

Students' Satisfaction with the Choice of Public Transport Mobility in UiTM Puncak Alam

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Abstract: Transportation is essential for facilitating movement and contributing to economic development. This study aims to measure student satisfaction with public transportation mobility at UiTM Puncak Alam. Understanding the level of satisfaction derived from transportation services is crucial for enhancing student experiences. The main focus of this research is to identify the factors influencing student satisfaction with public transport services, specifically examining reliability, convenience, frequency, and safety in UiTM Puncak Alam. A correlation study was conducted to explore the relationships between these factors and student satisfaction. The research utilized a non-probability convenience sampling method, distributing a questionnaire to 217 students from the Faculty of Business and Management. Data collection occurred over three months, from October 2022 to December 2022, using online questionnaires. The findings indicate that comfort, frequency, and safety significantly influenced student satisfaction. Numerous students expressed their dissatisfaction with the old buses, inconsistent service schedules, and safety issues. These elements were discovered to influence students' selection of public transportation and their overall contentment. The research also highlighted concerns like bus conditions, driver behavior, and punctuality, all of which affect student satisfaction and academic achievement. Based on these findings, the study suggests increasing the bus fleet, enhancing service frequency, and strengthening safety measures to better address student needs and boost their overall satisfaction with public transportation at UiTM Puncak Alam.

Keywords: *Students Satisfaction, Public Transport, Mobility, Comfortability, Frequency, Safety*

1. Introduction and Background

Students living on campus at Universiti Teknologi MARA (UiTM) Puncak Alam in Selangor rely heavily on public transportation, particularly bus services, for their daily commute. According to university policy, students residing in campus housing are not permitted to bring personal vehicles, except for motorcycles, and are encouraged to use the provided bus services. This policy aims to reduce traffic congestion by minimizing the number of vehicles on campus. However, this reliance on bus services presents challenges. Many students experience long waiting times, often up to 30 minutes, due to high demand and long queues. Consequently, some students opt for alternative modes of transportation, such as ride-sharing services like Grab or taxis, which may offer more convenience but can be costly. Referring to Liu, Li, & Zhang, (2020). evaluates the effectiveness of transportation policies implemented at the University of Michigan and their impact on public transit usage within the campus community. It provides insights into how university-specific policies influence students' and staff's transportation choices and the broader implications for sustainable campus mobility.

Overall this study aims to assess student satisfaction with the public transport services at UiTM Puncak Alam. The study seeks to understand the factors that influence satisfaction and identify areas for improvement in the university's public transport offerings.

2. Literature Review

Public Transport Mobility Satisfaction

According to Mokhtarian & Cao, (2020). Examines various studies on travel satisfaction related to public transportation. It also discusses the factors influencing public transport satisfaction, such as service quality, accessibility, and personal expectations, and highlights the gap in current research. Apart from that, referring to Currie & Delbosc (2021), provide a comprehensive overview of research on public transport satisfaction, focusing on user experience, service quality, and the impacts of various factors on satisfaction levels, it also addresses emerging trends and future research directions.

Effective public transportation is crucial for ensuring student satisfaction in university settings. According to

Shaaban (2016), implementing efficient bus routes that pick up and drop off students at specific times can significantly reduce waiting times and improve overall satisfaction. By optimizing bus routes and schedules, universities can minimize the likelihood of missed classes, thereby encouraging more students to use public transportation (Aris et al., 2019). However, increasing bus frequency often requires substantial investment, including purchasing more buses and hiring additional drivers, which can be financially challenging.

Safety is another critical factor influencing student satisfaction with campus transportation. Hashim (2013) emphasized the importance of maintaining a safe environment for students, which can be achieved by implementing safety technologies such as RFID and GIS. These technologies help monitor bus movements and student behavior, providing data that can enhance campus safety (Talib et al., 2018). Such measures are essential, especially on campuses that allow public vehicles to pass through, as they help prevent accidents and ensure a secure environment for students (Eastern Kentucky University, 2022).

Efficiency in public transportation is also a key determinant of student satisfaction. Fitzova et al. (2018) argued that reliable and user-friendly services are essential to attract and retain students as regular users of public transport. Aligning transportation services with student demand, enhancing the overall transit experience, and ensuring adequate coverage across campus can reduce the need for personal vehicles, lower transportation costs, and decrease stress levels associated with commuting (Cities Climate Leadership Group, 2021; Study International, 2019). Moreover, efficient transportation reduces parking and traffic congestion, contributing to a more sustainable campus environment (Force, 2004).

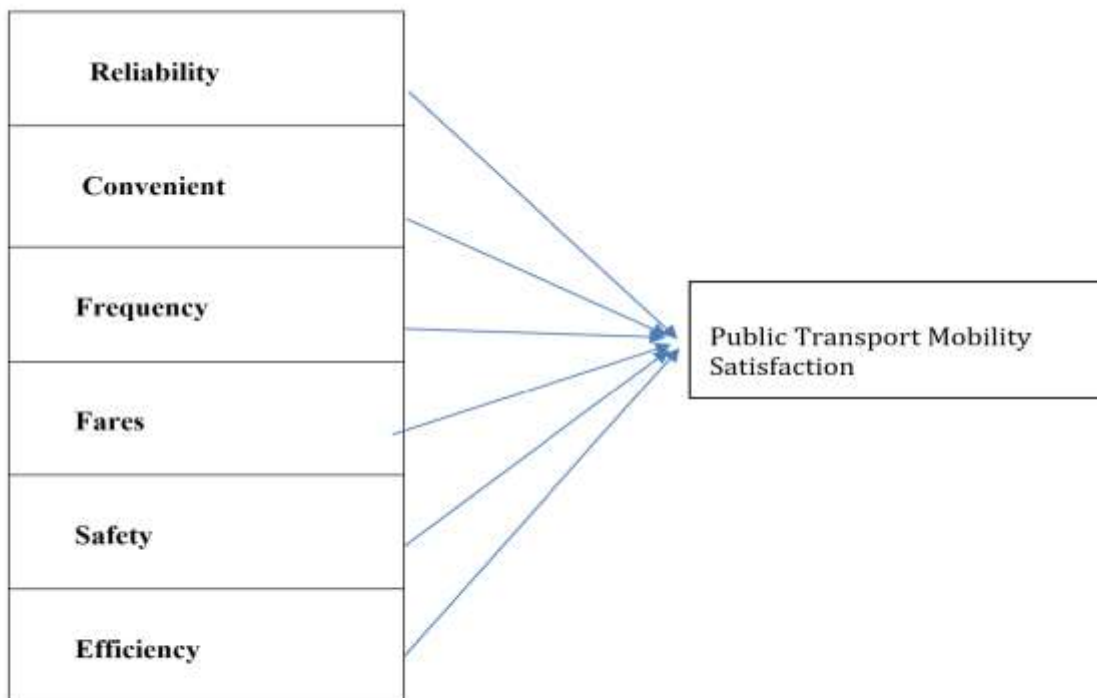


Figure 1 : Research Framework

3. Research Methodology

This study employs a descriptive research design to investigate students' satisfaction with public transport mobility at UiTM Puncak Alam. The aim is to explore the relationships between independent variables (reliability, convenience, frequency, safety) and the dependent variable (student satisfaction). A correlational approach was used to assess how these factors relate to each other. By analyzing these relationships, the study aims to determine the significance and strength of the correlations between the chosen factors and student

satisfaction. This approach allows for a better understanding of the natural associations between these variables without manipulating the study environment. The research was conducted in a natural setting at UiTM Puncak Alam, ensuring minimal interference with regular student activities. This field-based approach helps maintain the authenticity of the responses. The study employed a cross-sectional design, with data collected at a single point in time, providing a snapshot of student's satisfaction levels during the research period.

Population and Sampling

The target population for this study consists of students enrolled at UiTM Puncak Alam, specifically those in the Faculty of Business Management. The study aims to understand the satisfaction levels of students using public transport services on campus. To achieve this, a sample was drawn from the broader student population.

Sampling Technique

Convenience sampling, a non-probability sampling method, was used to select participants for this study. This approach was chosen due to its practicality and efficiency, allowing the researchers to easily access and gather data from students in semesters 1 to 5 of the Business Management program. While this method does not provide a fully representative sample of the entire student population, it offers valuable insights within the constraints of time and budget.

Sample Size

A total of 217 students were surveyed for this study, providing a sufficient sample size to gain reliable insights into student satisfaction with public transport. This sample size was deemed appropriate to balance the need for accuracy and precision with the practical limitations of data collection. By targeting a specific group within the university, the study ensured that the sample was relevant and aligned with the research objectives.

Questionnaire Design

The questionnaire used in this study was divided into four sections: Section A covered Demographic information, Section B focused on Factors Influencing Public Transport Customer Satisfaction, Section C examined the Effects of Customer Satisfaction on Public Transportation, and Section D sought Recommendations to Improve Public Transport at UiTM Puncak Alam.

To ensure the reliability and validity of the questionnaire, the constructs were derived based on findings from previous research. Each construct's reliability was confirmed by achieving a reliability index greater than 0.60, indicating acceptable internal consistency. The dimensions used in the questionnaire correspond to the study's hypotheses, ensuring alignment with the research objectives.

Measurement

A Likert scale was used to measure respondents' attitudes, opinions, and behaviors. This scale, named after Rensis Likert, allows participants to indicate their level of agreement with various statements on a numerical scale, typically ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Likert scales are commonly used in social sciences and market research due to their simplicity and effectiveness in capturing a wide range of attitudes and opinions. However, it is noted that Likert scales may be susceptible to social desirability bias, where respondents may provide socially acceptable responses rather than honest ones.

4. Results

The study employed several analytical methods to address the research objectives. The analysis began with a reliability test to assess the consistency of the questionnaire, followed by descriptive analysis to examine the demographic characteristics of the respondents. Finally, advanced statistical methods, including t-tests, regression, and correlation analyses, were used to explore the relationships between variables.

Reliability Test

The reliability test showed a high internal consistency, with a Cronbach's alpha coefficient of 0.849, indicating that the questionnaire items were reliable and measured the intended constructs consistently.

Descriptive Analysis

The descriptive analysis covered various respondent characteristics, including age, semester, residency, vehicle ownership, and transportation allocation. Out of 217 respondents, 12% were aged 17-19 years, 51.2% were aged 20-22 years, and 36.9% were aged 23-25 years. These demographics provided a comprehensive overview of the student population sampled in the study.

Data Analysis

Table 1: Table of Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.706 ^a	.499	.482	.856

Regression Analysis

The regression analysis results demonstrate the relationship between multiple independent variables and the dependent variable, students' satisfaction. The model summary indicates that 49.9% of the variance in the dependent variable (students' satisfaction) is explained by the independent variables. This is indicated by the R Square value of 0.499.

Table 2: ANOVA

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.220	7	21.746	29.681	.000 ^b
	Residual	153.125	209	.733		
	Total	305.346	216			

The ANOVA table shows that the overall regression model is statistically significant, with a significance value (p-value) of 0.00, which is well below the threshold of 0.05.

Table 3: Coefficients

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.133	.425		-2.668	.008
	1. The public transport service is usually reliable	.410	.086	.304	4.773	.000
	2. The public transport routes are convenient for me	.183	.078	.152	2.340	.020
	3. The public transport service is frequent	.212	.077	.192	2.764	.006
	4. The public transport staff is always helpful	.088	.075	.075	1.184	.238
	5. The public transport fare is more reasonable compared to other modes of transportation	.210	.076	.147	2.744	.007
	6. The safety of certain mode of public transport such as e-hailing makes me comfortable using it	.038	.080	.028	.477	.634
	7. The ease of getting mobility using public transport specifically (e-hailing), makes me want to use it more compared to other public transport	.146	.088	.098	1.661	.098

a. Dependent Variable: 4. I will keep on using public transport as my main transportation in UITM

In unstandardized coefficients in Table 3, for each unit increase in B1, students' satisfaction will increase by 0.410 units. While for each unit increase in B2, students' satisfaction will increase by 0.183 units. While for each unit increase in B3, students' satisfaction will increase by 0.212 units. For each unit increase in B4, students' satisfaction will increase by 0.088 units. While for each unit increase in B5, students' satisfaction will increase by 0.210 units. For each unit increase in B6, students' satisfaction will increase by 0.038 units. While for each unit increase in B7, students' satisfaction will increase by 0.146 units

Correlation Analysis

The correlation analysis explores the relationships between different styles and student satisfaction. The results indicate various levels of correlation, ranging from negligible to low positive, as outlined below.

Table 4: Table of Correlations

		Correlations						
		1. The public transport service is usually reliable	2. The public transport routes are convenient for me	3. The public transport service is frequent	4. The public transport staff is always helpful	5. The public transport fare is more reasonable compared to other modes of transportation	6. The safety of certain mode of public transport such as e-hailing makes me comfortable using it	7. The ease of getting mobility using public transport specifically (e-hailing), makes me want to use it more compared to other public transport
1. The public transport service is usually reliable	Pearson Correlation	1	.531**	.568**	.424**	.293**	.158*	.191**
	Sig. (2-tailed)		.000	.000	.000	.000	.020	.005
	N	217	217	217	217	217	217	217
2. The public transport routes are convenient for me	Pearson Correlation	.531**	1	.559**	.446**	.317**	.323**	.236**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	217	217	217	217	217	217	217
3. The public transport service is frequent	Pearson Correlation	.568**	.559**	1	.559**	.302**	.282**	.226**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.001
	N	217	217	217	217	217	217	217
4. The public transport staff is always helpful	Pearson Correlation	.424**	.446**	.559**	1	.216**	.248**	.388**
	Sig. (2-tailed)	.000	.000	.000		.001	.000	.000
	N	217	217	217	217	217	217	217
5. The public transport fare is more reasonable compared to other modes of transportation	Pearson Correlation	.293**	.317**	.302**	.216**	1	.267**	.219**
	Sig. (2-tailed)	.000	.000	.000	.001		.000	.001
	N	217	217	217	217	217	217	217
6. The safety of certain mode of public transport such as e-hailing makes me comfortable using it	Pearson Correlation	.158*	.323**	.282**	.248**	.267**	1	.469**
	Sig. (2-tailed)	.020	.000	.000	.000	.000		.000
	N	217	217	217	217	217	217	217
7. The ease of getting mobility using public transport specifically (e-hailing), makes me want to use it more compared to other public transport	Pearson Correlation	.191**	.236**	.226**	.388**	.219**	.469**	1
	Sig. (2-tailed)	.005	.000	.001	.000	.001	.000	
	N	217	217	217	217	217	217	217

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

* Correlation is significant at the 0.05 level (2-tailed).

Reliable Style: Shows a negligible positive correlation with student satisfaction ($r = .191, p = .005$).

Convenient Style: Exhibits a negligible positive correlation with student satisfaction ($r = .236, p < .05$).

Frequency Style: Also shows a negligible positive correlation with student satisfaction ($r = .226, p = .001$).

Staff Attitude Style: Displays a low positive correlation with student satisfaction ($r = .388, p < .05$).

Fare Style: Reveals a negligible negative correlation with student satisfaction ($r = -.219, p = .001$).

Safety Style: Indicates a low positive correlation with student satisfaction ($r = .469, p < .05$).

5. Managerial Implications and Recommendations

To enhance public transportation services on campus and improve overall student satisfaction, the following recommendations are proposed:

Increase Frequency and Reliability of Buses and Shuttles

To enhance the quality of campus public transportation, it is crucial to increase the frequency and reliability of buses and shuttles. This can be achieved by expanding the fleet size and implementing a real-time tracking system that enables students to monitor bus locations. Such measures will allow students to better plan their trips and reduce waiting times, as they will receive timely updates about bus arrivals and departures. Additionally, aligning bus schedules with class timings and peak usage periods will ensure transportation availability when most needed, alleviating concerns about inadequate service.

Expand the Accessibility of Service Areas

Improving campus transportation requires expanding the service areas to include locations such as off-campus housing, shopping centers, and recreational sites. This expansion will make public transportation more accessible and attractive to students, particularly those who live off-campus or regularly travel to popular destinations. An expanded service area will not only increase convenience but also reduce the number of private vehicles on the road, easing traffic congestion and lowering air pollution levels.

Utilize Technology for Enhanced Transportation Services

Leveraging technology can significantly enhance the convenience and efficiency of campus transportation. Introducing a mobile app tailored for students would enable them to access real-time bus tracking, view schedules, and plan trips more effectively. Additionally, incorporating electronic fare systems will streamline payment processes, reducing wait times at bus stops and providing a more seamless experience for all users. By implementing these recommendations, campus transportation services can become more reliable, accessible, and user-friendly, leading to improved satisfaction among students and a more sustainable campus environment.

Conclusion

This study examined student satisfaction with public transportation mobility at UiTM Puncak Alam, with a focus on key factors such as reliability, convenience, frequency, and safety. Understanding these elements is essential to enhancing the quality of transport services and meeting the needs of the student population.

The research highlighted several areas that require attention to improve overall satisfaction, including the condition of buses, service schedules, and safety measures. It also underscored the importance of aligning transport services more closely with student expectations and the need to encourage greater use of public transport.

Based on these insights, the study proposes targeted recommendations to increase the frequency and reliability of services, expand the coverage area, and integrate technology to enhance the convenience and efficiency of public transport. Implementing these recommendations can lead to a more positive transportation experience for students, fostering a sustainable and student-friendly campus environment.

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