

Problems Faced by Post-Graduate Students During the Research Process



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Abstract: In order to graduate and obtain a master's degree or doctorate, a post-graduate student must conduct research process. The post-graduate research process has challenged many students and some students leave the course for a certain period while others failed to complete their research. This study was conducted to explore the major problems faced by post-graduate students in Malaysia to conduct a research. The researchers used qualitative research design using a semi-structured interview method. The instrument of this study is the interview protocol. Interview participants were selected using the purposive sampling method. The participants in this study were 31 people consist of twelve Master Degree and ten PhD students who failed to complete their studies in the social science field in public universities in Malaysia. In addition, the participants also consist of supervisors who have had experience in supervising post-graduate students for over 10 years ie nine Professors. Data from participants were analyzed using inductive thematic analysis. Based on the results of the qualitative study, it has been found that there are six common factors related to the problems faced by post-graduate students in Malaysia during the research processes such as knowledge, personal problems, personality, management, thinking and reading. Besides, this study found that the effects of the problems faced by post-graduate students during the research process that is of no interest, no focus, stress, running out of ideas, do not achieve the desired targets, ongoing concerns, loss of commitment, slow in complete the research and failed to complete the study.

Keywords: Research Process, Post-graduate Students, Problems in Research, Human Resources.

I. INTRODUCTION

The National Education Philosophy specifically designed to human resources development such as competent individuals, knowledgeable and skilled [1]. Therefore, educational institutions have an important role as an institution that educates human resources to have knowledge and skills [2]. Human resources who have master and PhD degree can contribute to the emergence of new knowledge or concept to solve the problem in general society [3]. Post-graduate students also have an influence on the

emergence of new knowledge that is the result of their research [4]. An employee who has a master's or PhD degree is an important asset of a particular institution in improving the quality and professionalism of human resources [5].

A worker who has a variety of skills are important to ensure the quality of work [6]-[7]. As stated by the Malaysian Qualifications Agency [8] that post-graduate students in Malaysia hopes to become a skilled professional workforce and experienced through research practice. This is because the various experiences gained by post-graduate students while studying in institutions of higher learning. Experience in this research activity allows post-graduate students have advantages compared with other individuals.

Development in education is expected to be more challenging in the future, particularly to higher education, whether students or lecturers. After the National Higher Education Strategic Plan was implemented, the country aims to produce PhD-qualified graduates 33,000 for the period 2009-2018 and 27,000 for the period 2019-2023 [9]. Financial assistance is provided through the MyMaster, MyPhD, PhD Industry and Academic Training Scheme of the Public University. Various support has been given by the government to help the students who want to pursue a master's or doctorate in terms of financing. To graduate, post-graduate students are required to conduct the research process [8].

Post-graduate studies include the process of determining the subject of research, searching and selection of information, selecting the methods and instruments used in the study, cooperate with the parties related to the study, analysis of study data, writing a thesis and presented the findings [10]. There is an increase in the number of students who fail to complete the research process which is the benchmark for graduation [11]. Many post-graduate students face various problems while they carry out the research process [12]. The research process at the post-graduate level has challenged many students and there are students who leave the course for a certain period while others failed to complete their research.

There are various factors that can affect the student's research process, where this can cause students to fail in their studies [13]. This issue needs to be identified to enable further exploration about the real problems faced by students. Thus, this study was conducted to explore the main issues faced by post-graduate students in Malaysia to conduct the research process. Therefore, objective of this study i.e:

- i. To identify common problems faced by post-graduate students during research process.
- ii. To identify the effects of problems faced by post-graduate students during research process.

Revised Manuscript Received on March 30, 2020.

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II. POST-GRADUATE RESEARCH PROCESS

Post-graduate education in Malaysia consists of master Degree and PhD. There are six general goals of education and learning outcomes to be achieved for the development of a post-graduate student [14]. First, is the development of knowledge, competence based on scientific process or achievement or inquiry and research. Secondly, it includes strengthening attitudes, ethics and professionalism values. The third goal consists of the use of skills aimed at evaluating and making decisions based on student experience as well as research findings. Fourth, is the strengthening of various efforts in finding knowledge and lifelong learning skills in line with the progress of global development. The fifth and sixth goals are to produce relevant research findings on a national and international scale and disseminate research findings through various publications.

The process in post-graduate research process is challenging because it requires time, knowledge, and skills to plan and carry out investigations or to report research findings to account before a panel of examiners [3]. The research process can be divided into three main phases, namely the first phase (problem statement, question, hypothesis or study objective), second phase (literature review, study design, instrumentation, preliminary study) data collection, data analysis or study findings, and report preparation) [15].

In addition, the post-graduate research process consist of seven major phases, including conducting literature review, proposal, presenting the proposals in front of panel, conducting research, analyzing research findings, writing thesis overall as well as presenting the thesis in front of the viva panel [16]. Research in the field of social science differs from the real science field [17]. This is because in the field of pure science measures something whose results need to be exact in accordance with the measurements used, while in social science, measures something that is less likely or unclear. Examples of attitudes, perceptions, stages, practices and so on.

III. METHODOLOGY

A. Procedure

This study aims to explore the major problems faced by post-graduate students in Malaysia to carry out the research process. In this study, researcher used qualitative research design. Qualitative data in this study was obtained from interviews with expert groups in education in Malaysia. Interview is a process in qualitative studies to obtain data [18]. Interview method is appropriate to identify the experience of a study participant [19].

There are three types of interviews, including structured interviews, unstructured interviews and semi-structured interviews. Semi-structured interview methods have flexible properties that make interviewers ready to elaborate on their thoughts, views and opinions to researchers [18]. In this regard, in the semi-structured interviews of the researchers only provide the main questions and the follow-up questions are based on the responses of interviewees. In this study, researchers used semi-structured interviews to explore the problems faced by post-graduate students in Malaysia to

carry out the research process.

B. Participants

Samples of this interview the 31 participants in the field of social science in Malaysia. Samples of the interview participants were selected using purposive sampling. Participants in this study consist of twelve Master Degree students and ten PhD students who failed to complete their studies in the social science field in public universities in Malaysia. In addition, the participants also consist of supervisors who have had experience in supervising more than 30 post-graduate students for over 15 years i.e. nine Professors in the social science field.

C. Research Instrument

This research instrument is the interview protocol. In this study, the researcher only provides the main question and answer follow-up questions based on participant interviews. Data from participants were analyzed used inductive thematic analysis. The analysis of the interview data was based on the findings of the themes obtained from interviews with participants. After the interview process, the researcher reduced the interview data by repeatedly recording interviews. Then the researcher made transcription interviews and repeated reading to understand interview data. After that, the researcher creates "open coding". Inductive thematic analysis is thematic analysis derived from raw qualitative data such as interview transcripts, video recordings, biographies and so on [20]. As the data analysis of this study is based on interviews and transcripts of audio recordings, the researchers used an inductive thematic analysis. In this regard, the themes identified were based on the analysis of interview data with participants that referred to the research context.

IV. FINDINGS

A. What is the common problems faced by post-graduate students in Malaysia during research process?

The researcher creates "open coding" in which the coding process of each of the themes that emerges is considered by the researcher. At this stage, researchers make coding as much code as possible. The findings show that at this stage there are 56 codes issued from the interview data. The initial codes are as Table I.

Table-I: Initial codes of interview data

No	Initial code	No	Initial code	No	Initial code	No	Initial code	No	Initial code
1.	There is no preparation for research activities	13.	Problems in the family	25.	Not discipline	37.	Unskilled in planning research activities	49.	No reading skills
2.	A low level of knowledge about the research process as a whole	14.	Personal problems	26.	Motivation problems	38.	Unable to think creatively	50.	Does not make such reading so widespread
3.	No knowledge of the culture of research	15.	Environmental problems	27.	Not independent or too dependent on the supervisor	39.	Unable to think critically	51.	Not mastered about the research that was expected
4.	Not skilled in conducting research	16.	Emotional and psychological stress	28.	Can not control the discipline	40.	Low level of synthesis and analysis	52.	Do not know the research gap in its study
5.	It is unclear what issues will be studied	17.	Pressure in conducting research	29.	Not committed to research conducted	41.	Difficult to understand the articles appearing in the journal	53.	Problems in reading and understanding literature critically
6.	Not being able to identify the problem or issue to be studied	18.	Bad relationships with friends	30.	Easy to give up when facing problems which relate to research	42.	It's hard to understand things about the research in detail	54.	Reading and writing skills are not good enough as well as lack of proficiency in English
7.	It is not clear which method will be used	19.	Bad relationship with supervisor	31.	Not talking with supervisor consistently	43.	Do not understand the process of examining clearly	55.	Frequently changing the research topic
8.	Can not transfer knowledge to various situations	20.	Disorders of the external and the environment	32.	Not working with other researchers	44.	Difficulties in obtaining information	56.	Non-critical reading
9.	Negative perception that research is something that is difficult	21.	Inadequate financial allocation	33.	It's hard to find an appropriate supervisor	45.	Difficult to use the appropriate language in writing		
10.	In order to adapt to the environment and post-graduate academic culture	22.	No self-confidence	34.	Poor financial management	46.	Difficult in writing		
11.	Expectations of different learning cultures than before	23.	Not skilled in research planning	35.	Irregular information management	47.	Lack of research resources		
12.	Difficult to find relevant and relevant titles at the post-graduate level	24.	Can not control the discipline in the conduct of the research process	36.	Failed in time management	48.	Does not synthesize the sources of information read		

Once open coding is carried out, then the researcher makes selective coding for codes that have a relationship with each theme. In this regard, there are 6 themes that researchers have developed and the number of initial codes

that have been compiled in the themes. Table 2 shows the theme is developed and the number of code written in the theme.

Table-II: Theme development and the number of codes arranged in the theme

No	Theme Developed	Number of Codes in Themes
1	Knowledge	12
2	Personal problems	9
3	Personality	9
4	Management	7
5	Thinking	6
6	Reading	13

Table-III: Compilation of theme and code

No	Themes	Code	No	Themes	Code
1.	Knowledge	1. There is no preparation for research activities	4.	Management	31. Not talking with supervisor consistently
		2. A low level of knowledge about the research process as a whole			32. Not working with other researchers
		3. No knowledge of the culture of research			33. It's hard to find an appropriate supervisor
		4. Not skilled in conducting research			34. Poor financial management

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		5. It is unclear what issues will be studied			35. Irregular information management
		6. Not being able to identify the problem or issue to be studied			36. Failed in time management
		7. It is not clear which method will be used			37. Unskilled in planning research activities
		8. Can not transfer knowledge to various situations	5.	Thinking	38. Unable to think creatively
		9. Negative perception that research is something that is difficult			39. Unable to think critically
		10. In order to adapt to the environment and post-graduate academic culture			40. Low level of synthesis and analysis
		11. Expectations of different learning cultures than before			41. Difficult to understand the articles appearing in the journal
		12. Difficult to find relevant and relevant titles at the post-graduate level			42. It's hard to understand things about the research in detail
2.	Personal problems	13. Problems in the family			43. Do not understand the process of examining clearly
		14. Personal problems	6.	Reading	44. Difficulties in obtaining information
		15. Environmental problems			45. Difficult to use the appropriate language in writing
		16. Emotional and psychological stress			46. Difficult in writing
		17. Pressure in conducting research			47. Lack of research resources
		18. Bad relationships with friends			48. Does not synthesize the sources of information read
		19. Bad relationship with supervisor			49. No reading skills
		20. Disorders of the external and the environment			50. Does not make such reading so widespread
		21. Inadequate financial allocation			51. Not mastered about the research that was expected
3.	Personality	22. No self-confidence			52. Do not know the research gap in its study
		23. Not skilled in research planning			53. Problems in reading and understanding literature critically
		24. Can not control the discipline in the conduct of the research process			54. Reading and writing skills are not good enough as well as lack of proficiency in English
		25. Not discipline			55. Frequently changing the research topic
		26. Motivation problems			56. Non-critical reading
		27. Not independent or too dependent on the supervisor			
		28. Can not control the discipline			
		29. Not committed to research conducted			
		30. Easy to give up when facing problems which relate to research			

Table IV: The effects of the problems faced by post-graduate students

Keyword	Factor
Give up to continue research	Give up
There is no passion for research	No passion
There is no self-confidence to be able to complete the research as planned	No self-confidence
There is no interest in further research	No interest
Not focused on research conducted	Not focused
Experiencing stress can cause depression	Stress
The lack of ideas in conducting research	The lack of ideas
Not reach the desired target	Not reach the desired target
Ongoing concerns during the research	Ongoing concerns
There is no commitment to conduct research as planned	No commitment
Late in completing the research	Late in completing the research
Failed to complete the study	Failed to complete the study

B. What is the effects of problems faced by post-graduate students in Malaysia during research process?

In addition, this study found that the effects of the problems faced by post-graduate students to carry out the research process are shown in Table 4.

V. DISCUSSION

The process passed by post-graduate students in producing a research is challenges, this is because the process encompasses the process of strengthening knowledge, understanding and skills through personal learning, research and professional practice where it is not an easy task.

This study was conducted to explore the major problems faced by post-graduate students in Malaysia to carry out the research process. Based on the results of the qualitative study, it has been found that there are six (6) main factors related to the problems faced by post-graduate students in Malaysia in conducting research processes such as knowledge, personal problems, personality, management, thinking and reading.

The results of this study in line with Zulu (2014) that the lack of knowledge in the field of research and inexperience in transferring knowledge into various situations will lead to problems faced by researchers in research. The findings of this study also support the results of the study of Pyhalto et al. (2012) show that the main factors that make graduate students unsuccessful in conducting the research process include the lack of research skills, the negative perception that research is difficult, poor relationship with supervisor, failure to manage time, difficulty finding supervisor appropriate, lack of research resources, lack of knowledge of research culture, lack of cooperation with other researchers and difficulty in obtaining information.

The findings of this research supports results of Wanjiku (2010) and De Schoot et al. (2013), showed that family problems can negatively impact either directly or indirectly to the performance of students. These findings are also supported by Yurttau and Suluna (2010), which suggests that the environment does not support can be the cause of a student problem. Personality refers to the whole behavior and way of thinking that makes a person different from others. These results are supported by a study conducted by Atherton (2015) found that a little experience makes students lack self-confidence in learning.

Based on the findings of this study, it is also in line with Allan, Sniehotta and Johnston (2013) study that the less skilled students in management will face problems in achieving a goal. Thinking is a mind activity in developing existing knowledge to produce something new or solve a problem. The results also support Thaneerananon, Triampo and Nokkaew (2016) found that the level of student analytic thinking skills is relatively low. Effectiveness in scientific reading is an aspect that should be taken seriously by each student, as read-only without a clear understanding of the meaning and purpose of writing will not be able to develop the idea. This study supports Manarin et al. (2015) which suggests that many students are not critical in reading, not reading and not making academic reading widely.

VI. CONCLUSION

In order to graduate and obtain a master's degree or doctorate, a post-graduate student must conduct research process. The post-graduate research process has challenged many students and some students leave the course for a certain period while others failed to complete their research. The results of this study found that if the problems faced by the students were not resolved, it would have effects such as despair, no spirit, no self-esteem, no interest, no focus, stress, lack of ideas, did not reach the target desired, constant worry, no commitment, late in completing the research and failed to complete the study. Therefore, it is hoped that through this research findings, it could be a reference for those involved with post-graduate students to resolve this issue. The

proposal for further study is related to the exploration of skills among post-graduate students who are masters and PhD students who can assist in solving the problems faced by students in conducting the research process.

ACKNOWLEDGMENT

The author would like to express appreciation to the Ministry of Higher Education is supporting this research through Fundamental Research Grant Scheme (FRGS) VOT K044.

REFERENCES

1. Subramaniam, I. Teachers Perception on Their Readiness in Integrating Soft Skills in the Teaching and Learning. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 2013, 2 (5), 19-29. ISSN: 2320-7388.
2. Yunus, J. M., Rubani, S. N. K., Alias, M., Sumarwati, S., Yunus, F. A. N., Hamid, H. & Rizal, F. Vocational pedagogical decisions of Malaysian and Indonesian non-engineering TVET teachers. *Journal of Technical Education and Training*, 2019, 11 (3).
3. Sumarwati, S., Yunus, J. M., Ibrahim, B. Transferable Skills for PhD Students to Complete the Journey. *Advanced Science Letters*, 2017, 23 (2), 968-971. DOI: <https://doi.org/10.1166/asl.2017.7459>.
4. Raddon, A. and Sung, J. The Career Choices and Impact of PhD Graduates in the UK: A Synthesis Review. Report prepared for the Economic and Social Research Council (ESRC) Science in Society Team and the Research Councils UK (RCUK) Research Careers and Diversity Unit. UK: University of Leicester. 2009.
5. Sweitzer, V. Towards a Theory of Doctoral Student Professional Identity Development: A Developmental Networks Approach. *The Journal of Higher Education*, 2009, 80, 1-33. Doi: <http://dx.doi.org/10.1353/jhe.0.0034>. Allan, J. L., Sniehotta, F. F. and Johnston, M. The Best Laid Plans: Planning Skill Determines the Effectiveness of Action Plans and Implementation Intentions. *Annals of Behavioral Medicine*, 2013, 46 (1), 114-120. Doi: <https://doi.org/10.1007/s12160-013-9483-9>.
6. Ismail, A., Kasman, Z., Sumarwati, S., Yunus, F. A. N., Samad, N. A. The development of job competency for skilled technical worker towards green technology. *International Journal of GEOMATE*, 2019, 17 (59): 216-221. DOI: <https://doi.org/10.21660/2019.59>.
7. Amiruddin, M.H., Ngadiman, N., Abdol Kadir, R., & Saigy, S. (2016). Soft Skills Of TVET Trainees From The Malaysian Advanced Technology Training Center (ADTEC). *Journal of Technical Education and Training (JTET)*, 8(1), 14-24.
8. Malaysian Qualification Agency. Education Program Standards. 2014. Retrieved from Malaysian Qualifications Agency: <http://www.mqa.gov.my/portal2012/garispenduan/Education%20Program%20Standard%20%28EPS%29.pdf>.
9. Malaysia Education Ministry. National Higher Education Strategic Plan (PSPTN): CAP - MyBrain 15. 2014. Retrieved from Ministry of Education Malaysia: http://www.mohe.gov.my/psptn/index.php?option=com_content&view=article&id=77&Itemid=60.
10. Dunleavy, P. Authoring a PhD thesis: how to plan, draft, write and finish a doctoral dissertation. Houndmills, Basingstoke, Hampshire, Palgrave Macmillan. 2003.
11. Omar, M. W., Ali, M. N. M., Khalid, K., Zakaria, A. & Anuar, M. M. Managing the Time to Completion of the PhD. 2nd International Conference on Management, Economics & Finance (2nd ICMEF 2013) Proceeding 28 -29 October 2013. Novotel 1 Borneo, Kota Kinabalu, Sabah, Malaysia. ISBN: 978-967-5705-12-0.
12. Remenyi, D. and Money, A. Research Supervision for Supervisors and Their Students: 2nd Edition. London: Academic Publishing Limited. 2012.
13. Earl-Novell, S. Determining the extent to which program structure features and integration mechanisms facilitate or impede doctoral student persistence in mathematics. *International Journal of Doctoral Studies*, 2006, 1, 45-57.

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14. Malaysian Qualification Agency. Standard: Master's and Doctoral Degrees. 2013. Retrieved from Malaysian Qualifications Agency: <http://www.mqa.gov.my/portal2012/garispenduan/2013/S%20MASTERR%20DOCTOR%20BM.pdf>.
15. Hua, A. K. Introduction to Metodology Framework in Research Study. Malaysian Journal of Social Sciences and Humanities (MJSSH), 2018, 1(2), 17 - 24.
16. Roberts, C. M. The Dissertation journey: A practical and Comprehensive Guide to Planning, Writing and Defending Your Dissertation. California: Corwin Press. 2004.
17. Bhattacharjee, A. Social Science Research: Principles, Methods and Practices. University of South Florida: Creative Commons Attribution. 2012.
18. Merriam, S. B. Qualitative Research and Case Study Applications in Education. San Francisco: Jossey-Bass. 1998.
19. Lebar, O. Qualitative Research: Introduction to Theory and Method. 2006.
20. Boyatzis, R. E. (1998). Transforming Qualitative Information. Cleveland: SAGE Publications.
21. Zulu, C. The Master's Dissertation Journey: Experiences of a Group of Part Time Students at One University Campus in South Africa. Journal Social Science, 2014, 39 (2), 213-223.
22. Pyhalto, K., Toom, A., Stubb, J. and Lonka, K. (2012). Challenges of Becoming a Scholar: A Study of Doctoral Students' Problems and Well-Being. International Scholarly Research Network, 1-12. Doi:10.5402/2012/934941.
23. Wanjiku, M. I. Impact of Family Conflicts on the Academic Performance and Interpersonal Relationships of Pupils in Public Primary Schools in Nakuru Municipality. Egerton University: Master Thesis. 2010.
24. De Schoot, R. V., Yerkes, M. A., Mouw, J. M. & Sonneveld, H. (2013). What Took Them So Long? Explaining PhD Delays among Doctoral Candidates. PLoS ONE, 8 (7), 1-11. Doi:10.1371/journal.pone.0068839.
25. Yurttau, G. D. and Suluna, Y. What Are the Most Important Environmental Problems According to the Pre-Service Science Teachers? Procedia Social and Behavioral Sciences, 2010, 2, 3412-3416.
26. Atherton, M. Measuring Confidence Levels of Male and Female Students in Open Access Enabling Courses. Educational Research, 2015, 25 (2), 81-98.
27. Thaneerananon, T., Triampo, W. and Nokkaew, A. Development of a Test to Evaluate Students' Analytical Thinking Based on Fact versus Opinion Differentiation. International Journal of Instruction, 2016, 9 (2), 123-138. E-ISSN: 1308-1470. Doi: 10.12973/iji.2016.929a.
28. Allan, J. L., Sniehotta, F. F. & Johnston, M. (2013). The Best Laid Plans: Planning Skill Determines the Effectiveness of Action Plans & Implementation Intentions. Annals of Behavioral Medicine, 46 (1), 114-120. Doi: 10.1007/s12160-013-9483-9.
29. Manarin, K., Carey, M., Rathburn, M., Ryland, G. and Hutchings, P. Critical Reading in Higher Education: Academic Goals and Social Engagement. Bloomington: Indiana University Press, Project MUSE. 2015.
30. Malaysia Education Ministry. Public universities in Malaysia. 2016. Retrieved from Ministry of Education Malaysia: http://www.mohe.gov.my/web_statistik/statistik_pdf_2015_IPTA.pdf.

technical and vocational education training (TVET), indigenous people, entrepreneurship program, welding and engineering education.



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