



HOP ON HOP OFF: ASSESSMENT OF THE PUBLIC TRANSPORTATION SYSTEM IN BORACAY ISLAND

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Abstract

A tourist destination can only be promoted if the amenities, activities, accommodations, and access are in place. Modern transportation systems are critical for Tourism development, and Boracay Island, a popular tourist destination, is no exception. This study presents the assessment of Hop On, Hop Off (HOHO), a modern vehicle owned by Southwest Group Inc., which operates on the island. It utilized a descriptive research design with a sample size of 361 respondents to evaluate the operational efficiency, accessibility, and user familiarity of the HOHO bus. Through the use of Descriptive Analysis, the researchers delved into the data to uncover meaningful insights from passengers through convenience sampling and measured their feedback using a 4-point Likert scale. The study revealed high user familiarity in areas of comfort, with a mean of 3.76, cleanliness, with a mean of 3.66, and staff helpfulness, with a mean of 3.69. For areas that need improvement, including information dissemination, results show a mean of 3.46, service frequency during peak hours with a mean of 3.44, and digital connectivity with a mean of 3.51. The study will contribute to the service efficiency and development of Hop on Hop in vehicles servicing the island tourism in the country. It is recommended that Southwest Tours improve its efficiency by optimizing routes and adding additional vehicles to reduce waiting times, enhancing accessibility to PWDs, adopting sustainable practices, and improving visible information through signage and announcements. future research could be conducted on areas of environmental footprint, economic contributions to the local community, and comparative performance against other transportation modes. Similar research can be conducted using qualitative or mixed-methods approaches.

Keywords: *Hop on Hop Off, Public Transport, Transportation system, Descriptive analysis, Boracay Island*

Introduction

Over the years, the Philippines has made significant strides in modernizing its transportation system, particularly through the adoption of electric vehicles (EVs). The Department of Science and Technology has developed prototypes of locally manufactured, environmentally sustainable transport alternatives, including hybrid electric trains and automated guideway transit (Estacio et al., 2019). As a result, daily commuters and travelers now have various transportation options to choose from based on their preferences for convenience, comfort, and affordability (BRIA, 2022). To enhance transportation efficiency and convenience, modernized jeepneys were introduced in the country as part of its ongoing progress and embrace of new advancements.

In Boracay Island, Malay, Aklan, the transportation system has changed from traditional to modernized vehicles. The island embraced eco-conscious initiatives, prioritizing sustainable and efficient transportation options. The newly introduced vehicle on the island, called Hop On, Hop Off, is a shuttle bus and an eco-friendly vehicle that provides comfort to its passengers with its air-conditioned automobile and less noise and carbon emissions. This modernization of transportation not only improved the overall visitor experience but also aligned with Boracay's commitment to preserving its natural beauty while minimizing environmental impact (Boracay Informer, 2023).

However, Hop on Hop off faced challenges such as limited routes since it typically followed a set of selected routes to pick up and drop off public commuters. During peak seasons, these buses can become quite crowded, resulting in uncomfortable journeys. The mode of payment also drew attention because passengers had difficulty purchasing tickets or making payments, especially if they did not have access to a card with the company's "No Card, No Ride" policy. Research by Guevara (2023) highlighted that, for the longest time, commuting had been a major issue due to unclear pickup and drop-off points. High inflation rates had caused the prices of goods,

including gasoline, to increase significantly, affecting both public transport workers and commuters. When fuel prices rose, transportation services had to raise their fares to cover costs, forcing commuters to pay increased charges.

In addition, the researchers conducted a study to assess the Hop-on-Hop Off transportation system on Boracay Island by utilizing quantitative methods. The results of the study will offer solid evidence to guide policy recommendations and operational enhancements to the management of HoHo, ultimately contributing to a more efficient and user-friendly transportation system for all public commuters visiting Boracay Island.

Research Question

This study aimed to assess the hop-on-hop-off public transportation system on Boracay Island. Specifically, it sought to answer the following questions:

1. What is the highest average familiarity rate of public commuters with the Hop-on Hop-off service in Boracay Island?
2. What is the lowest average familiarity rate of public commuters for the Hop-on Hop-off service in Boracay Island?
3. What are the opportunities for improvements to the Hop-on Hop-off system to enhance services for public commuters?

Literature Review

Tourism is renowned for its diverse attractions, excellent amenities, comfortable accommodations, and convenient access. Transportation paved the way for tourists to reach any destination in the country. Research by Dileep (2023) suggests that transport encompasses various methods of moving people and goods, including air, water, and land transport. Public transport plays a crucial role in urban tourism development, including Island Tourism environments, addressing issues of population growth and congestion. Urban planners utilize public transport to mitigate traffic and pollution, and cities with well-developed public transport systems attract tourists (Mandeno, 2011; Yang, 2010)—moreover, Elsayed (2021). Therefore, advancements in transportation systems and technology have significantly impacted the urban structure of cities, particularly in the first two decades of the 21st century. Dileep (2023) suggests that modern tourist destinations should promote the use of modern public transportation to cater to the mobility demands of a growing tourist influx while being eco-conscious. In consonance, evaluating commuter familiarity is essential for identifying strengths and areas for improvement in public transportation systems. Various studies have explored commuter satisfaction worldwide, providing insights into the attributes that significantly influence user perceptions.

Additionally, Gehrke (2019) examines the integration of new mobility options within established travel paradigms, relevant to the deployment of the Hop On–Hop Off service in Boracay from a tourism perspective. These analyses underscore the importance of strategic measures, including route optimization and elevated service standards, for seamless integration within the dynamic tourism landscape of Boracay Island. Furthermore, Ismail et al. (2017) describe the Hop On–Hop Off as a type of tourist bus service that follows a circular route with fixed stops through a city, allowing paying passengers unlimited travel for a day (or another period) with the freedom to disembark at any stop and re-board another bus to continue their journey. This system enhances the tourism experience by providing a convenient and flexible mode of transportation for locals and tourists, allowing them to explore the island at their own pace.

Studies of Atombo (2020) pointed out that on high-occupancy public bus transport in Ghana, several key indicators for commuter familiarity include reliability, comfort, safety, and fare levels. Atombo deduced that these factors are critical determinants of user satisfaction, resulting in 42.2% of passengers being satisfied when their expectations of service quality are met, while 30.4% indicated dissatisfaction with the actual service rendered by public bus transport. Additionally, Choi (2021) employs latent class modeling to examine commuters' satisfaction with public transit, highlighting the importance of personalized service and the diverse needs of different commuter groups. The study revealed that personalized service attributes significantly influence overall service satisfaction, underscoring the necessity for transit agencies to consider diverse commuter preferences to enhance satisfaction and improve service quality.

Similarly, Yoo (2020) revealed the factors contributing to commuter satisfaction and dissatisfaction, highlighting the role of service quality, frequency, and accessibility. The study emphasizes that enhancing these factors can significantly improve overall commuter satisfaction. Study of Carreira (2020) affirmed that the travel experience impacts commuter attitudes, emotions, and loyalty toward transportation providers. The study highlights the importance of comfort and convenience, showing that positive travel experiences are strongly correlated with increased commuter loyalty.

Research by Morton (2018) stressed that bus transit in Scotland provides evidence of how customer perceptions of service quality influence satisfaction. Morton identifies punctuality (Mean = 3.79, SD 1.08) and cleanliness (Mean = 3.82, SD 1.00) as key quality indicators. Similarly, Lunke (2019) suggests that operational efficiency and customer service are vital for achieving high satisfaction levels, with a mean satisfaction score of 0.9482 for bus services and a standard deviation of 1.44466.

Furthermore, Ong (2021) in his study on passenger satisfaction with "Jeepney" services in Philippine urban areas emphasizes the role of service quality in sustainable urban transportation. The study reports mean satisfaction scores of 3.8 for service quality, 3.7 for

affordability, and 3.9 for safety.

Zabal (2019) emphasized the need to address public transport shortages on Boracay Island, specifically to support lower-income groups, elderly individuals, schoolchildren, patients, and women on the island. Modern transportation systems play a pivotal role in driving economic growth and progress both globally and locally, despite challenges such as traffic congestion and environmental concerns (Guerrero-Ibañez, 2018).

Similarly, Butler & Hannam (2012) suggest that selecting a mode of tourism mobility involves a multifaceted decision-making process. The choice of mode reflects a visitor's desire for autonomy, adaptability, and exploration. Tourist preferences for transportation modes often diverge from those of residents (Malhado & Rothfuss, 2013).

Additionally, tourists exhibit distinct motivations and behaviors regarding transport compared to residents. According to Hibbert et al. (2013), tourists often opt for modes of transportation that align with their identities. The preference for private modes of transport among independent travelers might stem from the sense of liberation and self-reliance associated with these options. Public transportation offers a higher degree of flexibility in catering to a large number of visitors and facilitating access to diverse locations. Consequently, public transport emerges as a pivotal mode of transportation in fostering the advancement of low-carbon tourism (Gössling, 2010).

However, its significance in tourism development within destinations, particularly in urban settings, cannot be overstated. Le-Klähn et al. (2014) found that an excellent public transportation system can be attractive enough to encourage tourists to use public transport. Consumer factors also hold significance, with time playing a crucial role in influencing travel behavior towards destinations (Dickinson et al., 2013). A lack of information is one of the most common reasons tourists do not use public transportation at their destinations. Ensuring access to transportation for destinations is vital for event planning in tourism (Edwards & Griffin, 2013). However, demand often fluctuates seasonally, leading to challenges in supply matching (Hall, n.d.).

Furthermore, Vodeb et al. (2021) posited that residents' perceptions of tourism impacts are meaningful for tourism management in understanding the patterns of their responses and reactions, which in turn have a significant effect on tourists visiting the destination. Specifically, satisfied residents who are proud, self-confident, and possess a positive sense of place identity and image have a profound impact on tourists; their attitude greatly influences tourists' overall destination experiences.

Tourists and locals have positive experiences with the system, but there is a need for more research on its impact on social inclusion and displacement effects (Yañez-Pagans, 2019). The challenges faced by commuters in Boracay Island include the lack of basic transport infrastructure, such as drainage, walkways, and street lights. Both tourists and locals have positive experiences with the transportation system, with tourists benefiting from the convenience and locals from improved infrastructure (Maming, 2021).

Public transportation systems significantly impact urban tourism development and commuter satisfaction. As times when technology evolved, the emphasis on sustainable transit becomes more critical, highlighting the need for reliable, convenient, and eco-friendly public transport systems to accommodate tourism growth while championing environmental responsibility.

Methodology

Research Design

This study employed a quantitative methodology, specifically descriptive analysis, to assess the dataset related to the public transportation system of the Hop On, Hop Off public vehicle in Boracay Island, Malay, Aklan (Ponto, 2015). Descriptive analysis is used in various fields to examine and analyze data. Sensory evaluation involves finding, describing, and measuring product qualities to ensure the quality of new products, as well as determining their shelf life (Gillette, 1984). Descriptive analytics seeks patterns and trends in historical data using statistics and visualizations (Geetha & Sujatha, 2024). In behavioral research, descriptive analysis examines target behaviors in real-life situations to establish baseline rates and operational guidelines for functional evaluations (Sloman, 2010). According to Sloman (2010), scatter plot analysis can show long-term patterns in behavior. Descriptive analysis is the simplest type of statistical analysis. It defines the population and arranges the data (Delaney, 2009). Descriptive analysis helps make sense of data and make decisions in certain situations. Further, this method involves the systematic collection of data, particularly the HOHO transport vehicle.

Respondents

The respondents in this study were HOHO commuters in Boracay Island, Malay, Aklan. The population of this study is $N = 3,636.8$, which represents the average number of daily commuters of HOHO. To determine the sample size, the researchers employed Slovin's formula, which included a 0.5% margin of error, resulting in a sample size of $n = 361$. The researchers employed convenience sampling to recruit respondents for the study and gather essential data for evaluating overall familiarity rates.

Instruments

This study utilized a researcher-made survey questionnaire. The 4-point Likert scale was used to enable the respondents to evaluate various aspects of the public transportation system in Boracay Island, ranging from "Excellent" to "Poor" with the following legend for data interpretation: Excellent (3.26 - 4.00); Good (2.51 - 3.25); Fair (1.76 - 2.50); Poor (1.00-1.75). Before conducting full-scale data collection, the questionnaire underwent pilot testing with 30 respondents to ensure its validity and reliability. The Cronbach's alpha value is .868 which indicates acceptable reliability of the instrument.

Procedure

Before conducting the study on the Hop On Hop Off shuttle bus transportation service, the researchers sought approval from the College Dean of Malay College, the Municipal Mayor of LGU-Malay, and the official of Southwest Tours, Inc. Following these preparatory steps, a pilot test was administered to 30 respondents to assess the validity and reliability of the researcher-made questionnaire. After validating the reliability of the instrument, the researchers proceeded to data gathering with $n = 361$ respondents.

The respondents were selected through convenience sampling during the actual data gathering. They were asked to fill out the Informed Consent Form before the actual answering of the instrument.

After the data had been collected, the researchers analyzed the data by employing descriptive analysis to obtain the mean and standard deviation to summarize and interpret the data, identifying trends and patterns in respondents' opinions and familiarity rates with the public transportation system in Boracay Island.

Ethical Considerations

The respondents were briefed about the objectives and their significance to ensure transparency in the study of assessing the public transportation system in Boracay Island. Before the survey was conducted, the researchers sought approval from the respondents. Measures were exerted to preserve the confidentiality of the respondents' data shared in connection with this study. Throughout the study, the researchers observed the ethical considerations as required in any research process and engagement.

Results

The results of the analyses for the "Hop On, Hop Off" public transportation system in Boracay Island, highlighting key strengths and challenges is presented below. It provides insights into the familiarity of public commuters aiming to improve HOHO public service:

Table 1. *Highest Familiarity Rate of Hop-on, Hop-off*

| Indicators | Mean | Std. Deviation | Description |
|--|------|----------------|-------------|
| 4. The comfort given by Hop On, Hop Off. | 3.76 | .485 | Excellent |
| 6. The staff service and helpfulness. | 3.69 | .513 | Excellent |
| 5. The cleanliness of Hop On, Hop Off buses. | 3.66 | .533 | Excellent |
| 7. The clarity of bus rules or policies. | 3.51 | .637 | Excellent |
| 19. Convenience brought by Hop On, Hop Off. | 3.65 | .510 | Excellent |
| 25. Overall experience of using Hop On, Hop Off in Boracay Island. | 3.66 | .501 | Excellent |
| 17. Appearance and vehicle design of Hop On, Hop Off. | 3.62 | .556 | Excellent |
| 3. The information visible in the Hop On, Hop Off buses. | 3.46 | .632 | Excellent |
| Grand Total | 3.62 | .545 | |

Legend: Excellent (3.26-4.00), Good (2.51-3.25), Fair (1.76-2.50), Poor(1.00-1.75)

Table 1 reveals the Familiarity Rate of the Hop-on, Hop-off. The information visible in the Hop on, Hop off buses received a mean score of 3.76, while the information visible in the Hop On, Hop Off buses received a lowest mean of 3.46.

Public transportation services, such as buses, significantly influence commuter engagement and perception, particularly in tourist destinations like Boracay Island (Deb et al., 2022; Ong et al., 2023). Key factors contributing to satisfaction typically include safety, comfort, cleanliness, staff behavior, and ease of accessing information. As presented in Table 1, the Hop-on Hop-off (HOHO) bus service in Boracay demonstrates strengths in several areas, including comfort, staff service, cleanliness, convenience, and bus appearance. These elements positively impact overall commuter familiarity with the service.

Table 2 revealed the Lowest Familiarity Rate of Hop-on, Hop-off. It indicates that the waiting time for each bus to arrive got the lowest mean of 3.15 or Good. While the information visible in the Hop On, Hop Off buses got a highest mean of 3.46 or Excellent.

The findings underscores the critical role of factors such as waiting times, fares, schedule reliability, and service frequency in shaping public transportation and the overall familiarity rate of the service among users (Beirão & Cabral, 2009; Ismail et al., 2017).The Hop-

on Hop-off service in Boracay Island faces challenges in specific areas, particularly in terms of waiting times.

Table 2. *Lowest Familiarity Rate of Hop-on, Hop-off*

| Indicators | Mean | Std. Deviation | Description |
|--|------|----------------|-------------|
| 2. The waiting time for each bus to arrive. | 3.18 | .701 | Good |
| 10. The price of ticket of a Hop On, Hop Off. | 3.40 | .787 | Excellent |
| 23. Schedule time of arrival and departure of Hop On, Hop Off buses. | 3.41 | .686 | Excellent |
| 8. The frequency of the Hop On, Hop Off arriving at each stop. | 3.44 | .647 | Excellent |
| 3. The information visible in the Hop On, Hop Off buses. | 3.46 | .632 | Excellent |
| Grand Total | 3.37 | .690 | |

Legend: Excellent (3.26-4.00), Good (2.51-3.25), Fair (1.76-2.50), Poor(1.00-1.75)

These findings align with a study emphasizing the negative impact of long waiting times, high fares, and inconsistent schedules on passenger satisfaction and service familiarity (Beirão & Cabral, 2009). Furthermore, research highlighting the impact of route length and traffic congestion on hop-on hop-off punctuality (Ismail et al., 2017), the bus schedule and frequency issues require utmost attention. These results collectively emphasize the need for strategic interventions to enhance service quality for public commuters, thereby fostering a higher familiarity rate among the target market.

Table 3. *Hop-on Hop-off system to enhance services for public commuters*

| Indicators | Mean | Std. Deviation | Description |
|---|------|----------------|-------------|
| 9. The accessibility of the Hop On, Hop Off buses and stops for people with disabilities. | 3.48 | .723 | Excellent |
| 11. The safety and security of the Hop On, Hop Off vehicle. | 3.64 | .546 | Excellent |
| 12. Sustainability and eco-friendliness practices of Hop On, Hop Off. | 3.56 | .626 | Excellent |
| 13. Service of Hop On, Hop Off compared to other modes of transportation in Boracay Island. | 3.61 | .556 | Excellent |
| 14. Availability of Hop On Hop Off services during peak seasons in Boracay Island. | 3.49 | .642 | Excellent |
| 15. Information provided by Hop On, Hop Off regarding local attractions in Boracay. | 3.60 | .612 | Excellent |
| 16. Capacity of Hop On, Hop Off in accommodating large groups or families traveling together. | 3.58 | .573 | Excellent |
| 18. Digital connectivity and technology integration experience provided by the Hop On, Hop Off. | 3.51 | .620 | Excellent |
| 20. Hop On, Hop Off catering to the needs of locals. | 3.61 | .558 | Excellent |
| 21. Hop On, Hop Off catering to the needs of tourists. | 3.63 | .538 | Excellent |
| 22. Routes and stops covered by Hop On, Hop Off. | 3.55 | .585 | Excellent |
| 24. Payment system of Hop On, Hop Off. | 3.58 | .601 | Excellent |
| Grand Total | 3.55 | .598 | |

Legend: Excellent (3.26-4.00), Good (2.51-3.25), Fair (1.76-2.50), Poor(1.00-1.75)

Table 3 shows that when it comes to the Hop-on Hop-off system to enhance services for public commuters factors received Excellent descriptive ratings. While the safety and security of the commuters remains a factor that hinders significant opportunities for improvements to the Hop-on Hop-off system to enhance services for public commuters with a mean of 3.64 the accessibility of the Hop On, Hop Off buses and stops for people with disabilities got the lowest score of 3.48.

The results highlights that Public transportation is influenced by various service quality attributes, as evidenced by several studies. Jou et al. (2023) emphasize the paramount importance of safety for bus passengers in Occidental Mindoro. Atombo and Wemegah (2021) highlighted a significant gap between commuter expectations and perceptions of service quality in Ghana, with affordability and availability being crucial. This reflects the feedback's indication of lower scores in service capacity and payment systems, suggesting that addressing these issues could enhance overall user familiarity of the vehicle and the transport system.

Conclusion

This study delved into assessing the public commuters of the Hop-on Hop-off (HOHO) bus service in Boracay Island. The primary aim of this study was to evaluate the public's familiarity with the HOHO bus service in Boracay Island. Specifically, the study aimed to identify the service's strengths and weaknesses, thereby providing valuable insights for enhancing the overall commuter experience. Descriptive data analysis was used specifically gathered the data through a survey questionnaire to assess passenger familiarity, identify service strengths, and pinpoint areas requiring improvements. The results of the study revealed that while the HOHO bus service garnered positive feedback for core attributes such as comfort and staff service, significant challenges emerged in areas like waiting times, ticket pricing, and service frequency. recommend that Southwest Tours should improve their efficiency by optimizing routes and additional vehicles to reduce waiting times, enhance accessibility to PWDs, adopt sustainable practices, and improve visible information

through signage and announcements. Furthermore, the study highlighted the need for improvements in accessibility, safety, and the incorporation of digital amenities. The study is limited to quantitative approach, Hop In Hop On in a context of island tourism, and familiarization of commuters services of HOHO. To gain a deeper insights of the HOHO bus service's impact, future research could be conducted on areas of environmental footprint, economic contributions to the local community, and comparative performance against other transportation modes. Similar research can be conducted using qualitative or mixed methods.

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