

FACTORS INFLUENCING SCIENCE STREAM STUDENTS IN ENGAGING GENERAL EDUCATION SUBJECTS (MPU) IN HIGHER EDUCATION

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ABSTRACT

General Studies (Mata Pelajaran Umum) or its acronym MPU has a pivotal role in higher education systems in which the students will be equipped with a fundamental knowledge and essential skills beyond their major field of studies. The Ministry of Education has made it compulsory for all branches of studies regardless of art, social and science streams to enrol for the subjects. The modules and curriculum in MPU has been established with a focus on the philosophy of knowledge, covering humanities, natural sciences and social sciences. Nevertheless, students in the science stream are not equipped with these fundamentals of knowledge and skills in their major field. Therefore, this study aims to explore the factors influencing science streams students in engaging MPU subjects beyond the mere requirement of them being compulsory modules in Higher Education. Both quantitative and qualitative methods will be utilized to investigate the variables that gain the interest of science stream students in MPU subjects. Quantitative surveys will assess students' attitudes, motivations, and perceived importance of MPU courses. On the other hand, qualitative interviews and focus group discussions will offer a more profound understanding of students' encounters, viewpoints, and recommendations for improving MPU offerings. This research carries important contributions for those involved in educational policies, designing curricula, lecturers, and individuals with a vested interest in higher education.

Keyword: General Education Subjects (MPU), Higher Education Institutions, Science Stream students

1. Introduction

General Studies, known in Malaysia as Mata Pelajaran Umum (MPU), consist of essential elements of the higher education curriculum. These particular subjects aim to provide students with a variety of field of knowledge and fundamental skills that extend beyond their primary field of study (Ministry of Education Malaysia, 2015). The integration of MPU subjects into higher education is compulsory across all branches of study, including arts, social sciences, and natural sciences, reflecting their importance in fostering well-rounded graduates (Azman, 2018).

The formation of the MPU curriculum is a pillar in the philosophy of knowledge, encompassing a variety line up of disciplines such as humanities, natural sciences, and social sciences (Lim & You, 2017). This interdisciplinary approach ensures that students are not merely specialized in their major fields but are also equipped with a holistic educational experience. Nevertheless, there exists a

substantial gap in the engagement levels of science stream students with MPU subjects. While MPU subjects are compulsory, the intrinsic interest and perceived value among science students vary significantly, prompting a need to explore the underlying factors influencing their engagement (Hassan & Mohd Nor, 2016).

This study aims to link the gap in current research by investigating the factors that influence science stream students' engagement with MPU subjects. By employing a mixed-methods approach, this research will provide a comprehensive analysis of students' attitudes, motivations, and experiences, offering valuable insights for improving MPU offerings in higher education.

2. Literature Review

The unification of General Studies (MPU) into Malaysia's higher education curriculum is custom to cultivate well-rounded graduates by providing essential knowledge and skills beyond their specialized fields of study. The Ministry of Education Malaysia has mandated these subjects across all academic disciplines, including arts, social sciences, and natural sciences, highlighting their integral role in the educational framework (Ministry of Higher Education, 2016).

Many research has indicated the multifaceted contributions of MPU subjects. For instance, Fen, Siraj, and Naimie (2017) emphasize the transformative potential of community service learning within MPU, which fosters critical thinking and civic responsibility among students. Similarly, Hairol and Zawiah (2017) examine the impact of the Tamadun Islam dan Tamadun Asia (TITAS) course in instilling cultural and ethical values, thereby enhancing students' holistic development.

Despite the promising benefits, the engagement of science stream students with MPU subjects remains a matter of concern. Studies have shown that these students often perceive MPU courses as peripheral to their main field of study, leading to varying levels of interest and engagement. Lim and You (2017) argue that this inconsistency stems from a lack of alignment between the MPU curriculum and the specific needs and interests of science students. They suggest that incorporating more relevant scientific and technological content could improve engagement and perceived value.

This is supported by Faridah and Fakhrol (2018), which shows that personalized MPU modules that correspond to students' core subjects can dramatically increase interest and involvement. This is particularly important as the development of soft skills and interdisciplinary knowledge is crucial for the evolving demands of the global workforce.

Furthermore, quantitative and qualitative research methods provide comprehensive insights into students' experiences and attitudes towards MPU subjects. Surveys conducted by Hassan and Mohd Nor (2016) show that students' attitudes and motivations are significantly influenced by their perceived relevance and application of MPU courses. Qualitative methods, on the other hand, reveal more in-depth information about students' individual experiences and suggestions for curriculum development through focus group discussions (Jabatan Pendidikan Tinggi, 2019).

This literature emphasizes the need for a dynamic and responsive MPU curriculum that not only meets regulatory standards but also corresponds with students' academic and professional goals. By addressing these needs, educational officials and curriculum designers can improve the effectiveness of MPU topics, contributing to students' overall growth across all academic disciplines.

3. Significance of the study

The importance of addressing these findings goes beyond just increasing student participation. Educational institutions can build a more inclusive and supportive learning environment by adapting MPU courses to the specific needs of science stream students. This can lead to improved student satisfaction and academic performance, thereby enhancing the institution's reputation and attractiveness to prospective students (Hairol & Zawiah, 2017). Furthermore, a deeper understanding of the characteristics that influence scientific students' engagement with MPU courses will educate policymakers and educators in establishing more effective educational strategies that align with the increasing needs of the workforce. As the global job market emphasizes transdisciplinary skills and knowledge, science graduates with a broad educational base can greatly improve their employability and adaptability (Jabatan Pendidikan Tinggi, 2019).

Furthermore, this study aims to provide valuable insights that can drive the continuous improvement of MPU curricula, ultimately contributing to the holistic development of students and the advancement of Malaysia's higher education system.

4. Research Objectives

1. To assess attitudes towards MPU courses among science stream students
2. To explore motivations for engaging with MPU courses
3. To determine the perceived importance of MPU courses

5. Research Questions

1. What are the attitudes of science stream students towards General Education Subjects (MPU) in Malaysian higher education institutions?
2. What intrinsic and extrinsic motivations influence science stream students to engage with MPU courses?
3. How do science stream students perceive the importance and relevance of MPU courses to their overall education and future careers?

6. Hypotheses

H1: Science stream students have generally negative attitudes towards MPU courses.

H2: Intrinsic motivations have a stronger influence on the engagement of science stream students with MPU courses compared to extrinsic motivations.

H3: The perceived importance of MPU courses is low among science stream students.

7. Methodology

7.1 Research Design

This study employs a mixed-methods approach, integrating quantitative surveys with qualitative interviews and focus group discussions to provide a comprehensive analysis of science stream students' engagement with General Studies (MPU) at KPJ Healthcare University (KPJU). The combination of both quantitative and qualitative data will offer a comprehensive understanding of students' attitudes, motivations, and experiences, thereby addressing the research gap identified in the literature.

7.2 Quantitative Component

The quantitative component involves the use of structured surveys to assess KPJU students' attitudes, motivations, and perceived importance of MPU courses. The survey instrument will be developed based on existing scales used in similar educational research, ensuring validity and reliability (Fen, Siraj, & Naimie, 2017). The survey will consist of Likert-scale items measuring various dimensions such as:

- Attitudes towards MPU Courses: Items will assess students' general attitudes and feelings about the MPU curriculum.
- Motivations for Engagement: Items will explore intrinsic and extrinsic motivations for participating in MPU courses.
- Perceived Importance: Items will measure students' perceptions of the relevance and value of MPU courses to their overall education and future career prospects.

A stratified random sampling method will be used to select participants from KPJU's science programs. This approach ensures that the sample is representative of the broader student population. Data will be analyzed using descriptive statistics and inferential statistics, including regression analysis to identify key predictors of student engagement with MPU courses (Hairol & Zawiah, 2017).

7.3 Qualitative Component

The qualitative component consists of semi-structured interviews and focus group discussions to gain deeper insights into students' experiences and perceptions of MPU courses. This method enables for better exploration that may not be captured through surveys alone.

Semi-Structured Interviews: In-depth interviews will be conducted with a purposive sample of science stream students at KPJU. The interview guide will include open-ended questions designed to elicit detailed responses about their experiences with MPU courses, challenges faced, and suggestions for improvement.

Focus Group Discussions: Focus groups will be organized to facilitate discussion among students, providing a platform for shared experiences and collective insights. Each focus group will consist of 6-8 participants, ensuring a manageable group size for effective interaction (Faridah & Fakhrol, 2018).

Data from interviews and focus groups will be transcribed and analyzed using thematic analysis. This approach involves coding the data to identify key themes and patterns, which will be compared and contrasted with the quantitative findings to provide a holistic understanding of the research questions.

7.4 Ethical Considerations

Ethical approval will be obtained from the relevant institutional review boards at KPJ Healthcare University before commencing the study. Participants will be informed about the purpose of the study, and their consent will be obtained prior to data collection. Confidentiality and anonymity will be maintained throughout the research process.

8. Conclusion

This research proposal outlines a thorough study to investigate the factors impacting science stream students' engagement with General Education Subjects (MPU) in Malaysian higher education. The literature review emphasized the crucial role MPU courses play in offering a well-rounded education,

encouraging critical thinking, and preparing students for the global workforce. However, a significant gap was identified regarding the specific engagement levels and perceptions of science stream students towards these courses (Faridah & Fakhrol, 2018; Fen et al., 2017; Hairol & Zawiah, 2017).

The proposed methodology employs a mixed-methods approach, integrating quantitative surveys and qualitative interviews to assess students' attitudes, motivations, and perceived importance of MPU courses. This dual method ensures a strong analysis by combining statistical data with detailed insights from students' own experiences.

This study is expected to make several key contributions to the field of education:

1. Enhanced understanding of student engagement: By focusing on scientific stream students, this study addresses a significant gap in understanding how they perceive and engage with MPU courses. It will give actual data on the factors that motivate or inhibit their engagement, offering useful insights for educators and policymakers. (Nik Liyana Mustapa & Sakinatul Raadiyah Abdullah, 2024).
2. Informed curriculum development: The findings can help to build more personalized and relevant MPU curricula that better correspond with the interests and needs of science stream students.. This can lead to improved student satisfaction and academic performance, contributing to the overall quality of higher education (Faridah & Fakhrol, 2018).
3. Policy implications: The study's findings can help policymakers establish and implement education policies that encourage a balanced and inclusive approach to general education. Understanding the specific issues that science students experience allows policymakers to improve the relevance and effectiveness of MPU courses (Ministry of Higher Education, 2016).

9. References

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