting research in universities in Arusha region

Intervening Measures to the Challenges Facing Post-Graduate Students in Conducting Research	Post-graduate Students n=120 f (%)
Seeking for research knowledge and skills	115(96)
Developing sense of commitment among the researchers	100 (84)
Ensuring adequate financial resources	117(98)
Proper time management between the supervisee and the supervisor	99(83)
Ensuring enough research information resources	105(88)
Enhancing cordial relationship between researcher and supervisor	111(93)
Enough knowledge in topic selection	113(94)
Provision of computer training course to post-graduate students	98(82)
Ensuring adequate internet services in universities	95(79)
High commitment to researchers and supervisors	101(85)

f = frequency, % = percentages, values in brackets are percentage of post-graduate students who agreed with the statement. Those with contrary opinion to the statement are implied.

Source: Field Data (2022)

In table 1, the findings show that, 96% of respondents indicated that, the researchers' especially post-graduate students should seek enough knowledge and skills about the research in order to address the challenge of lacking enough knowledge in carrying out the research in universities in Arusha region. Majority of respondents indicated that, post-graduate students should seek for research experts before conducting the research; they should consult research supervisors or their seniors for obtaining research procedures, research methods and research strategies for success in their researches. These findings are in agreement with Zhao & Dennis (2017) who pinpointed that, for the postgraduate students' expertise requiring specialized knowledge and skills and those who perceived researchers should be experts who receive specific training in reading literature, writing academic papers, and developing knowledge in statistics. In doing so, the research activities become a profession for the experts in the academic domain. Therefore, for postgraduate students research training gives the opportunity for developing the necessary levels of expertise and to be socialized into this profession.

The results in table 1 show that, 84% of respondents who were post-graduate students revealed that, among the intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha region is developing the sense of commitment among researchers. These respondents indicated that, post-graduate students should be committed themselves to their research, means they should have the passion and willing to conduct research as the most important part in post-graduate studies and should not take it as a punishment and disturbance. This would help in proper accomplishment of research among post-graduate students in universities in Arusha region. In support of the findings, Panadero et al., (2020) who revealed that, the important strategies towards the challenges facing the postgraduate students when conducting their research is through

structuring postgraduate students self-efficacy in research process that give them confidence in writing the research project. Also, the postgraduate students should be confident and committed enough to work on the supervisor's feedback and to communicate presentation improvements that they could have to further develop general skills and knowledge to become better and able to cope with challenges facing them in writing research.

Besides, 98% of respondents indicated that, before carrying out the study it is better for post-graduate researchers in universities in Arusha city to save money for their research, or finding support from the family, friends, from their working stations, from the government or from sponsors and non-governmental organisations. Also, it is important to avoid unnecessary purchases and focus only on the accomplishment of the study and this would help in addressing the challenge of funds for the study. These findings concur with Huenneke, et al., (2017) who did research on the challenges facing postgraduate students, their research studies conducted in different countries the situation shows lack of commitment by the government of some developing countries to support research activities so as to support the postgraduate students in higher learning institutions by setting aside enough funds in its budget. Consequently, efforts of developing research capacity remain low in higher learning institutions. The study recommends that individual researchers should save enough money for research and also support from the government, working stations of post-graduate students and non-government organisation to enable post-graduate students to be equipped with enough funds for carrying out their studies.

In addition, the results in table 1 show that 85% of respondents revealed commitment to the researcher and the supervisor is associated with proper communications, cordial relationships, proper feedback and proper guidelines from the supervisor to the researcher and vice

versa. These findings concur with Ismail, Omona (2013), who did a research on the strategies of postgraduate students in completing studies and determined that face-to-face interaction learning strategies among postgraduate students and their supervisors is one of the good strategies to be employed for the selection of the thesis title in order to judge decision whether the topic is relevant or not. Face-to-face meetings should continue for planned or unplanned series, especially bilateral discussions are preferred to be conducted in pleasant situations.

From qualitative findings, the current study found that there are intervening measures to the challenges facing post-graduate students in conducting research in universities in Arusha region. Postgraduate Lecturer pointed out that:

Post-graduate students should work closely with research experts to acquire enough knowledge and skills on research methodology and this would help in early preparation of good research topic, follow ethical considerations, have high commitment, punctuality and cordial relationship with research supervisors which enhances proper communication, and proper feedback (Personal Interview, April 2022).

Findings from qualitative data indicate that there are a number of possible measures to the challenges facing post-graduate students in conducting research in universities. In this regard, a participant had this to put forth;

Post-graduate students should positively embrace supervisor's criticisms with provision of insights, setting of realistic deadlines and expectations, and emphasize on students' self-esteem. Besides, they should focus on improving technical research skills, communicating high expectations, self-monitoring processes, encouraging active knowledge construction, widening networks for research improvements, and supervisor-supervisee brainstorming (Personal Interview, April 2022)

These study findings are in agreement with a study by Jeyaraj (2020) on academic writing needs of postgraduate research students in Malaysia. The study employed Used-structured exploratory interviews, which were carried out with six postgraduate students, so that a deeper understanding of their research writing needs could be obtained. Interviews were then analysed using a general inductive approach. From the findings, it was found that students required support in three main areas: writing, supervision and ICT. Students sought English language support and more workshops and programmes, which specifically dealt with thesis writing. They also believed that peer support groups would be beneficial. Secondly, more guidance was needed from supervisors to enable greater clarity on writing and institutional processes and procedures. Finally, students wanted greater access to ICT writing tools to facilitate writing and language learning.

5. Conclusion and Recommendations

5.1 Conclusion

From the findings, this study concludes that despite the challenges facing post graduate students in conducting research in universities in Arusha region, there is a great significance of post-graduate to conduct research. The study found that post-graduate research provide students with great skills of decision making, and problem solving skills since their researches are mostly focused on identifying the problems of the society and finding the solutions for those problems. Also, when conducting research the post-graduate students identify the gaps between scholars and reveal the truth about a certain phenomena. Furthermore, post-graduate research is significant to academicians and the policy makers since it provides the literature review to the coming researchers and also it may be used in policy making and taking government or institutional actions for development.

These challenges could be solved by research experts to acquaint the post-graduate students with enough knowledge and skills on research methodology and this would help in early preparation of good research topic, saving funds for their study, following ethical considerations, having high commitment, punctuality and cordial relationship with research supervisors which enhance proper communication, and proper feedback. Also, they should embrace supervisor's criticisms with provision of insights, setting of realistic deadlines and expectations, and emphasizing 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 to enhance the quality of research.

5.2 Recommendations

The study put forth the following recommendations:

- i. The universities need to improve the training courses to post-graduate students such that before commencement of research study there is need for research methodology course which enhances technical skills, managerial skills and communication skills. The training course would strengthen post-graduate students' commitment, which would have positive influence in their research. Obviously, the importance of seminars, workshops and short courses to these postgraduate students should be done during the time of research to improve and update their knowledge on how to carry out their studies effectively.

- ii. The government should provide financial support to post-graduate students, especially when they are near to conduct research. This could be done through loans and grants to post-graduate students from the starting point of research to the accomplishment of the research. The researchers should also look forward on their time and grant the permission from their working stations so as to afford full time sessions and get enough time to apply the research methodologies during the period of research.
- iii. There is a need to look into ways of increasing the number of research experts in universities in Arusha region so that the post-graduate students would get ample time to submit their studies to different research experts for constructive recommendations.

References

- Augustsson, G. and Jaldemark .J. (2014). *Online Supervision: A Theory of Supervisors' Strategic Communicative Influence on Student Dissertations*. Sweden: Mid Sweden University.
- Bhome, S. M., Prajapati, N., Deshmukh-Ghate, D., and Ghosh, A. (2015). *Research Methodology (Tools and Analysis)*. India: Himalaya Publishing House.
- Botha, C.T. and Simelane, S. (2007). The Influence of e-learning on student's success rate in human resource development. Paper Presented at the WWW Applications Conference
- Bushesha, M., Mtae, H., Msindai, J. and Mbogo, S. (2012). *Challenges Facing Supervisors and Students in the Process of Writing Theses/Dissertations under ODL: Experiences from the Open University of Tanzania*. Dar-es-salaam: The Open University of Tanzania.
- Chukwuere, P.C. (2020). Improving Postgraduate Nursing Research Output: A South African Nursing Science Perspective. *African Journal of Health Professions Education*, 2020; 12(3):114-118.
- Claudius, S.K. (2016). Challenges of Writing Theses and Dissertations among Postgraduate Students in Tanzanian Higher Learning Institutions: *International Journal of Research Studies in Education*, 2016 July, Volume 5 Number 3, 71-80.
- Creswell, J. W. and Creswell, J. D. (2018). *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. (5th Edition). SAGE Publications, Inc.
- De Beer, M., and Mason, R. (2009). Using a Blended Approach to Facilitate Postgraduate Supervision. *Innovations in Education and Teaching International*, 46(2), 213–226.
- Huenneke, L., Stearns, D., Martinez, j., and Laurila, K., (2017). Key Strategies for Building Research Capacity of University Faculty Members. *Innovation in Higher Education*, 42(1):421–435.
- Ismail, M., Osman, Z and Akramin, M. (2020). Strategies of Postgraduate Students in Completing Studies. *International Journal of Academic Research in Business and Social Sciences*, Vol.10, No. 9, 2020, Pg. 300 – 308.
- Jeyaraj, J. J. (2020). Academic Writing Needs of Postgraduate Research Students. Malaysia: *Malaysian Journal of Learning and Instruction*, 17(2), 1-23.
- Kikula, I. S. and Quorro, M.A.S. (2007). *Common Mistakes and Problems in Research Proposal*.
- Mahammoda, S.A. (2016). Factors affecting the quality of Undergraduate research work in Bahir Dar University Ethiopia. *International Journal of Research and Development*, 2016.
- Mapolisa, T. and Mafa, o. (2012). Challenges Being Experienced by Undergraduate Students in Conducting Research in Open and Distance Learning. *International Journal of Asian Social Science*, 2(10):1672-1684.
- Noor, U. and Barudin, M. (2017). Role of Supervisor in the Performance of Postgraduate Research Students. *Journal of Research and Reflections in Education*, December 2017, Vol., No.2, pp 178-186.
- NurAfiqah, A. and Nadwah, D. (2019). A Relationship between Research Skills and Autonomous Learning among Postgraduate Students. *International Journal of Business, Economics and Law*, Vol. 18, Issue 6 (April) ISSN 2289-1552.
- Olibie, E.I., Ngozi, N.A. and Uzoechina, O.G. (2015). Characteristics of Post Graduate Education Research Mentoring in Universities in Nigeria: Curricular Enhancement Strategies. *Journal of Curriculum and Teaching*, Vol. 4, No. 1; 2015.
- Omona, J. (2013). *Sampling in Qualitative Research: Improving the Quality of Research Outcome*.
- Panadero et al., (2020). *Journal of University Teaching &*

Learning, Volume 17,
Issue 5, University of Finance and Economics,
China.

- Pillai, R.K., Sanjay, M., Shally, A. & Ravi V.G. (2015). The Significance of Research in Post-Graduate Education and Ways to Facilitate. *Clinical Epidemiology and Global Health*, 3 (2015) 58-62.
- Rajasekar, S. (2013). *Factors Affecting Completion of Research Projects by Students*. Cambridge: Cambridge University Press.
- Ruchina, A.V., Marina V. K., Denis A. P., and Zhang Xue Jin (2015). The Role of Research Work in the Training of Master Students Studying at Technical University. *Procedia - Social and Behavioral Sciences*, 215 (2015) 98 – 101.
- Singh, A. (2021). *Significance of Research Process in Research Work*. India: Department of Computer Science Patna Women's College, Bihar.
- Sirajul, I. and Samsudin, S. (2020). Characteristics, Importance and Objectives of Research: An Overview of the Indispensable of Ethical Research. *International Journal of Scientific and Research Publications*, Volume 10, Issue 5, May 2020, 2250-3153.
- Vygotsky, L. S. (1934/1987). Thinking and speech (N. Minick, Trans.). In R. W. Rieber, & A. S. Carton (Eds.), *the collected works of L.S. Vygotsky (Vol. 1, Problems of general psychology*, pp. 39–285). New York: Plenum.
- Zhao, P. and Dennis, B. (2017). Exploring Graduate Students' Understanding of Research: Links between Identity and Research Conceptions. *International Journal of Teaching and Learning in Higher Education*, 2017, Volume 29, Number 1, 73-86.