STUDY ON THE EFFECTIVENESS OF THE ACADEMIC ADVISOR SYSTEM (SPAK) IN INFLUENCING THE LEARNING ACHIEVEMENT OF MECHANICAL ENGINEERING STUDENTS AT SULTAN ABDUL HALIM MU'ADZAM SHAH POLYTECHNIC

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Abstract

This study assesses the efficacy of the Academic Advisory System (SPAk) in improving learning outcomes for mechanical engineering students at Sultan Abdul Halim Mu'adzam Shah Polytechnic. A quantitative survey of students throughout four academic sessions (2023/2024 - 2024/2025) was used to assess satisfaction with Academic Advisors (PA) and SPAk activities using a 4-point Likert scale. The results showed high mean scores (3.72 - 3.89) and low standard deviations (<0.04), indicating great student satisfaction and program reliability. PAs excelled in time management (mean 3.86) and responsibility fulfilment (mean 3.87), whereas SPAk was lauded for skill development (mean 3.81 - 3.83) and job preparation (mean 3.83). The high response rates (96.8-100%) reinforced engagement. The findings highlight SPAk's success in promoting academic and personal growth, which aligns with national education goals. Recommendations include improving personalised advice and incorporating technology to increase accessibility.

Keywords*:* Academic Advisory System, Student Satisfaction, Academic Advising.

1.0 Introduction

The academic advisor system is essential for promoting student achievement in academic programs. Advisors serve as liaisons between students and the institution's academic staff, offering guidance on course selection, academic preparation, and progression requirements. Academic advisers provide students with personalised guidance to help them connect their academic choices with their professional aspirations, navigate institutional policies, and overcome obstacles to their studies. By encouraging informed decision-making and proactive engagement, the Academic Advisory system enhances the overall quality and effectiveness of the educational experience.

The Academic Advisory System (SPAk) was officially implemented in Malaysian polytechnics in 2004 as an organised platform for students to receive academic assistance, counselling, and support. It was designed to promote a systematic relationship between students and their Academic Advisors (*Penasihat Akademik* - PA), who are selected from the academic department's staff. Each student is assigned

a dedicated PA who guides them through their studies, including Industrial Training and Work-Based Learning. The implementation of SPAk is grounded in several national policies and official documents, including Public Service Circular No. 33 of 2007 by the Public Service Department, the Guidelines on the Scope of Duties and Responsibilities of Higher Education Officers (2014), the Malaysia Education

Blueprint (Higher Education) 2015–2025, and the Strategic Plan for Polytechnics and Community Colleges (JPPKK) 2018–2025.

SPAk has evolved, as evidenced by various major texts. The initial rules were published in 2012, followed by the first amended version in 2016, and the most recent second edition in 2022. These improvements seek to standardise SPAk application throughout all polytechnics, ensuring consistency, efficiency, and quality in academic advising. The system also includes the Self-Inspiration Module (*Modul Inspirasi Diri* - MInD), which is intended to help students develop holistically by improving academic performance, personal values, and professional preparedness. SPAk is critical in developing well-rounded, accountable, and competitive graduates who satisfy the nation's goals for high-quality, entrepreneurial human capital that is aligned with industry objectives.

In Malaysian polytechnics, PA plays an important role in assisting students throughout their academic journey. A PA is appointed by the Head of Department to oversee a group of students and provide academic advise on topics such as course registration, curriculum structure, assessment procedures, and academic planning. PAs are supposed to meet with their pupils for at least one hour each week and keep records of these sessions. They also keep track of students' attendance and academic performance, providing assistance or referrals when they encounter academic, psychological, or emotional difficulties. These responsibilities include preparing the SPAk Monitoring Reports in Weeks 8 and Week 14 of each semester to ensure that students receive timely advise and intervention as needed.

In addition to academic mentoring, PAs promote students' personal development through the MInD. This includes supporting students in discovering their skills, developing confidence, and planning for their future jobs. PAs also handle administrative activities such as maintaining the Academic Advisor Record File (FRPA), updating student information in the SPMP system, and ensuring that students complete the SPAk Effectiveness Evaluation. PAs help to shape well-rounded, responsible graduates who are equipped for both academic success and real- world obstacles by serving as mentors and facilitators.

The purpose of this study is to assess the effectiveness of the Academic Advisor System (SPAk) in enhancing academic performance among mechanical engineering students at Polytechnic Sultan Abdul Halim Mu'adzam Shah. It examines how structured advising, including frequent meetings, academic monitoring, and personal support, affects student performance and motivation. The findings highlight SPAk's significance in assisting students to overcome obstacles and link their academic routes with their career ambitions. This study contributes to the Malaysia Education Blueprint (Higher Education) 2015-2025 objectives by emphasising SPAk's favourable impact on generating holistic, enterprising, and balanced graduates. It emphasises the necessity of strong advisory systems in promoting student achievement and meeting national goals for quality higher education.

2.0 Literature Review

The objective of academic advising, which is a collaborative process between students and academic advisors, is to help students navigate their course of study as smoothly as possible. As stated by McConnel (2018), throughout the academic year, academic advisors will facilitate students in developing a study plan and selecting the most relevant courses to enrol in. This is the case for students who fail in the courses they have taken. In this situation, the role of the PA is not only to help students organize their course schedules but also to motivate them to improve their academic performance.

The closest persons to assist students in making decisions about their academic and study matters are their academic advisors. According to a study by Hamdan Said et al. (2019), the relationship will affect students' educational inspiration and career prospects. Academic advising is essential to helping students succeed academically and grow as individuals. Spratley (2020) asserts that academic advisors serve as both academic and personal growth facilitators, making them one of the most dependable support systems for students during their time in higher education.

The self-authorship theory of Baxter Magolda (2008) offers a useful framework for comprehending how students grow in their ability for meaning-making, personal identity, and internal voice—all of which are strongly related to academic resilience and intrinsic motivation. This theory can be used to effectively direct the development and implementation of advising practices that support self-directed learning and reflective thinking within the framework of the SPAk. Consistent meetings, academic planning, and mentoring are all part of SPAK's structured and student-centred advising approach, which fosters the three fundamental aspects of self-authorship: interpersonal (managing relationships), intrapersonal (forming identity), and epistemological (constructing knowledge) (Baxter Magolda & King, 2008).

According to *Buku Panduan Pelaksanaan Sistem Penasihatan Akademik* (2022), one of the responsibilities of PAs is to assist in the development of academic, professional, and personal objectives. Students' expectations, opinions, and satisfaction with the implementation of the academic advisory system can be used to determine its effectiveness and efficiency (Noriadah et al., 2013). This is the reason why well-structured advising between students and the PA is needed to enhance student motivation in their studies. In the meantime, McConnel (2018) discovered that PAs are crucial in assisting students in reaching their learning objectives. The role of PA is vital for students studying at the Polytechnic and success in their future.

Through a study by Noraini Harun, Mohd Khuzairy Mohd Yusof, & Rosmawati Jalal (2021), they found that students agreed that SPAk is a useful tool for fostering character growth and commendable values to achieve academic success and prepare for the post-pandemic future. This statement is supported by Nurulhuda Khalida, N., Dollah, H. R., & Amir, N. F. H. (2019). They discovered that the efficacy of SPAk and PA is a motivating factor that contributes to the development of students who are both academically successful and well-mannered.

3.0 Methodology

All Mechanical Engineering Department students who use the online Academic Advisor System (iPAD) as a form of interaction with an academic advisor are included in this quantitative survey study. This study also involves data from 4 semesters, starting from Session 1 2023/2024 to Session 2 2024/2025. As an instrument for study, the iPAD SPAk platform distributes a questionnaire with a 4-point Likert scale that is representative of the total population. The JPPKK survey form is divided into two sections: 11 questions in Part A pertain to the academic advisor, while Part B examines how well SPAk works for students via 9 questions, all using a closed-ended questionnaire for the survey. The data obtained was analyzed descriptively by using Microsoft Excel, which involved frequency analysis, mean value and standard deviation for all items to study the implementation of SPAk and the efficiency of the SPAk system among students.

4.0 Results and Discussion

Table 1 shows the response rates and participation trends of Mechanical Engineering students throughout four academic sessions (Session I 2023/2024 through Session II 2024/2025). The overall number of students registered in the HHP system changed greatly, from 460 in Session I 2023/2024, to 200 in Session II 2024/2025. Despite these swings, response rates were continuously high, with Session II 2023/2024 and Session II 2024/2025 earning a flawless 100% completion rate, closely followed by Session I 2023/2024 at 99.78%. Session I, 2024/2025, had a somewhat lower response rate of 96.80%, with nine students remaining to be examined. The high response rates across all sessions indicate that students are actively engaged in the evaluation process.

Table 1: Respondents from Mechanical Engineering Students for 4 Study Sessions

Item	Session I 2023/2024	Session II 2023/2024	Session I 2024/2025	Session II 2024/2025
Total Students	460	280	281	200
Completed Assessments	459	280	272	200
Not Yet Assessed	1	0	9	0
Response Rate (%)	99.78	100	96.80	100

The survey questions in Table 2 evaluate the performance of the PA and the efficiency of SPAk. The question is taken from the SPAK Guide Book.

Table 2: Student Feedback Survey: Roles of Academic Advisor (PA) and SPAK Program

No	Item Topics	Questions
1	Academic Advisor (PA)	PA allocates time to meet with me.
2		PA conducts activities during advising sessions.
3		PA helps me in planning time management.
4		PA is willing to listen to problems I share.
5		Advice and guidance from PA help motivate me.
6		I practice the advice and guidance given by PA.
7		I am comfortable sharing problems with PA.
8		I am comfortable sharing personal matters with PA.
9		My academic performance has improved after receiving advice and guidance from PA.
10		PA has carried out responsibilities well.
11		I need PA throughout my studies at the polytechnic.
12	Academic Advisory System (SPAk)	SPAK activities help me build self-confidence.
13		SPAK activities help me increase self-motivation.
14		SPAK activities help me improve learning skills.
15		SPAK activities help me improve effective communication skills.
16		SPAK activities help me comply with polytechnic rules and regulations.
17		SPAK activities help me stay focused on the main objective of being at the polytechnic.
18		SPAK activities help me get ready for my future career.
19		SPAK is an initiative that supports the formation of holistic and competitive student skills.
20		SPAK activities ease academic affairs during my polytechnic studies.

The student feedback survey results show high levels of satisfaction with the Academic Advisor (PA) program across all categories. As depicted in Figure 1, students consistently rated PA services enthusiastically, with mean scores ranging from 3.72 to 3.89 on a 4-point scale. The highest scores were provided for the PA's responsibilities (3.87 mean) and meeting time allocation (3.86 mean), suggesting effective advisor availability and professionalism. Students acknowledged the PA's role in academic improvement (3.83 mean) and motivation (3.84 mean), as well as their comfort in discussing both academic (3.80 mean) and personal topics (3.76 mean), however, personal matters showed slightly higher variability (SD=0.04).

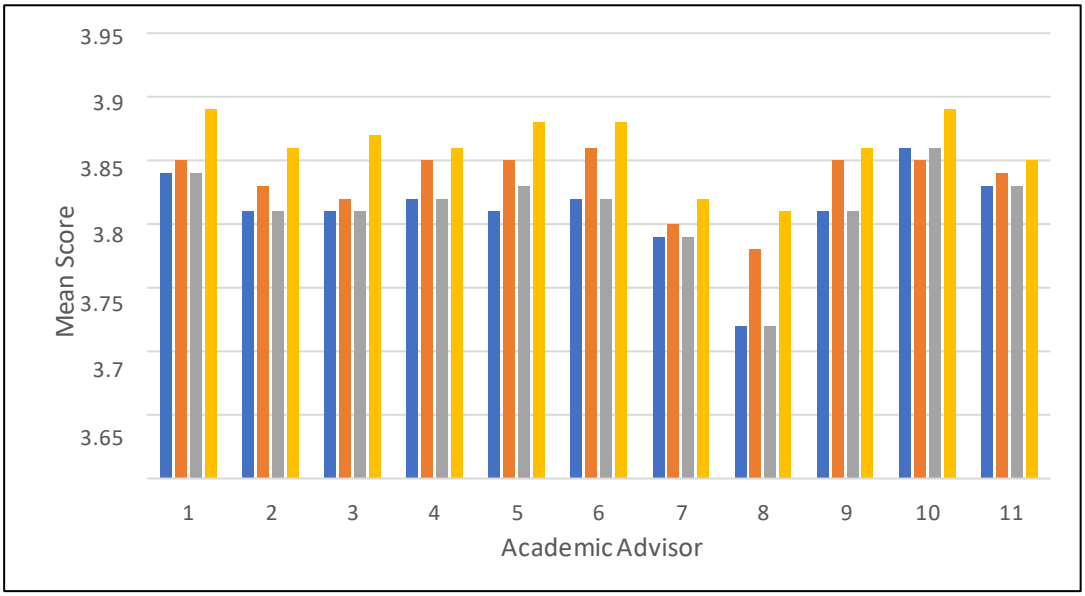


Figure 1: Student Feedback Survey: Roles of Academic Advisor (PA)

The survey results show that students are very satisfied with the Academic Advisory System (SPAk), as indicated by consistently high ratings in all examined dimensions. Figure 2 shows how efficient the SPAk program is. Similarly, received high marks, with students recognising its efficiency in skill development (mean 3.81 - 3.83 for learning and communication skills) and career preparedness. Both systems demonstrated amazing constancy throughout numerous academic sessions, as seen by low standard deviations (usually less than 0.03). The success of two complimentary programs, with PA focussing on individualised advice and SPAk on broader skill development, points to a comprehensive support structure that serves both current academic demands and long-term professional progress.

Table 3 shows mean scores and variability of PA and SPAk performance metrics over four academic sessions. The data is highly reliable, as indicated by consistently high mean scores (range from 3.76 to 3.87 on a 4-point scale) and extremely low standard deviations (usually less than 0.03) across all survey items and academic sessions. The limited variability (with SD values as low as 0.008 for Question 11 and regularly less than 0.04) reveals remarkable stability in student replies over time, implying that both the PA and SPAK programs produce stable, predictable results. While most items performed virtually identically across sessions, Question 8 (comfort sharing personal matters with PA) had somewhat higher variability (SD=0.04), which could indicate more individual variances in this sensitive area. The combination of high means (all more than 3.7) and low standard deviations suggests that the survey results are positive and dependable, with minimal variation in student views of program performance across cohorts and periods. This dependability makes the data especially useful for the Mechanical Engineering Department's decision-making and program evaluation.

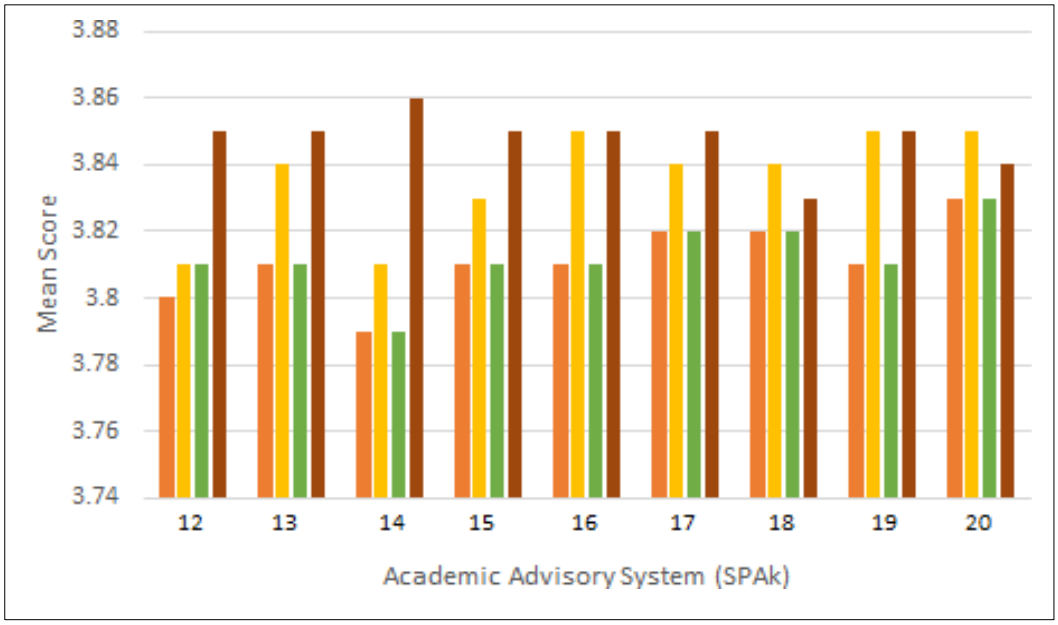


Figure 2: Student Feedback Survey: Efficiency SPAK Program

Table 3: Mean Scores and Variability of PA and SPAk Performance Metrics Over Four Academic Sessions

No	Item Topics	SESSION I 2023/2024	SESSION II 2023/2024	SESSION I 2024/2025	SESSION II 2024/2025	Means	Standard Deviation
1	Academic Advisor (PA)	3.84	3.85	3.84	3.89	3.86	0.021
2		3.81	3.83	3.81	3.86	3.83	0.03
3		3.81	3.82	3.81	3.87	3.83	0.026
4		3.82	3.85	3.82	3.86	3.84	0.017
5		3.81	3.85	3.83	3.88	3.84	0.029
6		3.82	3.86	3.82	3.88	3.85	0.031
7		3.79	3.8	3.79	3.82	3.80	0.013
8		3.72	3.78	3.72	3.81	3.76	0.04
9		3.81	3.85	3.81	3.86	3.83	0.022
10		3.86	3.85	3.86	3.89	3.87	0.017
11		3.83	3.84	3.83	3.85	3.84	0.008
12	Academic Advisory System (SPAk)	3.8	3.81	3.81	3.85	3.82	0.022
13		3.81	3.84	3.81	3.85	3.83	0.018
14		3.79	3.81	3.79	3.86	3.81	0.031
15		3.81	3.83	3.81	3.85	3.83	0.017
16		3.81	3.85	3.81	3.85	3.83	0.022
17		3.82	3.84	3.82	3.85	3.83	0.017
18		3.82	3.84	3.82	3.83	3.83	0.013
19		3.81	3.85	3.81	3.85	3.83	0.018
20		3.83	3.85	3.83	3.84	3.84	0.009

5.0 Conclusion

In conclusion, this study demonstrates the effectiveness of the Academic Advisory System (SPAk) in supporting mechanical engineering students' academic and personal development, with consistently high satisfaction scores (means 3.72 - 3.89) and low variability (SD <0.04) across four academic sessions. The findings confirm that Academic Advisors (PA) give excellent academic assistance, motivation, and personal support, whereas SPAk activities improve students' abilities, confidence, and career preparedness. To develop the system further, proposals include improving adviser training for personal matters, increasing digital platforms such as iPAD for more interactive support.These enhancements would better link SPAk with national education goals and maximise its role in producing competent, well-rounded graduates who are ready for both academic success and career opportunities. The study validates SPAk as a significant institutional support system while highlighting opportunities for expansion to suit changing student demands.

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