
The Influence of Interest and Attitude of Logistics Service Certificate Students in the SPP30303-Statistics Course on the Performance of Pasir Mas Community College Students

Muhd Fadhlullah Bin Rashid¹, Mohd Azian Bin Husin²@Che Hamat², Norharifas binti Mohammad³

¹ Kolej Komuniti Pasir Mas, Kelantan
E-mail: muhd_fadhlullah@kkpmas.edu.my

^{2,3} Kolej Komuniti Pasir Mas, Kelantan
E-mail: azian@kkpmas.edu.my, norharifas@kkpmas.edu.my

Abstract:

This study intends to identify the relationship between interest, attitude, and student performance in the SPP30303-Statistics course at Pasir Mas Community College. The study involved 45 students as a sample, and data was collected through a questionnaire to measure students' interests and attitudes, as well as their academic performance data. Descriptive analysis showed that students have a positive interest and attitude toward this course, with average interest and attitude scores in a moderately high range. Spearman's correlation found a moderately strong positive relationship between students' interest and attitude ($r = 0.570$), as well as a weak but significant positive relationship between interest and performance ($r = 0.272$) and attitude and performance ($r = 0.209$). Student performance showed an average grade point of 3.348, revealing overall satisfactory achievement. Based on these findings, the study proposes approaches to increase interest, strengthen positive student attitudes, and offer additional support to improve academic performance in this course.

Keywords: *Interest, Attitude, Academic Performance, Spearman's Correlation, Descriptive Analysis, And Questionnaire.*

I. INTRODUCTION

The Statistics course (SPP30303) plays a significant role in students' education in the Certificate of Logistics Service Program at Pasir Mas Community College. The course not only aids students in mastering important data analysis techniques in the logistics field but also supports them with analytical skills for making data-driven decisions. Thus, passing this course remarkably depends on students' understanding of statistical concepts and their level of interest and attitude toward the course.

Student interest is attributed to their emotional engagement and willingness to learn a subject, whereas attitude is associated with their perceptions and feelings toward the subject. Both aspects are counted as important in learning, as the high level of interest is partly associated with better engagement in the learning process, while a positive attitude can

enhance students' motivation and commitment to the course.

These two domains often impact academic performance, assessed via test and project achievements. Students with a deep interest in the course are likely to be more focused and diligent in their studies, while those with a positive attitude toward the course tend to strive to enhance their understanding. Therefore, understanding the relationship between interest, attitude, and academic performance is crucial for identifying methods to improve student achievement. According to [1], if students do not have an interest in the course, they will develop a negative attitude towards it, which may lead them to repeat the course. This issue is supported by the findings of [2], who stated that an excerpt from Utusan Malaysia on June 17, 2008, reported that 73% of Malay students lacked additional practice, 50% failed to complete assigned homework, and 48% relied on teachers to complete

their homework. Based on the results of the Final Examination for the SPP30303 course in Session II 2022/2023, as shown in Table 1.0, the grades obtained ranged between B+, A-, and A.

Table 1.0 : Final Examination Results for SPP30303 Course Session II 2022/2023

Student ID	Grade
D23SLK22F5XX	B+
D23SLK22F5XX	B+
D23SLK22F5XX	B+
D23SLK22F5XX	A
D23SLK22F5XX	A
D23SLK22F5XX	A -
D23SLK22F5XX	A
D23SLK22F5XX	B+

Source : CCMS SLK KKPMCRP Sesion II 2022/2023

This study aims to investigate the relationship between students' interests, attitudes, and performance in the SPP30303-Statistics course. Through this research, we hope to identify the factors influencing student performance and provide an in-depth understanding of how interest and attitude can be improved to achieve better academic results. The findings of this study are also expected to recommend practical recommendations for augmenting teaching and learning strategies in this course, with the goal of assisting students attain higher academic performance.

1.1 Background of The Study

The implementation of Outcome-Based Education (OBE) among community college lecturers began in 2012, gradually replacing the traditional methods previously employed. The objective of OBE is to add to the effectiveness of learning outcomes, which are entrenched on students' knowledge and competencies. Additionally, OBE is aligned with the National Higher Education Strategic Plan (PSPTN) and is formulated under Act 679 within the framework of the Malaysian Qualifications Framework (MQF).

According to a study conducted by [3], OBE not only accentuates the curriculum content but also incorporates eight domains of learning outcomes that must be instilled in students to produce competent and holistic graduates. Furthermore, research by [2] proposes that the implementation of OBE obliges lecturers to focus not only on delivering course content but also on other affecting factors, such as students' attitudes and interests. However, students frequently face challenges in

grasping statistical concepts, which are remarked as complex and require meticulous analysis and a high level of concentration.

One of the key factors influencing students' success on this course is their interest in the subject. A high level of interest can lead to larger engagement in the learning process, incorporating active class participation, additional study beyond lecture hours, and efforts to comprehend difficult topics. On the contrary, students with low interest in the course may not pay sufficient attention or exert effort to understand the content, which may negatively affect their academic performance.

Moreover, student attitude is another crucial element in the learning process. A positive attitude toward the subject can heighten enthusiasm and dedication to reaching academic success. On the other hand, a negative attitude or a lack of confidence in one's abilities can result in students feeling pressured or demotivated to improve their performance. Even if students have an interest in the course, without the right attitude, their academic achievements may be compromised.

Another challenge is distinguishing the extent to which interest and attitude impact student academic performance in the SPP30303-Statistics course. While previous studies have shown a correlation between interest, attitude, and performance, there is a lack of detailed research at vocational education institutions such as Pasir Mas Community College. This gap presents an opportunity for further research in this context. Without a comprehensive understanding of this relationship, efforts to enhance student interest and attitude in the statistics course may not yield the desired results. Thus, this study intends to examine the relationship between students' interests, attitudes, and academic performance in the SPP30303-Statistics course. By comprehending the factors influencing student achievement, this research seeks to provide recommendations that can enhance the learning experience and, consequently, improve students' academic performance in this course.

1.2 Conceptual Framework

In this study, the researcher has adapted the conceptual framework as illustrated in Figure 1. Interest and attitude are independent variables that are associated with students' actual achievement in the SPP30303-Statistics course. The findings of this study will demonstrate the extent to which interest and attitude influence student achievement in this course.

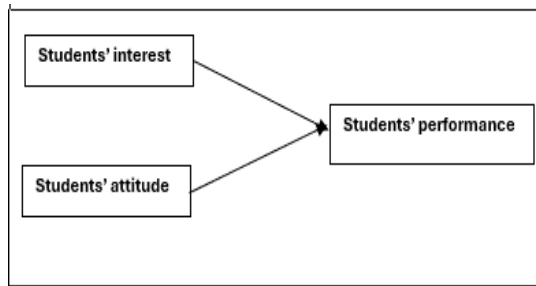


Figure 1: Conceptual Framework

1.3 Research Objective

This study specifically aims to:

- i. Identify the relationship between students' interests and academic performance in the SPP30303 course.
- ii. Identify the relationship between students' attitudes and academic performance in the SPP30303 course.

1.4 Research Questions

The research questions for this study are:

- a) Is there a positive relationship between students' interest and academic performance in the SPP30303 course?
- b) Is there a positive relationship between students' attitudes and academic performance in the SPP30303 course?

1.5 Scope of Study

This study focuses solely on students' interest and attitude in the SPP30303-Statistics course among Business Operations Certificate (SPP) students at Pasir Mas Community College and Logistics Service Certificate (SLK) students at Pasir Mas Community College, Rantau Panjang Branch, for Session I 2023/2024. Other factors, such as teaching methods, learning patterns, and the learning environment, are not contemplated, despite their potential impact on student performance.

II. LITERATURE REVIEW

2.0 Literature Review

2.1 Academic Performance

According to [4], academic performance is a goal that both students and educators focus on to achieve. When performance reaches an excellent level, the teaching and learning process has been successful. On the contrary, if performance is low, it suggests that the educator has not yet achieved a high level of effectiveness. This statement is supported by [5], who states that high student performance reflects their mastery of knowledge

and the development of their attitudes, which are essential in the learning process.

2.2 Interest

Numerous factors contribute to confirming students' interest in mastering their courses. A study by [2] asserts that interest is one of the key drivers of excellence in a course or subject. According to [6], student success is substantially influenced by their learning interest, which can be evaluated by their performance, attraction to an activity, and students' attitudes and behavior. High motivation can stimulate students' interest, particularly as they transition from secondary to higher education. Additionally, [7] states that interest is directly related to an individual's attitude; when students have a strong interest in a subject, they tend to put in their best effort to achieve meaningful and impactful results. A deep interest in a subject motivates students to strive for excellence in the SPP30303-Statistics course.

2.3 Attitude

Attitude, as defined in the *Dewan Bahasa* Dictionary, refers to behavior, character, and ethics. Attitude affects students by showing what they like or dislike. It also signals their readiness to accomplish tasks or assessments. If students demonstrate a positive attitude, they will carry out tasks with full responsibility to achieve academic success.

A study by [7] concludes that students with a positive attitude are more prepared to excel in their studies because they possess high motivation to succeed. Behavioral changes, such as knowledge acquisition and skill development, are part of a learning process for academic growth [9].

III. RESEARCH METHODOLOGY

This study implements quantitative research design, utilizing a questionnaire survey to ensure research objectives and questions are efficiently addressed. The study population consists of 50 students from the SPP and SLK programs. The sample size calculation refers to [10], which guides determining the ideal sample size based on the required level of accuracy, desired confidence level, and estimated proportion of attributes within the population. The sample size was calculated using the formula by [10] and can be easily obtained through an online calculator (<https://goodcalculators.com/sample-size-calculator/>). After applying for the finite population correction, the final sample size is 45 students.

The Spearman correlation coefficient was occupied to assess the relationship between the two variables, determining whether the correlation is strong or weak [4]. The interpretation of this method is based on values ranging from -1 to +1, where -1 indicates a perfect negative correlation. 0 argues no correlation, and +1 indicates a perfect positive correlation.

The following interpretation is commonly used to evaluate the correlation strength:

Table 3.0: Correlation Strength Interpretation Table

Value Range	Correlation Strength
0.00 – 0.25	Very weak
0.26 – 0.49	Weak
0.50 – 0.69	Moderate
0.70 – 0.89	Strong
0.90 – 1.00	Very Strong

Source: Sirkin (2012).

IV: DATA ANALYSIS AND FINDINGS

4.1 Data Analysis

Descriptive statistical analysis was conducted using SPSS Version 22. The findings are presented in tables displaying mean values, standard deviation, and correlation interpretation. According to [11], mean scores are categorized into three levels: high, moderate, and low. This classification is clearly illustrated in Table 4.1

Table 4.1: Mean Score Classification

Nilai Skor Min	Tahap
3.67 hingga 4.00	Tinggi
2.34 hingga 3.66	Sederhana
1.00 hingga 2.33	Rendah

4.2 Descriptive Analysis

This study involved 45 respondents who completed a questionnaire on their interest and attitude toward the SPP30303-Statistics course. Each item was assessed using a 4-point Likert scale, with a minimum score of 1.00 and a maximum score of 4.00. A summary of the analysis is presented in Table 4.2.

Table 4.2: Summary of Questionnaire Analysis

Item	Mean	Standard Deviation
M1: I am highly interested in the	3.4222	0.54309

SPP30303-Statistics course		
M2: I am very happy to have the opportunity to learn the SPP30303-Statistics course	3.5111	0.54864
M3: I enjoy learning the SPP30303-Statistics course	3.4667	0.58775
M4: I spend my free time doing practice exercises for the SPP30303 course	3.2444	0.71209
M5: I frequently refer to additional sources from the internet or other reading materials	3.3778	0.57560
M6: I always look forward to attending the SPP30303-Statistics class	3.4222	0.58344
M7: I actively volunteer to solve practice questions during learning sessions	3.3111	0.63325
M8: Student-centered learning activities provide me with satisfaction	3.5556	0.54588

i. Average Score

- The average score for all items ranges from 3.24 to 3.56, indicating students' positive interest and attitude toward the SPP30303-Statistics course.
- Item M8 recorded the highest average score (3.56), suggesting that students are highly satisfied with student-centered learning activities.

ii. Response Variation

- M4 (practice exercises during free time) had the highest standard deviation (0.712), indicating greater variability in student responses for this item.
- Conversely, M8 had the lowest standard deviation (0.546), reflecting consistent responses regarding satisfaction with student-centered learning activities.

iii. Positive Focus

Most items, such as M2, M3, M6, and M8, reflect students' positive interest and attitude toward the course.

4.2 Spearman's rank Test

This study employs Spearman's Rank Analysis to examine the significance of the relationship between interest and attitude (Independent Variables) and student performance (Dependent Variable). The analysis was conducted using IBM SPSS Statistics Version 22. Table 4.3 presents the results of the data analysis using Spearman's Rank Test.

Table 4.3: Spearman's Rank Correlation Test

			Min at	Sika p	Pres tasi
Spearman's rho	Min at	Correlation Coefficient	1.00	0.57	0.27
		Sig. (2-tailed)	0	0**	2**
				0.00	0.00
		N	45	45	45
Sikap	Correlation Coefficient	Correlation Coefficient	0.57	1.00	0.20
		Sig. (2-tailed)	0**	0	9**
			0.00	0	0.00
		N	45	45	45
Prestasi	Correlation Coefficient	Correlation Coefficient	0.27	0.20	1.00
		Sig. (2-tailed)	2**	9**	0
			0.00	0.00	0
		N	45	45	45

** Correlation is significant at the 0.01 level (2-tailed)

Table 4.4: Student Grade Point Values

i. Relationship Between Interest and Attitude

Referring to Table 4.3, the correlation coefficient for the relationship between interest and attitude is 0.570, with a significant value of $p = 0.000$. This indicates a moderate positive relationship between students' interest and their attitude toward the SPP30303 course. The findings suggest that students who exhibit a higher level of interest in the

course tend to have a more positive attitude toward it.

ii. Relationship Between Interest and Academic Performance

Referring to Table 4.3, the correlation coefficient for the relationship between interest and academic performance is 0.272, with a significant value of $p = 0.000$. This indicates a weak but significant positive relationship between students' interest and their academic performance. The findings suggest that students with a higher level of interest in the course tend to achieve better academic performance, although the influence is relatively small.

iii. Relationship Between Attitude and Academic Performance

Referring to Table 4.3, the correlation coefficient for the relationship between attitude and academic performance is 0.209, with a significant value of $p = 0.000$. This indicates a very weak but significant positive relationship between students' attitudes and their academic performance. A positive attitude toward the course has a minimal influence on students' academic achievement.

4.3 Grade Point Value Mean

Referring to Table 4.4, the mean grade point value of the students is 3.348, indicating that the overall student performance is at a moderately high level.

ii. Range of Values

Attributing to Table 4.4, the minimum grade point value is 2.330, while the maximum value is 4.000, suggesting a moderate variation in student performance within the study group.

iii. Standard Deviation

Implying Table 4.4, the standard deviation is 0.522, indicating that the distribution of students' grade point values falls within a moderate range. This reflects a good level of consistency in student achievement.

Item	N	Minimum	Maximum	Mean	Standard Deviation
Grade Point Value	45	2.330	4.000	3.348	0.522

V. CONCLUSION AND RECOMMENDATIONS

This study efficaciously connected the relationship between students' interests, attitudes, and academic performance in the SPP30303-Statistics course at Kolej Komuniti Pasir Mas. Based on descriptive and correlation analyses:

i. Is there a positive relationship between students' interest and academic performance in the SPP30303 course?

- Students' interest in the SPP30303 course is moderately high, with item mean scores ranging between 3.24 and 3.56.
- The relationship between interest and academic performance is weak but significant ($r = 0.272$), suggesting that while interest plays a minor role, it still has an important impact on improving academic performance.

ii. Is there a positive relationship between students' attitudes and academic performance in the SPP30303 course?

- Students' attitude towards the course also shows a moderately high mean score, indicating good acceptance of learning activities and course content.
- The relationship between students' attitudes and academic performance is weak but significant ($r = 0.209$), suggesting that a positive attitude has a slight influence on students' performance.

6. Research Recommendations

Based on the study findings, the following recommendations can be considered:

6.1 Enhancing Student Interest

- Integrating practical elements: Activities such as logistics simulations or statistical case studies can increase students' interest in the course.
- Real-world applications: Introducing statistical applications in logistics can help students see the relevance of the course to their future careers.

6.2 Developing a Positive Attitude

- Motivational sessions and counseling: Emphasizing the importance of statistics in the

logistics industry through motivational talks by professionals in the field.

- Recognition and rewards: Providing incentives or awards to students who demonstrate extra effort in learning

6.3 Strengthening Student Performance

- Additional training: Organizing extra classes or statistical workshops for students needing additional support.
- Individual tutoring: Providing personalized guidance to students with lower performance to help them understand difficult concepts.

6.4 Student-Centered Learning Approaches

- Ascending active learning activities, such as collaborative learning or group projects, to engage students more directly in statistical learning.

6.5 Future Research

- Further research can be conducted to examine other factors, such as teaching methods or students' backgrounds, that may influence performance in the course.

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AUTHOR'S INFORMATION



First Author: Ts. Muhd Fadhlullah Bin Rashid



Kolej Komuniti Pasir Mas

PT 3302-3307, Taman Sri Kota, Pasir Pekan, 16250 Wakaf Bharu, Kelantan

E-mail: muhd_fadhlullah@kkpmas.edu.my

<p>Second Author: Ts. Dr. Mohd Azian Bin Husin@Che Hamat</p> 	<p>Kolej Komuniti Pasir Mas PT 3302-3307, Taman Sri Kota, Pasir Pekan, 16250 Wakaf Bharu, Kelantan E-mail: azian@kkpmas.edu.my</p>
<p>Third Author: Norharifas Binti Mohammad</p> 	<p>Kolej Komuniti Pasir Mas PT 3302-3307, Taman Sri Kota, Pasir Pekan, 16250 Wakaf Bharu, Kelantan E-mail: norharifas@kkpmas.edu.my</p>