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Exploring The Usage of Artificial Intelligence and Academic Performance Among Students at the Faculty of Sports Science and Recreation (FSR) UiTM Seremban 3

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I. INTRODUCTION

This study investigates the impact of artificial intelligence (AI) usage and academic performance among students at the Faculty of Sports Science and Recreation (FSR), UiTM Seremban 3. It explores how AI tools such as ChatGPT, Grammarly, Quill Bot, and Microsoft Copilot influence learning efficiency, confidence, and academic outcomes. The research also considers students' perceptions of AI availability, functionality, and complexity, while addressing concerns about overreliance and ethical boundaries.

II. METHODS

A quantitative research design was employed using a structured questionnaire distributed to 363 students via Google Form. The instrument consisted of 29 items across three domains (availability, functionality, complexity) and academic performance measures. Data were analysed using descriptive statistics and multiple linear regression via Jamovi 2.6.26 software to determine the predictive effect of AI usage on academic performance.

III. RESULTS AND DISCUSSION

A. Artificial Intelligence Usage

The results for AI usage among students at the Faculty of Sports Science and Recreation (FSR) UiTM Seremban 3 showed a mean score of 4.28 (*SD* = 0.692). This indicates a very high level of AI adoption in academic tasks such as writing, editing, and information retrieval. The relatively small standard deviation suggests that responses were closely clustered around the mean, reflecting a consistent perception among students.

B. Academic Performance

The findings for academic performance revealed a mean score of 4.23 (*SD* = 0.678). This demonstrates that students generally reported a very high level of academic achievement, with AI tools contributing to improved confidence, efficiency, and learning outcomes. The low standard deviation indicates limited variability in responses, suggesting that most students shared similar views regarding their academic performance.

C. Artificial Intelligence Usage on Academic Performance

Regression analysis confirmed that AI usage has a statistically significant effect on academic performance, with $R^2 = 0.74$, $p < 0.001$. This means that AI usage explains 74% of the variance in academic performance, a strong predictive relationship. Among the three domains measured, availability emerged as the strongest predictor, followed by complexity and functionality. The findings support the research hypothesis, demonstrating that AI usage significantly influences academic performance.

TABLE I
MULTIPLE REGRESSION ANALYSIS OF THE IMPACT OF ARTIFICIAL INTELLIGENCE USAGE DOMAINS TOWARDS ACADEMIC PERFORMANCE

Model	Unstandardized Coefficient	Standardized Coefficient	t	Sig.
	B	Beta		
Intercept	0.65	-	5.52	0.001
Availability	0.42	0.46	7.73	0.001
Functionality	0.18	0.20	3.46	0.001
Complexity	0.24	0.25	5.55	0.001
R^2	0.74			
Significant	0.001			

IV. CONCLUSIONS

This study highlights the significant effect of artificial intelligence (AI) usage on academic performance among students at the Faculty of Sports Science and Recreation (FSR), UiTM Seremban 3. Both variables were perceived at a very high level, showing that students view AI tools positively and believe these technologies support their studies. Regression analysis confirmed that AI usage has a significant impact on academic performance, suggesting that responsible integration of AI contributes to improved learning outcomes.

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