

## DIFFICULTIES IN POSTGRADUATE RESEARCH: A CASE STUDY

Asliaty Binti Atim<sup>1</sup>, Hairunnisa Binti Ibrahim<sup>2</sup>, Nurul 'Ain Binti Othman<sup>3</sup>

<sup>1,2,3</sup>Universiti Tun Hussein Onn Malaysia

### Abstract

*In Malaysia, postgraduate research has become an integral part of higher education that helps in the generation of knowledge, innovation, and socio-economic development. Nevertheless, postgraduate research is confronted by numerous challenges that affect the quality and efficiency of the output. The article explores the difficulties of postgraduate research, focusing specifically on Universiti Tun Hussein Onn Malaysia (UTHM). The researcher talked with three participants who have different issues faced while studying in UTHM. Some important problems encountered by postgraduate researchers in UTHM are quality of supervision, inadequate funding of research, limited access to advanced infrastructure, and challenges of balancing work and study. These are compounded by administrative inefficiencies and delay the progress of research and completion of a degree. The study proposes enhanced supervisions through professional development, better funding opportunities, improvement of research infrastructure, flexible study options for part-time students, and streamlining of administrative processes as solutions. Meeting these challenges would place Malaysia in a strategic position as a leader of research in Southeast Asia and would promote efficiencies in postgraduate research outcomes.*

**Keywords:** *Postgraduate research, Challenges, Professional development, University, Academic*

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\*Corresponding Author: Asliaty Binti Atim, Universiti Tun Hussein Onn Malaysia

Email: [asliaty@uthm.edu.my](mailto:asliaty@uthm.edu.my)

## INTRODUCTION

Over the past decades, Malaysia has gone a long way in developing its higher education sector to position itself as a regional hub for academic research and development. Besides, the government committed itself to education policies, such as the Malaysia Education Blueprint of 2015-2025, which features Malaysia's vision to attain world leadership in higher education and research (Ministry of Education Malaysia, 2019). It is stated that the postgraduate research has a very key role in this vision for the promoting of innovations, creation of new knowledge, and contribution to socio-economic development of the nation (Singh & Jamil, 2021).

With such hopes, Malaysia, however, still faces many problems, like most developing nations, in its postgraduate research. In fact, some of the major determinants impeding the growth and quality of research output in Malaysian universities have been identified to include poor supervision, limited opportunities for funding, and general defects in research infrastructure among others (Hadi & Muhammad, 2019). For instance, research by students takes longer due to the shortage of supervisors with sufficient experience and slow responses; this factor contributes to a high attrition rate, which has also increased the time it takes for students to finish their programs. According to Nasri et al. (2023), such scenarios have increased the number of dropouts and the period taken to complete a program. In addition, though the funds for research have increased, the resources at present are still not enough to meet the increasing needs of postgraduate students, thus complicating matters in their pursuit to produce quality research output (Singh, 2019).

The aim of this present research is an inquiry into the current trends in Malaysia regarding postgraduate research, focusing on some specific challenges that students and institutions are facing. By identifying these challenges and outlining some possible solutions, this study will contribute to ongoing efforts toward improving the effectiveness and impact of postgraduate research in Malaysia.

## **OBJECTIVES**

The present study focuses on the current trend in research studies undertaken at the postgraduate level within the context of Malaysia, highlighting specific students' and institutional challenges. Hence, the objectives that this study intends to achieve will be outlined as follows:

1. To bring forth the key issues faced by the postgraduate students while conducting the research study.
2. To recommend some strategies and suggestions to the universities and the responsible policy makers on how to provide more support to postgraduate research and alleviate challenges identified.

## **METHODS**

This research was carried out in Universiti Tun Hussein Onn Malaysia and targeted some of the PhD students within the faculties of engineering in this university. In this study, the qualitative approach was used to collect data on major issues these postgraduate students faced while conducting their research study. Semi-structured interviews had been the main instrument for data collection with a view to obtain an in-depth understanding of issues faced by students since these allow flexible but focused debates around key issues. Non-probability sampling with purposive sampling was adopted for the selection of participants in the present research based on experiences that would provide relevant insights.

Three were involved, representing each of the main faculties of engineering at UTHM: the Faculty of Civil Engineering and Built Environment (FKAAB), the Faculty of Mechanical and Manufacturing Engineering (FKMP), and the Faculty of Electrical and Electronic Engineering (FKEE). Each informant participated in an individual interview session in which the researcher asked semi-

structured questions to discover perceptions of challenges faced throughout the postgraduate research journey. In that way, this approach allowed the researcher to obtain detailed responses that provided a comprehensive perspective on issues within the context of engineering research at UTHM.

Each interview session took approximately about 15 minutes. The researcher used a recording device during the interview and took some important notes. The recording was later transcribed and analyzed. The interview transcripts were then coded manually and grouped into major conceptual areas such as key challenges, strategies, and recommendations.

## **RESULTS AND DISCUSSION**

Through interviews with these students, some of the challenges that postgraduate research faces in UTHM are identified and summarized below.

### **Key Challenges of Postgraduate Research in UTHM**

#### **1. Quality and Availability of Supervision**

In UTHM, one of the major challenges for postgraduate research includes issues related to the availability and quality of research supervision. Most supervisors do not have light teaching and administrative loads, constraining the amount of time they can commit to guiding postgraduate students (Imran, 2023). Mostly, the students believed that this affects the timely response and frequency of supervisory sessions, hence impacting negatively on research progress. According to Masek & Alias (2020), these supervisory issues contribute to lower research outputs and extended timelines for completing postgraduate studies, especially at the doctoral level. This is further worsened by the high student-faculty ratios that exist in most universities in Malaysia, reflecting badly on the research experiences and outputs for many students. (Cui, 2024).

#### **2. Research Grants**

Funding remains the most serious problem for postgraduate students in UTHM, for whom many have to struggle through scholarships or research grants. Despite the strong efforts of the government to boost funding since 2019, resources for conducting research are still not sufficient for expensive specialized or innovative projects which require advanced materials and tools (Rashid, 2019). Poor funding opportunities reduce the ability of students to visit international conferences, buy research materials with special importance, or collaborate with partners from other countries (Amzat et al., 2023). Due to this factor, the students pronounced that money is often a reason for delaying the expected date of completion and sometimes forcing students to give up studying due to a lack of support.

#### **3. Research Infrastructure**

Access to high value-added research facilities, such as technologies and specialized equipment, is integral in leading to successful postgraduate research. However, most of the universities in Malaysia, particularly public universities, including UTHM, still lack appropriate research facilities which can offer effective scope and quality of research that the postgraduate student can engage in (Ng et al., 2019). While recent efforts have raised the bar for digital libraries and access to research databases, the students disclosed that there is still a gap regarding the availability of specialized software and laboratory equipment that is needed to undertake

sophisticated research. Lack of resources contributes to reducing the number of innovative research output by students and makes them less competitive in the world market (Jayabalan et al., 2021).

#### **4. Balancing Work, Study, and Family Life**

By large, graduate students in Malaysian universities are part-time students struggling to balance their academic requirements with work and family commitments. It is also the case in UTHM. The students understood that these requirements and commitments are very often hard to balance and contribute to delays in research completion. Other studies have also identified that, in particular under the COVID-19 pandemic conditions, such challenges were increased when distance learning and limited access to campus conditions contributed to harms regarding student progress in pursuing completions of research. (Sharin, 2021; Zainal et al., 2022). Pressures at work, attending to the family, and academics may all combine to have a negative impact on the quality of the research the student produces and even their general mental health (Idris et al., 2021).

#### **5. Administrative Bureaucracy**

Other major issues for postgraduate students in UTHM are from an administrative point of view. Universities with long procedures for clearing the research proposals, giving approvals to ethics, and scheduling viva examinations drag down the entire process of a research study (Tshipala, 2021). Moreover, the requirement of multiple levels of approval may discourage the students from doing their research and slow it down as well (Mohd Isa & Ahmad, 2018). The students stated that this is further combined by bureaucratic inefficiencies in research administration, which create obstacles that reduce efficiency in doing postgraduate research in UTHM, hampering apt completion of the degrees.

From the results obtained through interview sessions, the strategies and recommendations to be done are through the following aspects:

##### **1. Improved Quality of Supervision**

Quality improvement of supervision for the postgraduate students in UTHM indeed requires investment in the professional development of supervisors. Various studies confirm that continuous research methodologies and supervisory practices significantly enhance the support provided to the students, as observed by Honig and Rainey (2019) and Masek and Alias (2020). The students expressed that mentorship programs and skills development are key initiatives in ensuring that supervisors have the capacity to effectively conduct the guidance of research. In addition, team supervision models, in which two or more supervisors accept responsibility for the student's progress, have also reported improvements in the quality of feedback and research outputs (Le et al., 2021). This model spreads the workload yet provides students with a wider range of expertise and perspective on their research.

##### **2. Increasing the Availability of Research Funds**

The government should collaborate with private institutions to supplement financial deficiencies. Government-funded programs, such as the Malaysia Research & Innovation Grant created in 2020, focus their funding on research related to the country's needs for sustainability

and technological advancement. According to Mamat et al. (2021), such grants, when supplemented by private contributions, will yield stable financial support for postgraduate research. Besides, international collaboration has been on the rise since 2020 due to research grants that have facilitated a collaboration between Malaysian universities and other institutions worldwide to develop resources and quality of output, as pointed out by Choi et al. (2021). The students assumed that by expanding these collaborations, it also represents increased chances of overcoming funding constraints and allowing more diverse opportunities within.

### **3. Infrastructure Development for Upgrading Research**

The nature of the research requires the latest available technology and resources. Malaysian universities, doing their best within their capacity, have managed to invest in developing digital libraries, virtual research environments, and open-access repositories since 2021. Such support promotes the research work of postgraduate students in instances when outreach is to be conducted remotely (Ummihusna & Zairul, 2022). The students added that online databases and digitized collections of research also promote abolishing some access burdens coming from physical resources, which have been a very enduring problem for students throughout rural or remote regions. This becomes global trends and supports the vision of placing Malaysia in the lead as a research hub within Southeast Asia.

### **4. Flexibility in Study Options**

There is a need for more flexibility in the available study options, as many postgraduate students balance academic, professional, and personal roles simultaneously. Indeed, some studies have argued that making available options such as part-time study programs and hybrid learning models improves academic performance and mental health among students with multiple role engagements (Ramli et al., 2022; Cheoh et al., 2024). The students displayed that this is, of course, coupled with the university finally recognizing that career counseling and mental health support will go a long way in the handling of such pressure; hence, students will engage better with postgraduate research. It also leads to increased retention and completion rates within institutions which have support mechanisms in place, specifically for part-time students (Khong., 2023).

### **5. Administrative Streamlining**

Efficient management processes promote smooth development of postgraduate research. In view of this, Malaysian universities have only recently begun to move along in the digitization of administrative functions, which has now become a limiting factor for the timeline of this research. (Razali., 2020). It was presumed by the students that the integration of digitized management platforms within the administrative functions streamlines the ethics approvals processing, thesis submission, and viva examination scheduling. Improvement in this aspect is urgent if a supportive environment that will foster timely completion and avoid delays related to administrative bureaucracy is to be provided.

## **CONCLUSION**

The importance of postgraduate research holds the key to the objectives of Malaysia's growth both academically and socio-economically. It not only helps within the academic world but also contributes toward the industries and societal benefits. However, many important barriers remain to be overcome, especially those related to the quality of supervision, funding of research, availability of infrastructure, and efficiency at the administrative level. It is only by addressing these barriers that the full potential of postgraduate research for driving innovation to meet national priorities can be realized.

Improved faculty development and team-based models of supervision will result in improved quality of supervision, hence leading to increased guidance and feedback for postgraduate students, translating to better research. Similarly, more funding, particularly through collaborative efforts from both government and private sectors, will provide the resources and opportunities needed for postgraduate students to pursue high-quality, impactful research.

First, this modern research infrastructure comprising digital libraries, virtual research environments, and open-access repositories would enable Malaysian researchers to conduct high-level research. Equally, flexible study options and mental health support services will allow students to balance commitments to academic, work, and personal life more effectively; this is associated with higher student retention and completion.

Eventually, the application of digitized platforms in easing administrative processes, such as ethics approvals and thesis submissions, will minimize delays and make the environment more conducive to academic progression. Such targeted reforms can enable Malaysia to reinforce its postgraduate research landscape and maintain its prominence as a key leader in Southeast Asia concerning matters related to research and innovation. This will not only raise Malaysia's level in the international academic alliance but also give incentive to the economic strength and sustainable development of the nation.

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