



COMPARATIVE ANALYSIS ON SERVICE QUALITY BETWEEN GHANA PRIVATE ROAD TRANSPORT UNION AND METRO MASS TRANSIT LIMITED; PERSPECTIVE OF STUDENTS OF TAKORADI TECHNICAL UNIVERSITY

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Abstract: Public transportation is a lifeline for many students in Ghana, yet service quality is a major concern. This study carried out a comparative analysis of the service quality of the Ghana Private Road Transport Union (GPRTU) and Metro Mass Transit Limited (MMTL) from the perspective of students of Takoradi Technical University (TTU) in Western region, Ghana. Data were collected from 300 students using a structured questionnaire, and the results were examined through the SERVQUAL framework, which considers reliability, responsiveness, assurance, empathy, and tangibles. The findings indicate that reliability and responsiveness were weak. MMTL was criticized for inconsistent schedules and overcrowding. Assurance emerged as the strongest area for both services. Students generally expressed confidence in safety measures, though GPRTU staff were rated slightly higher for politeness and professionalism. Empathy was less visible in both providers, as a little over half of the students were willing to recommend the services to others. Many respondents also felt that drivers and conductors showed little care for passengers' concerns. Tangibles recorded the lowest ratings, with students highlighting the need for newer and better-maintained vehicles. In conclusion, the SERVQUAL model provides a measure of reasonable trust in both GPRTU and MMTL. The study recommends improvements in time management, vehicle maintenance, customer service training, and the adoption of modern systems like digital ticketing and real-time tracking to enhance satisfaction and build greater loyalty among student passengers.

Keywords: SERVQUAL; reliability; assurance; tangibles; responsiveness; empathy.

1. INTRODUCTION

Public transportation is an important component in the daily lives of Ghanaians, for students and workers who rely heavily on affordable and accessible means to travel, public transport is essential. The seamless operation of academic and operational activities is ensured by dependable and high-quality transportation services. Ghana's public transportation system is dominated by the Ghana Private Road Transport Union (GPRTU) and Metro Mass Transit Limited (MMTL). For the purpose of improving services and making wise decisions, it is essential to comprehend how their offerings stack up, particularly in relation to TTU. In Ghana, the transport sector is characterized by a mix of formal and informal operators. Among the formal operators, Metro Mass Transit Limited (MMTL), a public transportation company in Ghana, providing reliable and affordable means of transportation passengers within villages, towns and cities. The company's mission is to provide an efficient urban mass transport system in Ghana through the use of buses. MMTL also plays a key role in providing scheduled, long-distance bus services across various regions, including the Western Region where Takoradi Technical University (TTU) is located. On the other hand, the Ghana Private Road Transport Union (GPRTU), which comprises private commercial vehicle operators like "trotro" drivers, dominates urban and peri-urban transport with flexible routes and high frequency of service. The "trotro" system is particularly popular for short to medium-distance travel due to its lower fares and extensive coverage[1]. Takoradi, as a regional capital and a commercial hub in the Western Region, experiences significant daily transportation traffic, including a large population of students from TTU.

The university community depends heavily on both MMTL and GPRTU services to access academic facilities, residences, and other amenities. Reliable and quality public transport is therefore significant not only for convenience but also for ensuring students' academic success and timely attendance[2]. Despite the importance of these services, several challenges

undermine the quality of transport in Takoradi. Reports from students have highlighted issues such as overcrowding, poor vehicle maintenance, inconsistent schedules, and safety concerns, especially with GPRTU services. Meanwhile, MMTL buses, though generally regarded as safer and more comfortable, are criticized for limited route coverage and infrequent trips, which sometimes compel students to opt for less reliable alternatives[3]. Service quality in public transport is a multidimensional concept encompassing reliability, safety, comfort, frequency, and customer service[4]. Given the contrasting operational models of MMTL and GPRTU, travelers' perceptions of service quality are likely to differ. For the TTU community, these differences can significantly affect daily travelling experiences, impacting academic engagement and overall well-being. This study seeks to conduct a comparative analysis of service quality between Metro Mass Transit Limited (MMTL) and the Ghana Private Road Transport Union (GPRTU) as experienced by students at Takoradi Technical University. Understanding these dynamics will provide valuable insights to transport authorities, university management, and policymakers to enhance public transportation services in Takoradi. Students of Takoradi Technical University frequently raise concerns about the quality of public transport services they use. While Metro Mass Transit Limited is often viewed as safer and more comfortable, its limited routes and schedules sometimes restrict accessibility. On the other hand, GPRTU trotro services offer greater route coverage and frequency but face criticism over vehicle conditions and driver conduct[1]. However, there is limited research that specifically compares these two transport options in the context of Takoradi, and how the differences affect the daily transportation of TTU stakeholders. This study aims to address this gap by conducting a comparative analysis of service quality between MMT and GPRTU as experienced by TTU students. In order to arrive at the primary aim of this work which is to *compare the service quality between Metro Mass Transit Limited and Ghana Private Road Transport Union within the context of Takoradi Technical University*, the following specific objectives were considered.

- i. To evaluate the service quality of Metro Mass Transit Limited among TTU students.
- ii. To investigate the service quality of Ghana Private Road Transport Union among the same group.
- iii. To identify the major differences in service quality attributes between these two transport providers in the Takoradi Metropole.

The study focuses on the comparative analysis of service quality between the Ghana Private Road Transport Union and Metro Mass Transit Limited as experienced by students of Takoradi Technical University. The research is limited to the students who regularly rely on public transport for their daily transportation to and from the university campus. The study captures conditions during a specific period, so its findings might not represent variations that occur during different academic semesters, public holidays, or changes in transport operations. It thoroughly examines key service quality factors such as reliability, safety, comfort, frequency and customer service, providing a detailed understanding of how each provider meets or falls short of user expectations. The scope specifically includes first-hand accounts of travel experiences, perceptions of punctuality and vehicle maintenance, and the general atmosphere on board, including how drivers and conductors interact with passengers. The study does not cover other modes of transport such as private cars, or ride-hailing services, nor does it extend to broader urban transportation issues outside the TTU context. By narrowing its focus in this way, the research aims to deliver actionable insights that are directly relevant to the needs of TTU's students, offering guidance for targeted improvements while highlighting factors that contribute to their satisfaction or dissatisfaction.

Despite its comprehensive approach, this study faces several potential limitations. Sampling constraints may arise, as not all categories of commuters such as part-time students, infrequent users, or those from remote locations may be equally represented in the survey, which could introduce bias, this study relies on self-reported data collected through survey, which may be subject to response bias, where personal attitudes and recent experiences influence feedback. Although efforts are made to include participants beyond TTU, the geographic coverage may still not fully reflect public transport experiences across the entire Western Region due to time and resource constraints. Additionally, unforeseen external factors such as weather, roadworks, fuel shortages, or sudden fare adjustments may impact service conditions during the study and affect results.

The significance of this research is to shed light on the transportation difficulties experienced by the TTU community and to guide university leaders and transport providers on where improvements are most needed. By highlighting these issues, the research can help those in charge whether policymakers or service operators make better decisions that directly impact the quality of life and academic success of students and even staff. Beyond its immediate benefits for TTU, the study also adds to the wider understanding of public transport quality in Ghana's regional settings. Through carefully documenting the daily experiences and expectations of students, the research offers valuable information about what matters most like timely services, reasonable fares, safety, and courteous treatment. These findings can help shape new strategies and policies to tackle familiar problems, such as packed vehicles, unreliable schedules, and vehicle breakdowns. Ultimately, the recommendations provided could serve as a foundation for ongoing collaboration between the university and transport operators, paving the way for a more reliable and student-friendly transportation environment. In the bigger picture, the success of such efforts at TTU can inspire similar improvements at other universities around Ghana, supporting access to education and the overall well-being of academic communities.

2. LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive review of the relevant literature on service quality in public transportation, focusing specifically on Metro Mass Transit Limited (MMT) and the Ghana Private Road Transport Union (GPRTU). The chapter explores the fundamental concepts and principles of service quality, discusses key objectives relevant to this study, introduces mathematical models frequently used in service quality analysis, and critically reviews previous studies related to transport service quality from users' perspectives. The goal is to establish a theoretical foundation that supports the comparative analysis of service quality as experienced by students and staff of Takoradi Technical University (TTU).

2.2 Concept and Principles

Service quality remains the main factor in determining customer satisfaction and loyalty, particularly in the public transportation sector where service delivery directly impacts daily customers. Contemporary definition views service quality as the overall assessment of a service by customers based on their expectations and actual experiences[5]. This assessment is multidimensional, involving both tangible and intangible service elements. The SERVQUAL model, originally developed by Parasuraman et al. (1988), continues to serve as a foundational framework, but recent research has adapted and expanded the dimensions to suit modern public transit contexts. For example, contemporary studies emphasize accessibility, comfort, and safety as increasingly important dimensions alongside the traditional SERVQUAL factors[6]. The dimensions in the SERVQUAL model used in this work are defined as follows:

- Reliability: Refers to the consistency and dependability of the transport service, such as adherence to schedules and correct handling of passenger requests[7].
- Assurance: Involves the competence and courtesy of drivers and support staff, and the ability to instill confidence and trust in passengers[8].
- Tangibles: This includes the physical appearance of buses, cleanliness, seating comfort, and modernity of equipment, which significantly influence user perceptions[4].
- Responsiveness: The willingness of transport staff to help passengers promptly, including timely communication about delays and handling complaints effectively[9].
- Empathy: The degree of personalized attention and understanding offered to passengers, especially to vulnerable groups like students and persons with disabilities[10].

Fundamentally, the principles of service quality in public transport are underpinned by the expectancy-disconfirmation theory, which posits that satisfaction results from the comparison between expected and perceived service[11]. When performance meets or exceeds expectations, satisfaction and perceived quality increase; when it falls short, dissatisfaction ensues.

Additionally, safety and security have emerged as standalone principles due to rising concerns over passenger well-being. Safety pertains to the prevention of accidents and safe driving practices, while security involves protection against theft, harassment, or violence during transit[12]. Modern service quality frameworks also incorporate customer participation and technology integration as principles influencing the overall service experience. For instance, digital ticketing systems, real-time tracking apps, and customer feedback platforms contribute positively to perceptions of quality[13].

2.3 Empirical Studies on Service Quality in Ghanaian Public Transport

Alfred and Owusu-Antwi conducted a study on customer perceptions of service quality in Ghana's urban bus services, including Metro Mass Transit. Their findings revealed that reliability and safety were the most critical determinants of passenger satisfaction. While MMTL was praised for its affordability and safety standards, challenges such as inconsistent schedules and inadequate responsiveness were noted[7]. Similarly, Mensah and Boateng compared private and government-operated transport services, and their findings was that Ghana Private Road Transport Union (GPRTU) operators offer greater flexibility and frequency, which appeals to students and staff with varying timetables. However, shortfalls in vehicle maintenance and customer care negatively impacted perceptions of service quality[9].

Boateng and Amponsah applied SERVQUAL alongside technology acceptance models to evaluate the impact of digital innovations on service perceptions. Their study showed that the integration of mobile ticketing and real-time tracking enhanced responsiveness and reliability scores for government-run services but was less prevalent among private operators, creating a quality gap[13]. Additionally, Darko et al. investigated service quality from the perspective of university customers in Ghana, emphasizing the role of empathy and personalized service. They argued that private operators often lack structured customer care mechanisms, which affects the overall user experience[10].

2.4 Critiques and Research Gaps

A major critique across these studies is the predominant reliance on quantitative survey methods, which, while useful for generalizing findings, may overlook nuanced transit users' experiences and cultural factors influencing service expectations[12]. Moreover, many studies treat government and private services as homogenous entities without acknowledging intra-sector variations or specific user group needs, such as those of university students. There is also limited longitudinal research examining how service quality perceptions evolve over time with changes in policy, infrastructure, or technology. Given the dynamic nature of transportation patterns, especially in university settings and this is a significant gap. Furthermore, while safety and security have been highlighted as increasingly important, few studies have methodically incorporated these as distinct service quality dimensions[8].

3. RESEARCH METHOD

3.1 Introduction

This section provides a detailed description of how the research was conducted from selecting participants to analyzing the data in order to compare the service quality of the Ghana Private Road Transport Union (GPRTU) and Metro Mass Transit Limited (MMTL) through the ideas of students at Takoradi Technical University (TTU). It covers the research approach, the people involved, how the data was gathered, and how it was analyzed. The aim of this section is to provide a clear understanding of the methods used, ensuring that the findings presented later are credible and reliable. By carefully designing the research and following ethical guidelines, the study aimed to produce trustworthy insights into how TTU students perceive the service quality of GPRTU and MMT.

3.2 Study Area

This study focuses on the transportation services provided by GPRTU and MMTL as experienced by students at Takoradi Technical University (TTU). Takoradi, a key city in the Western Region of Ghana, is an important center for education, commerce, and transportation. Many students at TTU depend on public transportation for their daily commute to and from

the university. The choice of TTU students is significant because their regular use of these services offers a clear understanding of how well GPRTU and MMTL meet passengers' needs. These two organizations are the main providers of public transport in Takoradi, each with different service styles and operations. By focusing on the experiences of TTU students, this study aims to assess the reliability, safety, affordability, comfort, and overall satisfaction with the transportation services provided.

3.3 Research Design

To explore the differences in service quality between GPRTU and MMTL, this study used both qualitative and quantitative research design. A descriptive survey method was employed, which is well-suited for gathering measurable information about people's opinions and experiences. By using this approach, the study could capture the views of a large number of students and present the results in a way that highlights patterns and differences between the two transport services.

3.4 Mathematical Representation

Quality Gap Score

Quantitative analysis of service quality often employs mathematical models to measure gaps between customer expectations and perceptions. The SERVQUAL score for each dimension is typically calculated as:

$$Q = P - E \quad (1)$$

Where Q, P and E are quality gap score, performance and expected perceived score respectively. Positive values of quality gaps score(Q) indicate service exceeding expectations whereas negative values show dissatisfaction[4].

Another common model is the SERVPERF, which focuses solely on performance perceptions without expectation measures[14]. Additionally, multi-criteria decision-making (MCDM) methods, such as the Analytic Hierarchy Process (AHP), have been applied to weigh service quality attributes based on user preferences (Saaty, 1980) but SERVQUAL model was applied in this research work[15]. Again, statistical tools such as mean scores, standard deviations, and inferential tests (e.g., t-tests, ANOVA) are used to compare service quality ratings between transport providers and user groups.

Population and Sampling

The study focused on students currently enrolled at TTU who frequently use either GPRTU or MMTL for their daily transportation. Since the university has a large and diverse student body, it was important to select a sample that fairly represent different academic years. To achieve this, stratified random sampling was used. For a total student population N of approximately 16,700[16] and a margin of error say $\pm 5.72\%$, the sample size, n was estimated to be 300 students (Use equation 2).

$$n = \frac{N}{[1 + N(e)^2]} \quad (2)$$

Where N is total number of students population, e is the margin of error, and n is the sample size.

3.5 Data Collection Instruments and Procedure

The main tool for collecting data was a structured questionnaire, designed around the widely accepted SERVQUAL model, which assesses service quality across five key dimensions: tangibility (physical aspects), reliability (ability to perform promised service), responsiveness (willingness to help), assurance (knowledge and courtesy), and empathy (caring, individualized attention)[4]. Questions were carefully crafted to relate these dimensions specifically to the transportation experiences of TTU students with GPRTU and MMTL. Students were asked to rate various statements on a 5-point Likert scale, from "extremely satisfied too extremely dissatisfied and very poor to excellent". This format made it easy for respondents to express their level of satisfaction. The data collection process was carefully planned and executed over a period of four weeks, spanning from early March to the end of April 2025. The aim was to gather reliable and representative information about TTU students' perceptions of the service quality of both GPRTU and MMTL transportation services. To maximize the response rate and reach a diverse group of students, questionnaire distribution was done using electronic (online) surveys. The questionnaire was made available online via Google Forms. The online link was shared through TTU's official student groups on platforms such as WhatsApp and google classroom. This method allowed all students including those who might not have been reached on campus, such as those attending evening classes or off-campus students, to participate at their own convenience. Reminders were sent twice during the data collection period to encourage participation and increase the response rate.

3.6 Data Handling, Preparation and Analysis

Responses from the online survey were automatically saved in a secure cloud database, allowing for easy access and export to statistical software for analysis. Electronic data ensured a robust dataset that reflected a wide range of student experiences. After completing the data collection phase, the gathered information was systematically prepared and analyzed to extract meaningful insights regarding the service quality of GPRTU and MMTL as perceived by TTU students.

The first step involved organizing the collected data to ensure accuracy and readiness for analysis. Data from the online survey totally summarized by google form with graph and response from student. Once all responses were compiled, the dataset was screened for completeness and consistency. Also, the responses were summarized by google form by giving the percentages, graphs and numerical statistics in the sections below. For example, Likert scale responses ranging from "very poor and extremely unsatisfied" (rated as 1) to "excellent and extremely satisfied" (rated as 5).

3.6.1 Descriptive Statistics

The initial phase of analysis involved descriptive statistics, which summarize the basic features of the data and provide a snapshot of students' perceptions. Measures such as percentages were calculated for each of the SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance, and empathy) as they relate to both GPRTU and MMTL services. These

descriptive statistics helped to understand overall trends, such as whether students generally perceive one operator as providing better service quality than the other, and which specific service dimensions are rated higher or lower.

3.6.2 Inferential Statistics

In order to determine whether the differences observed in the descriptive statistics were statistically significant, inferential analysis was conducted using independent samples t-tests. This test compares the mean scores of two independent groups in this case, the perceptions of service quality for GPRTU versus MMTL across each SERVQUAL dimension. The null hypothesis for each test assumed there was no difference in perceived service quality between the two operators. A significance level (alpha) of 0.05 was set, meaning that if the p-value obtained from the t-test was less than 0.05, the difference would be considered statistically significant, supporting the alternative hypothesis of a difference in service quality perceptions.

3.6.3 Reliability and Validity Testing

To assess the internal consistency of the questionnaire items, Cronbach's alpha coefficients were calculated for each of the SERVQUAL dimensions. A Cronbach's alpha value above 0.7 was considered acceptable, indicating that the items within each dimension reliably measured the same underlying concept[17].

4. RESULTS AND DISCUSSION

4.1 Introduction

This section presents the analysis and interpretation of the data collected to compare the service quality of Metro Mass Transit Limited (MMTL) and Ghana Private Road Transport Union (GPRTU) services from the perspective of Takoradi Technical University (TTU) students. The objective is to identify key differences and similarities in perceived service quality dimensions, such as reliability, assurance, tangibility, responsiveness, and empathy.

4.2 Interpretation and Presentation of Results

The results from both descriptive and inferential statistics were carefully interpreted to answer the main research questions. Tables and graphs were used to visually present the findings, making it easier to compare service quality dimensions between GPRTU and MMTL. Special attention was paid to dimensions where significant differences were found, as these highlight areas where one operator may excel or fall short relative to the other. The data collected from 300 TTU students provided valuable insights into their perceptions of service quality for Metro Mass Transit (MMTL) and Ghana Private Road Transport Union (GPRTU). The analysis focused on five SERVQUAL dimensions: reliability, responsiveness, assurance, empathy, and tangibility. Below is a detailed results and discussion of each dimension.

4.3 Student satisfaction with GPRTU and MMTL Service

Figures 1 and 2 and Table 1 show presentation of how students are satisfied with the services of GPRTU and MMTL. Also, Figures 1 and 2 measures the reliability, assurance and tangibility of the services provided by MMTL and GPRTU by posing the question how satisfy are you with the services of GPRTU and MMTL. Even though many students use both services regularly, this does not necessarily mean they are satisfied. Most use them because they are available and affordable, not because they are impressed.

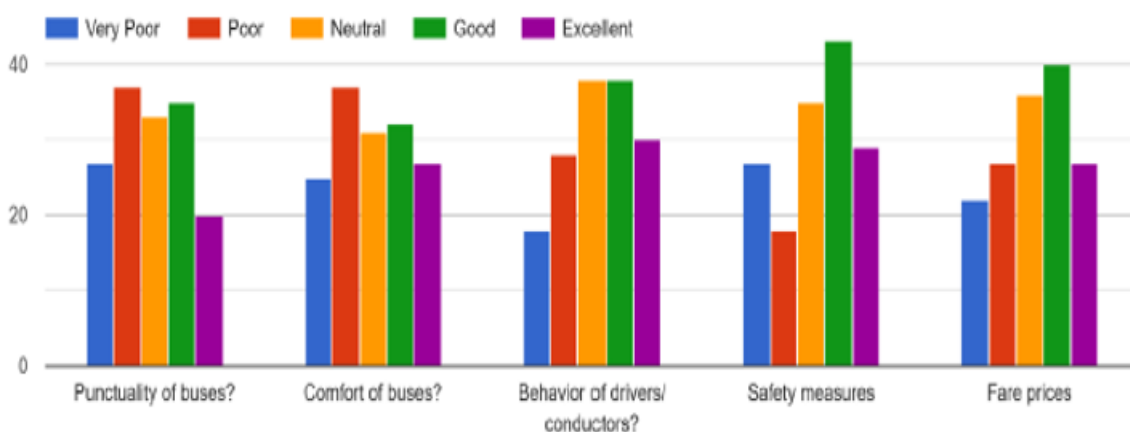


Figure 1: Graph showing level of satisfaction of TTU Students for GPRTU Service

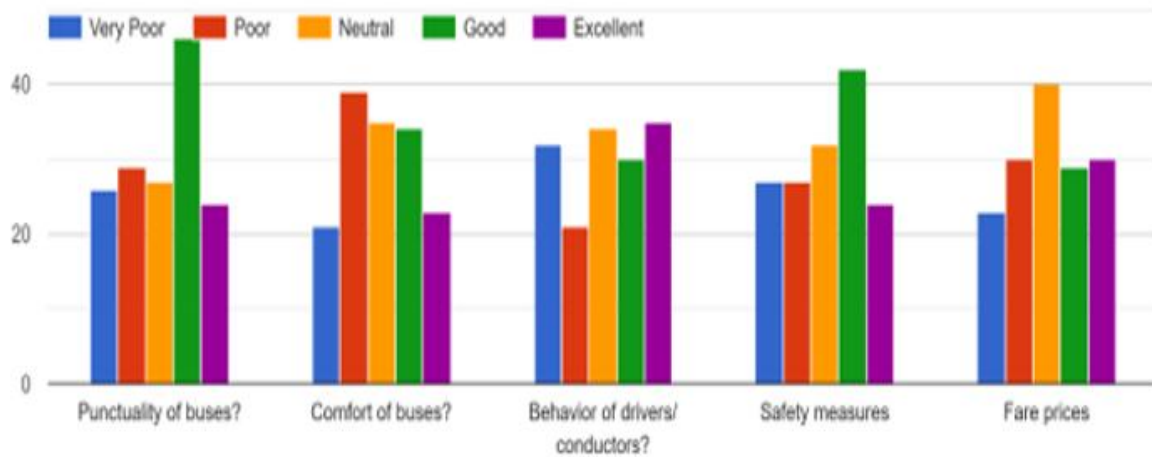


Figure 2: Graph showing Level of satisfaction of TTU student for MMTL Service

Table 1: Overall comparative analysis of service quality between GPRTU and MMT

Aspect	GPRTU (Graph 2)	MMTL (Graph 1)	Comparative Note
Punctuality	Strong “Good” ratings	Many “Poor” & “Neutral”; few “Excellent”	GPRTU seen as more punctual
Comfort	Same pattern: “Poor/Neutral” high	Mostly “Poor/Neutral”	Both weak on comfort
Drivers’ behavior	More balance across Neutral–Good–Excellent	Mix of “Neutral/Good,” but still many “Poor”	GPRTU slightly better-rated staff behavior
Safety	“Good” is also the strongest bar	Highest “Good/Excellent” of all categories	Both strongest on safety, but MMTL edges slightly higher in “Excellent”
Fare prices	Neutral dominates, with some Good	Mixed: Neutral & Good, some Poor	Both mixed, but GPRTU fares appear less criticized

4.3.1 Reliability

Reliability refers to the ability of the transport service being counted on to perform dependably and accurately, their promise. Also, reliability concept is measured by the parameters below.

- **Punctuality of buses:** MMTL was rated quite low, with many students describing it as poor or just average. GPRTU fared a little better, with more students saying it was good, although very few rated it excellent.
- **Overall service quality:** Both services averaged around 3 out of 5, which means students generally saw them as “fair” rather than “very good.”
- **Meeting expectations:** Both MMTL and GPRTU scored below 3 on a 5-point scale, showing a clear gap between what students expected and what they experienced.

In summary, analysis shows that GPRTU was perceived as significantly more reliable than MMTL. Both services struggle with reliability, thus they all underperformed but with GPRTU slightly ahead of MMTL in punctuality.

4.3.2 Assurance

Assurance refers to safety and confidence in staff professionalism.

- **Driver and conductor’s behavior:** From Figures 1 and 2 MMTL received mixed reviews, with some students being neutral but many respondents rate them poorly. GPRTU scored better here, with more students rating their staff as good or excellent.
- **Safety measures:** Both providers did fairly well, with safety seen as the strongest area. MMTL had slightly more “excellent” ratings, while GPRTU had more “good” responses.

In Summary, safety gives both services some credibility, and students generally feel assured in this area. Strongest dimension overall. Safety is valued by students, and GPRTU edges ahead in staff courtesy.

4.3.3 Tangibility

Tangibility assesses the physical facilities, equipment, and appearance of personnel. Both transport modes received moderate ratings, but certain differences emerged. From the Figures 1 and 2, tangibility was measured using parameters such as comfort, fare pricing and physical appearance

- **Comfort:** Both providers scored low here. Most students rated the comfort of buses as poor or neutral, mentioning things like cramped seats, poor ventilation, and lack of cleanliness.
- **Fare prices:** Views were mixed. Some students thought the prices were fair, while others felt they were too high for the service quality offered.
- **Physical appearance:** Many students called for newer buses, proper maintenance, and good interior decor.

In summary, tangible is a major weakness for both providers. Tangible is the weakest area overall, with both providers performing poorly on comfort, bus condition, and cleanliness.

4.3.4 Responsiveness

Responsiveness measures the willingness and ability of service providers to help customers and promptly respond to their needs. Responsiveness deals with how quickly and willingly staff respond to students' needs. Figures 3 and 4 shows pie charts presentation of responsiveness for both GPRTU and MMTL by students answering the question "have you experienced any issues (such as delays and overcrowding) with GPRTU and MMTL"?

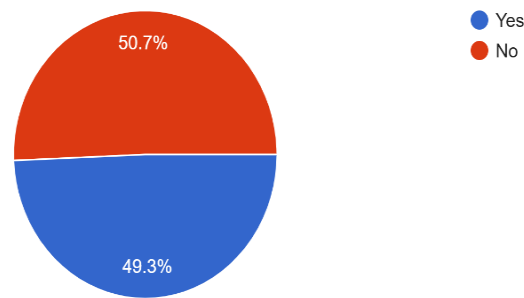


Figure 3: Pie Chart representing the Responsiveness of GPRTU

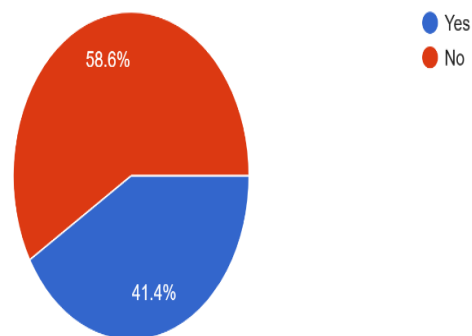


Figure 4: Pie chart representing the Responsiveness of MMTL

Although, more than half of the respondents (58.6%) said they had not experienced any issues with MMTL, compared to just a little over half of the respondents (50.7%) saying they have had no issues with GPRTU, significant number of complaints often mentioned delays, overcrowding, and slow response to problems. In summary, students feel that both GPRTU and MMTL is a little responsive enough, though GPRTU attracts sharper criticism.

4.3.5 Empathy

Empathy is genuine care about passenger's needs, feelings and experiences. It involves recognizing the challenges passengers face such as, discomfort and helpfulness. Empathetic transport service ensures clear communication, respectful treatment make passenger feel valued, safe and supported throughout the journey. Figures 5 and 6 measure the empathy by students answering the question, would you recommend services of GPRTU or MMTL to others?

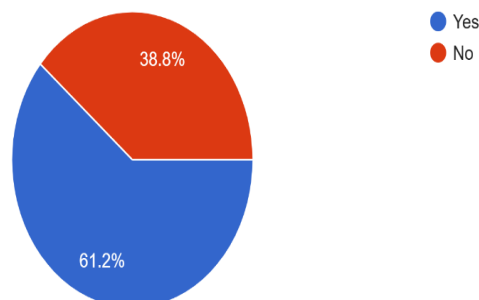


Figure 5: Pie Chart representing the Empathy of GPRTU

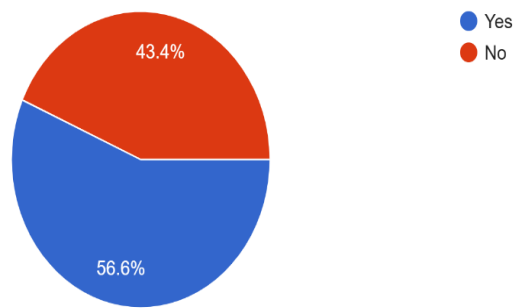


Figure 6: Pie Chart representing the Empathy of MMTL

It was observed from the charts that, less than half of the students said they will not recommend either GPRTU or MMTL to others (thus 43.4% for MMTL and 38.8% for GPRTU). This shows average loyalty. Students also pointed out in open responses that they wanted staff to be more respectful, treat luggage properly, and consider the pressure students face. In summary, this indicates a general dissatisfaction or lack of endorsement among students for both transport services. Students feel that their concerns are not prioritized.

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The goal of this research was to compare the service quality of the Ghana Private Road Transport Union (GPRTU) and Metro Mass Transit Limited (MMTL) focusing on the perspectives of students from Takoradi Technical University (TTU). The findings revealed that the two transport companies differ significantly in key aspects of service quality. Metro Mass Transit Limited was perceived as budget-friendly though was a mixture but rated high in neutral, making it to be the preferred option for students on a less tight budget. Many students noted that the government-subsidized fares of MMTL helped reduce their travel costs. Furthermore, there was a general consensus that Metro Mass buses were safer, with fewer incidents of reckless driving and stricter enforcement of speed limits leading to road crashes compared to GPRTU vehicles.

While a sense of safety was important, they were often overshadowed by ongoing complaints about inefficiency. Many students voiced their frustrations over irregular schedules, long waiting time at the terminals, and overcrowding during peak hours. These problems do not only create inconveniences for students but also affect their ability to make it to academic commitments such as lectures, exams and others on time. On the flip side, GPRTU offered a more flexible and readily available service. "Trotros" and minibuses were nearly always within reach, especially on short and medium routes in the Takoradi area. Students appreciated the reliability, which made their travel experience much more convenient. Additionally, GPRTU drivers were viewed as more attentive to passenger needs, often adjusting drop-off points or quickly addressing vehicle issues like breakdowns while on the road. While the GPRTU service does offer some advantages, students have consistently pointed out its major flaws. For starters, there's no fare regulation, which leads to unpredictable pricing; fares can change based on things like fuel prices, the time of the day, or how many passengers present, making it hard to know what to expect. Safety is another big issue; there have been reports of reckless driving, poor vehicle maintenance and overloading, all of which shake students' trust in the service. On top of that, comfort is lacking, with many vehicles suffering from bad ventilation, uncomfortable seating, and general neglect, which really takes away from the overall quality of the transport experience.

In conclusion, the comparative analysis showed that neither Metro Mass Transit Limited nor GPRTU fully met the service expectations of students. MMTL had the edge when it came to reliability and organized operations, but it struggled with a bit affordability and responsiveness. On the other hand, GPRTU shone in availability and adaptability, yet it fell short in terms of safety, comfort, and fair pricing. The findings indicate that both providers have their own strengths and weaknesses that complement each other.

5.2 Recommendations

5.2.1 Recommendations for Ghana Private Road Transport Union (GPRTU)

GPRTU offered a more flexible and readily available service making them more reliable yet fall short on other service quality. Below are suggestions to improve their service quality.

- **Standardize Fare Charges:** The Union ought to implement consistent fare structures for all routes and consider offering student discounts, particularly during the school year [18].
- **Improve Safety Standards:** GPRTU ought to team up with the Driver and Vehicle Licensing Authority (DVLA) to make sure that every vehicle gets its required maintenance checks. Additionally, drivers should participate in regular road safety training at least twice a year to continually update drivers on road accidents and safety driving.
- **Upgrade Comfort Levels:** GPRTU really needs to update its fleet by swapping out the older vehicles for newer models. This way, passengers can enjoy better seating, improved ventilation, and a smoother suspension, making for a much more comfortable travel experience.
- **Strengthen Union Supervision:** Local GPRTU branches need to step up when it comes to supervising driver behavior. They should keep a close eye on overloading and make sure to address passenger complaints quickly and effectively.

5.2.2 Recommendations for Metro Mass Transit Limited (MMTL)

Metro mass transit limited was opted for affordability and reliability but passengers do not only base on these to rate service quality. The following are suggestions for service quality improvement.

- **Improve Punctuality and Frequency:** To enhance punctuality and frequency, management should consider implementing more dependable scheduling systems. By introducing digital bus tracking, passengers would have the ability to see where buses are and when they're set to depart, all in real time. With these passengers are able to track vehicle from their comfort zones.
- **Upgrade Fleet and Maintenance Culture:** The government and MMTL management ought to invest in new buses while keeping the current ones in good shape. Regular inspections are essential to make sure that the buses stay safe, clean, and comfortable for passengers.
- **Enhance Customer Service:** It is essential for both staff and drivers to undergo training focused on customer care and engaging with students in a friendly manner. This approach will help build stronger connections between service providers and passengers, since keeping customers happy is also needed to foster loyalty.
- **Adopt Technology:** Metro Mass could really benefit from rolling out cashless payment options, like electronic cards or mobile money, to help cut down on delays at bus terminals. Plus, implementing digital ticketing would enhance transparency and accountability. This will help customers from long distance book seat to travel without rushing and help employees to work with ease.

5.3 Suggested Areas for Further Research

Although this research achieved its objectives, it was limited in scope and context. The following areas are suggested for future research:

- **Broader Geographical Scope:** Future research could broaden its focus to include other towns in western region allowing for a more comprehensive understanding of the findings
- **Impact of Technology on Service Quality:** There is potential for further studies to investigate how digital advancements like mobile apps, GPS tracking, and cashless payment systems affect customer satisfaction and the efficiency of operations.
- **Longitudinal Studies:** Researchers might look into how service quality evolves over time, especially in response to government interventions or reforms within the public transport sector.
- **Comparisons with International Standards:** Another interesting avenue for research could be to compare the quality of public transport services in Ghana with international best practices to assist make better improvement for customer satisfaction
- **Demographic-Based Analysis:** Future studies could explore how perceptions of service quality vary among different passenger demographics, such as working professionals, traders, and those living in rural areas.

CREDIT AUTHOR CONTRIBUTIONS STATEMENT

Daniel Minnow Maclar: Conceptualization; Formal analysis; Investigation; Methodology; Resources; Software; Validation; Visualization; Writing - original draft; Writing - review & editing; Supervision

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DECLARATION OF COMPETING INTEREST

The Authors declare that, there are no competing interest to declare.

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