

Investigating the relationship between students' academic performance and university transportation service quality: Case study of the university of Kasdi Merbah, Ouargla

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Summary: This study examines the impact of university transportation service quality on students' academic performance at Kasdi Merbah University, Ouargla, using the SERVQUAL model. Surveying 280 students, the research finds overall dissatisfaction across all service quality dimensions, with the lowest ratings in seating sufficiency, climate control, schedule adherence, complaint handling, safety equipment, and communication of delays. Regression analysis reveals a moderate correlation ($R = 0.453$) between perceived service quality and academic performance, with quality dimensions explaining about 20.6% of the variance in academic outcomes. Responsiveness and assurance (safety) are identified as the most significant predictors of academic performance. The findings underscore the need for comprehensive improvements in university transportation, particularly in responsiveness, safety, and tangible resources, to enhance both student satisfaction and academic achievement.

Keywords: University transportation, service quality, academic performance, SERVQUAL model.
Jel Classification Codes : I23, R41, L91, M31.

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I- Introduction

The standard of transportation services provided by universities plays a crucial role in influencing students' academic experiences.. This research addresses the relationship between the quality of university transportation services and students' academic performance, focusing on five main dimensions of service quality: tangibility, reliability, assurance (safety), responsiveness, and credibility. Research literature indicates a close correlation between commute time and its conditions and students' academic performance (Burzacchi et al, 2024), as the quality of university transportation services can positively impact academic performance by reducing stress, increasing time available for study, and improving attendance and participation in academic activities.

This research seeks to explore how different aspects of transportation service quality within the university setting influence the academic outcomes of students at Kasdi Merbah University in Ouargla..

II. Theoretical framework for transportation service quality and its impact on students' academic performance:

University transportation services represent one of the important elements in the system of services provided by educational institutions, and their importance increases with the growing number of students and the spread of university branches in various areas (Magasi et al, 2022). Universities seek to provide high-quality transportation services to their students, whether within the campus or between the student's residence and the university, due to its impact on student satisfaction and academic performance (Burzacchi et al, 2024).

Students' academic performance is affected by a variety of factors, including those related to the students themselves such as their personal abilities, motivation for learning, and study habits; factors related to the educational environment such as the quality of teaching, curricula, and equipment; and external factors such as social and economic conditions and support services (Taufiq, 2020).

Studies have indicated that support services provided by educational institutions, including transportation services, significantly affect students' academic performance through their impact on students' level of satisfaction and psychological and physical comfort (Zakaria et al, 2018).

Recent studies indicate an inverse relationship between commuting time and students' academic performance. A study conducted on students at Politecnico di Milano University showed that increased commuting time negatively affects students' academic performance, as the student's grade point average (GPA) decreases with increased commuting time. This can be explained by the fact that the long time spent by students commuting reduces the time available for studying and academic activities, and increases the level of stress and fatigue for the student (Burzacchi et al, 2024).

II. 1. SERVQUAL model:

Service quality is considered one of the central concepts in marketing and services literature and has gained increasing attention since the 1980s. Parasuraman and his colleagues define service quality as “*the difference between customers' expectations of service and their perceptions of the actual performance of that service*” (Parasuraman et al., 1985). Service quality is a critical factor in the success and competitiveness of service organizations, as achieving high levels of service quality is associated with increased customer satisfaction and loyalty, which positively reflects on the organization's performance (Zeithaml et al., 1996).

The SERVQUAL model is considered one of the most prominent models used in measuring service quality, and it was developed by Parasuraman and his colleagues (Parasuraman et al., 1988). The approach of this model is by conducting a measure between how users perceive the actual service provided to them and their expectations (Parasuraman et al., 1988). This model has five dimensions as follows:

I. 1.1 Tangibility

The tangibility dimension refers to the physical aspects associated with university transportation services, such as the condition of buses, facilities, equipment, and technology used (Alma & Željko, 2023). It also includes the appearance of staff, cleanliness of transportation vehicles, and the availability of comfort amenities for passengers. A study conducted at Yildiz Technical University indicated that tangible aspects represent one of the main factors influencing the quality of transportation service within the university campus (Kerim & Hasan, 2021; Koc & Kaya, 2021).

I. 1.2 Reliability

The reliability dimension means the ability of the service to deliver what it promised with accuracy and dependability, such as adhering to departure and arrival schedules, avoiding frequent breakdowns, and providing a sufficient number of buses (Eboli & Mazzulla, 2007; Abdullah, 2006). High reliability reduces stress and anxiety associated with delays, allowing students to attend lectures on time.

I. 1.3 Assurance

This refers to the extent to which students feel safe while using university transportation, including drivers' competence, their adherence to traffic rules, the presence of monitoring systems, and emergency measures (Eboli & Mazzulla, 2007; Redman et al., 2013). The feeling of safety reduces anxiety and stress, and enhances the student's ability to focus on their studies.

I. 1.4 Responsiveness

This reflects the willingness of service providers to respond to students' needs, such as quickly handling complaints, providing alternative solutions in case of breakdowns, and responding to emergency situations (Abdullah, 2006). Effective responsiveness enhances student satisfaction and confidence in the service.

I.1.5 Credibility

This includes the extent of students' trust in the information provided by the university transportation management, the honesty of promises made, and transparency in dealing with problems (Abdullah, 2006). Credibility enhances students' sense of reassurance and helps them build their academic plans more effectively.

II- Methods and Materials

To address the primary research question, this section outlines the study's methodology, including details about the population, sample, and instruments used.

1. Study population and sampling

The research involved all students enrolled at Kasdi Merbah University in Ouargla. The sample was chosen through random sampling, with a total of 280 questionnaires distributed and all 280 successfully completed and considered valid for analysis.

2. Research instruments

To evaluate the main hypothesis, a questionnaire was developed based on several prior studies. The questionnaire consisted of two main parts:

The first part gathered personal information such as gender, age, and status.

The second section consists of thirty-nine statements measuring the quality of transport service, divided into five determinants as follows:

- Tangibility, consisting of 7 items.
- Reliability, comprising 6 items.
- Responsiveness, with 9 items.
- Assurance, including 8 items.
- Credibility, with 4 items.

One more section was dedicated to measure the academic performance of students, it included 5 statements.

The questionnaire was structured using a five-point Likert scale, as demonstrated in table 1 (see appendices) which provides a detailed explanation of the scale.

3. Study tool reliability

The internal consistency of the questionnaire was evaluated using Cronbach's Alpha, which measures the extent to which items within a scale are correlated and collectively represent the same underlying construct. The coefficient ranges from 0 to 1, where values closer to 1 indicate greater reliability. Generally, a reliability coefficient above 0.60 is deemed acceptable, above 0.70 is considered good, and above 0.80 reflects very high reliability (Cohen et al., 2018).

The table 2 (see appendices) indicates that the overall reliability coefficient for the instrument is 0.926, equivalent to 92.6%. This figure surpasses the 0.60 threshold, signifying a very high degree of reliability in the obtained results.

III- Results and discussion

This section details the findings obtained from analyzing the survey data using SPSS version 26 software..

1. Results

The main hypothesis proposed that university transportation service quality has a significant impact on students' academic performance. To test this hypothesis, arithmetic means and standard deviations were computed for the responses pertaining to service quality, categorized by its core dimensions: tangibility, reliability, empathy, responsiveness, and assurance.

1.1 Tangibility dimension

Table 3 (see appendices) presents the arithmetic means and standard deviations reflecting the degree to which the study participants agreed on the presence of quality in services related to the tangibility dimension.

The overall mean score calculated is 2.38, which falls into the "Disagree" category, indicating general dissatisfaction among respondents regarding the tangible aspects of the service. The lowest scores are observed for the sufficiency of seating (mean = 1.76) and the provision of ventilation and appropriate air conditioning (mean = 1.74), both evaluated as "Strongly disagree." Comfortable seating also received a low mean (2.25, "Disagree"). In contrast, aspects like the convenience of bus stop locations, interior cleanliness, presence of handrails, and adequacy of lighting received neutral evaluations, with means ranging from 2.61 to 2.80. These results suggest that while some basic facilities are perceived as average, critical elements such as seating capacity and climate control are significant areas of concern, contributing to an overall negative perception of the tangibility dimension of university transportation services

1.2 Reliability dimension

Table 4 (see appendices) presents the means and standard deviations reflecting the study participants' level of agreement regarding the presence of quality in the service, specifically within the reliability dimension.

The overall mean score is 2.34, which falls under the "Disagree" category, indicating a general dissatisfaction among respondents regarding the reliability of the service. Most items, including bus departure accuracy (2.27), acceptable intervals between buses (2.37), regular operation without frequent interruptions (2.38), adherence to capacity limits to avoid overcrowding (1.85), and schedule compliance even in adverse conditions (2.4), all received "Disagree" evaluations. Only the statement regarding the ability to rely on university transportation to commute to and from the university received a "Neutral" evaluation (2.77). These results suggest that students perceive significant shortcomings in the reliability of the transportation service, particularly in terms of overcrowding and schedule adherence, which may negatively impact their daily routines and satisfaction with the service.

1.3 Responsiveness dimension

Table 5 (see appendices) illustrates the arithmetic means and standard deviations indicating the degree to which the study participants agree on the quality of service experienced within the responsiveness dimension.

The overall mean score is 2.36, which is evaluated as "Disagree," reflecting a general dissatisfaction among respondents regarding the responsiveness of the service. While the coverage of university structures by the bus network and morning bus availability received "Neutral" evaluations (means of 2.97 and 2.65 respectively), most other aspects were rated negatively. In particular, the coverage of all city neighborhoods, bus availability in the evening and on Saturdays, handling of student complaints, driver cooperation, provision of alternative solutions during breakdowns, and management's responsiveness to problems all received mean scores below 2.6 and were evaluated as "Disagree." These results indicate that students perceive significant shortcomings in the system's responsiveness, especially in terms of complaint handling, problem-solving, and consistent bus availability outside of peak times. This suggests a need for substantial improvements in communication, operational flexibility, and customer service to better meet students' needs and expectations.

1.4 Assurance dimension

Table 6 (see appendices) displays the arithmetic means and standard deviations reflecting the degree to which the study participants agreed on the presence of quality in the service as it relates to the assurance dimension.

The service quality of university transportation in terms of the safety and security dimension. The overall mean score is 2.33, which is interpreted as "Disagree," indicating a general dissatisfaction among respondents regarding the safety and security aspects of the service. While the adherence of drivers to traffic laws and the safety of transportation routes received "Neutral" evaluations (means of 2.81 and 2.82, respectively), all other items were rated as "Disagree." Notably, the availability of safety equipment (mean = 1.92), clear supervision to prevent unauthorized use (1.89), safety and comfort of waiting areas (2.34), first aid supplies (2.25), late-hour bus availability (2.01), and the overall feeling of safety when using the service (2.58) all scored below the neutral threshold. These results highlight significant concerns among students about the adequacy of safety measures, supervision, and emergency preparedness, suggesting that improvements in these areas are necessary to enhance the perceived safety and reliability of university transportation services.

1.5 Credibility dimension

Table 7 (see appendices) presents the arithmetic means and standard deviations indicating the level of agreement among participants regarding the quality of service provided in relation to the credibility dimension.

Table 7 (see appendices) assesses the credibility dimension of university transportation service quality by evaluating four key aspects: the sufficiency of buses, timely communication of schedule changes, adherence to designated routes, and the use of modern buses. The overall mean score is 2.30, corresponding to a "Disagree" evaluation, which indicates a general lack of confidence among respondents in the credibility of the service. The lowest mean (1.91) is for immediate notification of delays or changes in bus schedules, suggesting that students feel inadequately informed about disruptions. The sufficiency of buses (mean = 2.28) and the use of modern buses (mean = 2.13) are also rated negatively, highlighting concerns about both capacity and the quality of the fleet. Only adherence to designated bus routes received a neutral evaluation (mean = 2.89), implying that this aspect is relatively more satisfactory but still not viewed positively. Overall, the results reflect significant dissatisfaction with the credibility and reliability of the university transportation service, particularly regarding communication and the adequacy of resources.

2. Discussion

This section endeavors to interpret the findings presented in the preceding section.

2.1 Analysis and interpretation of findings Related to Tangibility

The vast majority of responses from students emphasize how crucial tangible elements are to university transportation. Numerous students underlined the necessity of expanding the bus fleet in order to reduce crowding and guarantee that every student has access to seats. Many requests for routine maintenance, better cleanliness, better ventilation, and the replacement of old buses were made in response to concerns about the buses' condition. Students also drew attention to the inappropriate waiting stations and asked for improved facilities to protect them from bad weather and create a more comfortable waiting area.

Students' everyday experiences and opinions of the service are directly impacted by these observable problems. Enhancing tangible components like the fleet, stations, and onboard facilities should result in instant increases in customer satisfaction and have a favorable impact on students' academic performance and punctuality.

2.2 Analysis and interpretation of findings Related to Reliability

Students expressed frustration over frequent delays and noncompliance with published schedules, highlighting reliability as a major concern. A lot of students complained that buses frequently leave or arrive late, forcing them to wait for long periods of time and occasionally skip class. Service irregularities make it difficult for students to efficiently plan their academic activities, especially during busy times or on certain days (like Saturdays). Students also drew attention to the lack of reliable information systems that could aid in time management, like real-time tracking applications.

In addition to simply being inconvenient, these reliability problems also lead to increased stress and a feeling of uncertainty in students' academic routines. Academic performance could decline and trust in the service provider declines when transportation is unreliable. Reliability demands not only improved fleet management and scheduling, but also the incorporation of technology to increase predictability and transparency.

2.3 Analysis and interpretation of findings Related to Responsiveness

Students expressed disagreement with how quickly the administration responded to their problems and suggestions for improvement. Many believed that there were not enough ways for efficient communication with transportation management and that their complaints and suggestions were not given enough consideration. The primary problems that students encountered were the inability to react quickly to mechanical malfunctions, service interruptions, or schedule modifications.

Establishing clear and accessible communication channels, like feedback forms, smartphone apps, or dedicated hotlines, is necessary to increase responsiveness. Students' participation in decision-making and service evaluation procedures may encourage a mutually beneficial and ongoing improvement culture. In addition to resolving immediate issues, promptly addressing concerns and openly sharing solutions would foster long-term trust between service providers and students.

2.4 Analysis and interpretation of findings Related to Assurance

Concerns about unauthorized people boarding university buses, which can cause discomfort and, in certain situations, harassment—particularly among female students—were frequent topics in student feedback regarding safety and assurance. These worries become worse by reports of careless driving and inappropriate behavior by certain drivers. Students also pointed out the absence of security cameras, first-aid kits, emergency exits, and onboard supervision.

Students' sense of security during their commutes is impacted by these safety lapses, which foster an atmosphere of vulnerability and anxiety. Stricter access controls, comprehensive driver training, and improved on-board monitoring are necessary to rebuild trust. Many of the safety-related issues raised by students would also be resolved by making sure that the stations are safe and well-lit, especially in early the morning or evening.

2.5 Analysis and interpretation of findings Related to Credibility

Another issue was credibility, or the extent that students believed the transportation administration's objectives and approaches were legitimate. Students complained about a lack of transparency about delays, service modifications, and the reasons behind operational available options. Trust was further damaged by staff members acting impolitely and by unmet promises of service enhancements.

Restoring credibility requires dedication to transparent communication and responsibility. The administration should make sure that all schedule, policy, and change-related information is communicated in an honest and clear way. The institution's credibility can also be strengthened by routinely observing employee behavior and enforcing disciplinary actions for misbehavior. In the end, restoring trust necessitates a clear commitment to student welfare and consistent fulfillment of promises.

3. Hypothesis testing

The primary hypothesis of this study asserts that the quality of university transportation services significantly influences students' academic performance. In order to test this hypothesis, a multiple linear regression model has been calculated.

To facilitate hypothesis testing, the study hypothesis needs to be reformulated into a statistical format as follows:

H1: There is a statistically significant effect of quality dimensions on academic performance at a significance level of α less than 0.05.

H0: There is no statistically significant effect of quality dimensions on academic performance at a significance level of α less than 0.05.

From Table 8 (see appendices), it can be observed that the linear correlation coefficient between the quality dimensions and academic performance is (45.3%), indicating a moderate correlation between the two variables. As for the explanatory power regarding the dependent variable, we note that the adjusted correlation coefficient reached (20.6%), meaning that (20.6%) of the changes occurring in academic performance are due to the quality dimensions, while the remaining percentage (79.4%) is attributed to other factors, random factors, or error.

Analysis of Variance (ANOVA) Results for the Regression Model Testing the Main Hypothesis:

The ANOVA table (table 9 in appendices) for the regression analysis reveals the following:

- The regression sum of squares (SSR) is 47.501, the residual sum of squares (SSE) is 184.371, and the total sum of squares (SST) is 231.872;
- The degrees of freedom associated with the regression is 5, and the degrees of freedom for the residuals is 274;
- The mean square for the regression (MSR) is 9.500, while the mean square for the residuals (MSE) is 0.673;
- The F-statistic for the regression model is 14.118;
- The p-value for the F-test is 0.00, which is less than the conventional alpha level of 0.05, leading to the rejection of the null hypothesis. Therefore, the regression model provides a statistically significant fit to the data.

Table 10 (see appendices) shows that the constant value of the regression line is 1.646, which represents "a" in the linear equation. As for the slope of the regression line for the dimensions whose significance level was less than 0.05, it is as follows:

- 0.256 for the responsiveness dimension,
- 0.419 for the safety dimension.

Accordingly, the regression equation can be written as follows:

$$\text{Academic performance} = 1.646 + 0.256 (\text{responsiveness}) + 0.419 (\text{safety}).$$

It can be noted as well that the significance level of the quality dimensions varies from one dimension to another, as it was significant (less than 0.05) for the responsiveness and safety dimensions. Therefore, the null hypothesis (H₀) is being rejected for both dimensions and the alternative hypothesis is being accepted, which confirms the existence of a statistically significant effect of the responsiveness and safety dimensions on students' academic performance at a significance level of α less than 0.05.

Regarding the other dimensions (tangibility, credibility, and reliability) their significance levels exceeded the predetermined threshold of 0.05. As a result, the alternative hypothesis (H₁) is rejected while the null hypothesis (H₀) is retained. This indicates that, at a significance level of $\alpha = 0.05$, these dimensions do not have a statistically significant impact on students' academic performance.

IV- Conclusion

This study was about an evaluation of the quality of university transportation services and their impact on students' academic performance at Kasdi Merbah University in Ouargla, employing the SERVQUAL model to analyze five key service dimensions: tangibility, reliability, responsiveness, assurance and credibility. The findings reveal a general dissatisfaction among students with the quality of transportation services, as reflected by low mean scores across all dimensions—particularly in critical areas such as seating sufficiency and comfort, ventilation, adherence to schedules, responsiveness to complaints, safety measures, and timely communication. The analysis showed that the tangibility and reliability dimensions suffer from significant shortcomings, with students highlighting issues like overcrowding, lack of punctuality, and poor maintenance of buses and facilities. Similarly, both the responsiveness and assurance dimensions were rated negatively, indicating inadequate service coverage during evenings and weekends, insufficient handling of complaints, and a lack of effective safety protocols.

Statistical analysis further confirmed a moderate but statistically significant relationship between the perceived quality of transportation services and academic performance, with the regression model explaining about 20.6% of the variance in students' academic outcomes. Notably, the responsiveness and assurance (safety) dimensions emerged as the most influential predictors of academic performance, underscoring the importance of reliable, safe, and student-focused transportation systems in supporting educational success.

Overall, the results highlight an urgent need for comprehensive improvements in university transportation services at Kasdi Merbah University. Enhancing the tangible aspects of the service, ensuring operational reliability, strengthening communication and responsiveness, and prioritizing student safety are essential steps. Addressing these shortcomings will not only improve student satisfaction and well-being but also contribute positively to their academic achievement. Future

research could expand on these findings by exploring the impact of specific service improvements or by comparing results across different institutions and transportation contexts.

- Appendices:

Table (1): The direction of opinion for the five-point Likert scale used in the study.

MEAN value	Degree of agreement
1 – 1.80	Strongly disagree
1.81 – 2.40	Disagree
2.41 – 3.40	Neutral
3.41 – 4.20	Agree
4.21 – 5	Strongly agree

Source: prepared by the researcher.

Table (2): Cronbach's Alpha Reliability Coefficient

Number of items	Cronbach's Alpha Reliability Coefficient
39	0.926

Source: created by the researched with SPSS.

Table (3): Service Quality Assessment in Terms of Tangibility Dimension

N	Statements	Mean	Standard deviation	evaluation
1	University transportation provides sufficient seating for students	1.76	0.94	Strongly disagree
2	University transportation provides comfortable seating for students	2.25	1.14	disagree
3	University transportation stops are in convenient locations	2.75	1.25	Neutral
4	University transportation is clean from the inside	2.80	1.18	Neutral
5	University transportation provides ventilation and appropriate air conditioning in all seasons	1.74	0.94	Strongly disagree
6	There are handrails or support means for standing passengers inside the buses	2.76	1.23	Neutral
7	Lighting inside the buses is adequate and suitable for night use	2.61	1.11	Neutral
-	Overall Mean	2.38	0.71	Disagree

Source: created by the researched with SPSS.

Table (4): Service Quality Assessment in Terms of Reliability Dimension

N	Statements	Mean	Standard deviation	evaluation
1	Bus departure times are accurate	2.27	1.15	disagree
2	The time interval between the arrival of one bus and another is acceptable	2.37	1.16	disagree
3	University transportation service operates regularly without frequent interruptions	2.38	1.13	disagree
4	Buses adhere to the specified capacity to avoid overcrowding	1.85	1.03	disagree
5	The transportation schedule is respected even in exceptional circumstances such as bad weather	2.4	1.16	disagree
6	I can rely on university transportation to get to and from the university	2.77	1.31	Neutral
-	Overall Mean	2.34	0.84	Disagree

Source: created by the researched with SPSS.

Table (5): Service Quality Assessment in Terms of responsiveness Dimension

N	Statements	Mean	Standard deviation	evaluation
1	The university transportation bus network covers all university structures (study places and university residences)	2.97	1.18	Neutral
2	The university transportation bus network covers all neighborhoods of Ouargla city	2.53	1.09	Disagree
3	Buses are sufficiently available in the morning before classes begin	2.65	1.21	Neutral
4	Buses are sufficiently available in the evening after classes end	2.26	1.15	Disagree
5	Buses are sufficiently available on Saturdays	1.94	1.06	Disagree
6	Student complaints and suggestions are handled quickly and effectively	1.97	1	Disagree
7	Bus drivers are cooperative and willing to help students	2.53	1.13	Disagree
8	When a breakdown or delay occurs, alternative solutions are quickly provided	2.24	1.06	Disagree
9	University transportation management responds quickly and effectively when a problem occurs or a complaint is submitted	2.20	1.05	Disagree
-	Overall Mean	2.36	0.70	Disagree

Source: created by the researched with SPSS.

Table (6): Service Quality Assessment in Terms of Assurance Dimension

N	Statements	Mean	Standard deviation	evaluation
1	Drivers adhere to traffic laws and safety procedures while driving	2.81	1.21	Neutral
2	Safety equipment such as surveillance cameras, fire extinguishers, emergency exits, and seat belts are available on buses	1.92	1.04	Disagree
3	Transportation routes appear safe and do not pass through dangerous or unpaved roads	2.82	1.2	Neutral
4	There is clear supervision that prevents non-university individuals from using the transportation	1.89	1.09	Disagree
5	Waiting areas and university transportation stations are safe and free from harassment	2.34	1.23	Disagree
6	First aid supplies are available inside buses for use when necessary	2.25	1.13	Disagree
7	University transportation buses are safely available until late hours to meet students' needs	2.01	1.14	Disagree
8	I feel safe when using university transportation at all times and in all situations	2.58	1.23	Disagree
-	Overall Mean	2.33	0.78	Disagree

Source: created by the researched with SPSS.

Table (7): Service Quality Assessment in Terms of Credibility Dimension.

N	Statements	Mean	Standard deviation	evaluation
1	The number of buses is sufficient to meet students' needs	2.28	1.13	disagree
2	Students are immediately informed of any delay or change in bus schedules	1.91	1.08	disagree
3	The designated bus routes are adhered to	2.89	1.16	Neutral
4	The university transportation service uses modern buses	2.13	1.08	disagree
-	Overall Mean	2.30	0.74	Disagree

Source: created by the researched with SPSS

Table (8): Correlation Between Quality Dimensions and Academic Performance

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.453 ^a	.205	.190	.82030

a. Predictors: (Constant), Responsiveness, Assurance, Reliability, Tangibility and credibility.
 b. Dependent Variable: academic performance

Source: created by the researched with SPSS

Table (9): ANOVA Table for the Effect of Service Quality Dimensions on Academic Performance

ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	47.501	5	9.500	14.118	.000 ^b
	Residual	184.371	274	.673		
	Total	231.872	279			

a. Dependent Variable: Academic performance
 b. Predictors: (Constant), Responsiveness, Assurance, Reliability, Tangibility and credibility.

Source: created by the researched with SPSS

Table (10): Variance of the regression line for the main hypothesis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.646	.199		8.252	.000
	Tangibility	.095	.089	.075	1.063	.289
	Credibility	-.157	.088	-.129	-1.785	.075
	Responsiveness	.256	.104	.199	2.475	.014
	Reliability	-.066	.083	-.061	-.790	.430
	Assurance	.419	.092	.362	4.543	.000

a. Dependent Variable: Academic performance

Source: created by the researched with SPSS

Referrals and references

Bakti, I. G. M. Y., & Sumaedi, S. (2019). Assessing service quality of public tram transport in Zagreb City. *Zbornik Ekonomskog fakulteta u Zagrebu*, 17(1), 21–34.

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

de Oña, J., de Oña, R., Eboli, L., & Mazzulla, G. (2014). Perceived service quality in public transport: A structural equation modeling approach. *Journal of Rail Transport Planning & Management*, 4(3), 53–66.

Kamil, M. M., Azman, A. S., & Hanan, S. A. (2019). A review of SERVQUAL model in relation to transportation services. *STML portal*.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41–50. <https://doi.org/10.1177/002224298504900403>

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.

Pefok, K. C., & Mikhailov, A. (2010). The effectiveness of SERVQUAL in measuring service quality and the impact of technology on customer satisfaction [Master's thesis, Karlstad University]. DiVA Portal. <https://www.diva-portal.org/smash/get/diva2:356861/FULLTEXT02.pdf>

Sahraei, M., Mesbah, M., & Habibian, M. (2023). Evaluating public transit service quality through before-after customer satisfaction surveys. *Archives of Transport*, 65(1), 53–66.

Terefe, Y. (2018). Assessment of customer satisfaction in public transport: The case of Addis Ababa Light Rail Transit (AA-LRT), Ethiopia. *Journal of Public Transportation*, 21(1), 1–16. <https://doi.org/10.5038/2375-0901.21.1.1>

Valenzo-Jiménez, M. A., Martínez-Ruiz, A., & Martínez-Carballo, L. (2019). Application of the SERVQUAL model to evaluate the quality in the transportation service in Morelia, Mexico. *DYNA*, 86(211), 2346–2183.

Victoria Transport Policy Institute. (2023). *Evaluating public transit benefits and costs: Best practices guidebook*. <https://www.vtpi.org/tranben.pdf>

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1988). Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52(2), 35–48. <https://doi.org/10.1177/002224298805200203>