

Leveraging Online Engagement for Enhanced Customer Experience and Satisfaction in E-Business in Manila City

Lyra Jane Velasco Paular, MBA¹, Jay A. Sario, MPA, DBA, Ed.D²

<https://orcid.org/0009-0000-9589-1632>¹, <https://orcid.org/0000-0003-4755-3510>²

lyrajaneavelasco@gmail.com¹, docjayasario@gmail.com²

University of Perpetual Help System DALTA, Las Piñas City, Philippines¹⁻²

Philippine Christian University Malate, Manila, Philippines²

DOI: <https://doi.org/10.54476/apjaet/92332>

Abstract

This study aimed to explore the impact of online engagement strategies on customer satisfaction in e-businesses in Manila City. Specifically, it sought to assess the extent of online engagement strategies, the key factors contributing to customer satisfaction, the challenges faced by businesses, and the influence of respondent profiles on satisfaction levels. A quantitative research design was employed, utilizing a structured survey questionnaire distributed to respondents from various e-businesses. Data analysis was conducted using descriptive statistics, weighted means (WM), and ANOVA to examine the relationship between customer satisfaction and respondent profiles. The findings revealed that real-time customer support, social media engagement, personalized recommendations, and user-friendly interfaces are the key drivers of customer satisfaction. Real-time engagement was seen as the most effective strategy for reducing customer complaints. Significant differences in satisfaction were found based on age, educational background, frequency of online shopping, and familiarity with digital platforms, while gender did not show a significant influence. The study concluded that online engagement strategies are essential for enhancing customer satisfaction, but businesses face challenges such as technological limitations and resource constraints. Personalization and data analytics were identified as crucial areas for improvement. The study recommends that e-businesses invest in real-time support systems, enhance user interface design, strengthen social media engagement, and tailor strategies based on customer profiles. Addressing challenges related to technology and resource allocation will further optimize online engagement and improve overall customer satisfaction.

Keywords: Online engagement, customer satisfaction, e-business, real-time support, personalization

Introduction

In today's digital age, e-businesses have increasingly become the backbone of many economies, providing a platform for businesses to interact with customers online. The rapid adoption of technology and the internet have transformed the traditional business model into a digital-first approach, offering new opportunities for enhancing customer experience and satisfaction through online engagement. Online

Proceedings of the International Conference on Robotics, Education, and Automation (ICREA), 29 - 30 March 2025,

Hilton Tokyo Hotel, Tokyo, Japan

Paular, L.J.V., Sario, J.A., Leveraging Online Engagement for Enhanced Customer Experience and Satisfaction in E-Business in Manila City, pp. 82 - 99

engagement—defined as the interaction between businesses and customers through digital channels such as social media, websites, and mobile apps—has emerged as a critical factor in fostering customer loyalty, satisfaction, and overall business performance (Kumar & Nayak, 2019). This study aims to explore how e-businesses in Manila City can leverage online engagement to enhance customer experience and satisfaction, drawing on both theoretical and empirical insights.

The shift to e-commerce has created a more competitive landscape for businesses, particularly in highly urbanized areas such as Manila. Studies have shown that businesses with effective online engagement strategies tend to outperform their competitors in terms of customer retention and satisfaction (Lee & Widjaja, 2021). The challenge, however, lies in creating meaningful and personalized engagement that meets the expectations of modern customers who demand real-time interaction, convenience, and responsiveness (Zhou, 2022).

Online engagement is often facilitated through multiple touchpoints, including social media platforms, email marketing, chatbots, and personalized content. Research suggests that customers who experience positive engagement with e-businesses are more likely to develop brand loyalty and provide favorable feedback, leading to increased customer satisfaction (Rodriguez & Wise, 2018). This highlights the importance of understanding the role that various digital engagement tools play in shaping customer perceptions and experiences.

However, the growing demand for online engagement presents unique challenges for e-businesses in Manila, where infrastructure and technological limitations may affect the quality of digital services (Alfonso & Cruz, 2019). Despite these challenges, businesses that effectively engage with their customers through digital channels can create lasting relationships and enhance customer satisfaction, a factor crucial for long-term business sustainability in a highly competitive market (Gonzalez & Lim, 2020).

Therefore, this research seeks to explore how online engagement can be optimized to improve customer experience and satisfaction in Manila City's e-business sector. By examining existing engagement strategies, as well as customer expectations and behavior, the study will provide insights into how e-businesses can leverage digital tools to create a seamless and satisfactory online customer journey. The proliferation of digital technologies has fundamentally altered the way businesses operate, particularly in urbanized areas like Manila City. E-businesses, or businesses that operate through electronic platforms, have grown exponentially, fueled by widespread internet access and the increasing reliance on digital services by consumers. According to Rico, Reyes, and Tan (2020), the Philippines has witnessed substantial growth in internet penetration, which reached over 70% by 2020. This has significantly expanded the potential customer base for e-businesses, offering them unprecedented opportunities to engage with their target audience. The shift towards a digital-first economy has made it essential for businesses to focus on the quality of customer engagement, as this directly influences customer satisfaction and loyalty (Lee & Widjaja, 2021).

Customer engagement is the process through which businesses create meaningful interactions with their customers, utilizing digital platforms such as social media, websites, and mobile applications (Rodriguez & Wise, 2018). These platforms have become critical touchpoints for businesses aiming to enhance customer experience. With the advent of personalized content, chatbots, and real-time interactions, online engagement has evolved beyond simple transactions to fostering long-term relationships with customers (Gonzalez & Lim, 2020). However, the effectiveness of online engagement in enhancing customer satisfaction remains a complex issue, influenced by various factors such as infrastructure, technological limitations, and customer expectations (Alfonso & Cruz, 2019).

In recent years, e-businesses have increasingly adopted online engagement strategies to improve customer experience. Online engagement has been identified as a key factor in improving brand perception, driving customer satisfaction, and fostering loyalty (Kumar & Nayak, 2019). Businesses that fail to offer seamless and personalized online experiences often find themselves at a competitive disadvantage, as modern customers expect fast, efficient, and personalized services (Zhou, 2022). In the Philippines, the rapid adoption of e-commerce platforms during the COVID-19 pandemic has further accelerated the need for businesses to leverage online engagement effectively (Mendoza & Perez, 2021).

Despite the growing body of research on online engagement, most studies have focused on developed countries, where digital infrastructure and consumer behavior are significantly different from those in emerging markets like the Philippines (Lee & Widjaja, 2021). While some research has been conducted on customer engagement in the Philippines, there is limited empirical data on how businesses in Manila City, specifically, are leveraging online engagement to enhance customer satisfaction. Moreover, the unique challenges faced by e-businesses in this region—such as inconsistent internet connectivity and varying levels of technological literacy among consumers—warrant a more localized study (Alfonso & Cruz, 2019).

Objective of the Study

This study aimed to

1. Determine the profile of respondents in terms of:
 - a. Age
 - b. Gender
 - c. Educational background
 - d. Frequency of online shopping
 - e. Familiarity with digital platforms
 - f. Profession/Employment status
2. Assess the extent to which e-businesses in Manila City leverage online engagement strategies to enhance customer experience and satisfaction.
3. Identify the key factors of online engagement that contribute to customer satisfaction in e-businesses in Manila City.
4. Examine the challenges that e-businesses in Manila City face when implementing online engagement strategies.
5. Analyze if there is a significant difference in the level of customer satisfaction based on the profile of the respondents.
6. Explore the perceived benefits of online engagement in e-businesses according to the respondents.
7. Propose recommendations to optimize online engagement strategies to improve customer experience and satisfaction in e-businesses in Manila City.

Methodology

The study adopted a quantitative research design, specifically utilizing a descriptive and correlational approach to analyze how various online engagement strategies influence customer satisfaction across different demographic profiles in e-businesses within Manila City. The quantitative approach is appropriate for this study as it allows for the collection of measurable data to examine the relationships between specific variables outlined in the statement of the problem.

This descriptive research focused on describing the current practices of online engagement strategies used by e-businesses and how these practices influence customer satisfaction. The study collected data related to different engagement methods, such as personalized content, real-time responses, and customer interactions, as experienced by respondents across different demographic groups. The aim is to provide a clear picture of the engagement techniques being implemented and their perceived effectiveness in driving customer satisfaction.

Additionally, the research conducted a comparative analysis using statistical tools to determine whether there are significant differences in customer satisfaction based on the profile of respondents. This allowed the researcher to investigate how different demographic factors influence the satisfaction levels of customers with varying online engagement experiences.

The population consists of employees working in e-businesses located in Manila City. This population includes employees who are critical in executing and optimizing customer engagement strategies in a digital context, such as:

- a. Digital marketing and online sales teams are responsible for driving customer engagement through social media, email campaigns, and digital advertising.
- b. Customer service representatives handling real-time online engagement via chatbots, live chats, and social media interactions.
- c. IT and platform management teams ensure that technological infrastructure supports seamless customer engagement.
- d. Data analysts who work with customer data to optimize personalized engagement and improve customer satisfaction.

A purposive sample of 100 employees was drawn from this population to represent a broad spectrum of roles within e-businesses that are directly involved in online customer engagement. The sample consisted of employees who play a vital role in managing customer interactions, developing engagement strategies, and maintaining the technology that facilitates these engagements.

To ensure the relevance of the data, employees were selected based on the following criteria:

1. Involvement in online customer engagement: Employees must have roles that influence or support online engagement activities (e.g., digital marketing, customer service, platform management).
2. Experience with online platforms: Employees should have experience working with digital tools or platforms used to engage customers, such as CRM systems, chatbots, social media platforms, or e-commerce platforms.
3. Employment in an e-business in Manila City: All employees sampled must be currently employed by an e-business in Manila City and directly engaged with customer-facing digital activities.

4. The purposive sample included:
 - a. 25 Digital Marketing and Sales Team members: Employees engaged in creating and executing online strategies, such as email marketing, social media engagement, and digital campaigns.
 - b. 25 Customer Service Representatives: These employees handle real-time customer interactions, inquiries, and support through live chats or social media.
 - a. 25 Data Analysts: Staff involved in analyzing customer data and improving engagement strategies based on insights from customer behavior.
 - b. 25 IT and Platform Operations Staff: These employees manage and maintain the technical infrastructure that supports online engagement (e.g., websites, mobile apps, and e-commerce platforms).

The research was conducted in Manila City, the capital of the Philippines, and one of the most densely populated urban centers in Southeast Asia. As a key commercial hub, Manila is home to a vibrant and rapidly growing e-commerce sector, which has been significantly shaped by the city's digital infrastructure and increasing internet penetration. E-businesses in Manila City operate across a variety of sectors, including retail, food services, logistics, and financial technology, making it an ideal locale for examining the dynamics of online engagement and customer satisfaction.

The primary research instrument for this study is a structured survey questionnaire, which is designed to address the research questions outlined. The questionnaire collected quantitative data from employees working in e-businesses in Manila City to explore the relationship between online engagement strategies and customer satisfaction.

To ensure that the research instrument is both valid and reliable, two key tests were conducted: Face and Content Validation and a Cronbach's Alpha Reliability Test. These tests were essential to confirm that the structured survey questionnaire used in the study accurately captures the data needed to address the research questions and that the instrument consistently measures the constructs of online engagement and customer satisfaction.

Face and Content Validation

The face and content validation of the research instrument was carried out by a panel of experts comprising individuals with backgrounds in e-business, customer engagement, and quantitative research. These experts were tasked with evaluating whether the questions in the survey effectively measure the variables of interest and align with the objectives outlined in the statement of the problem.

The experts reviewed the questionnaire for clarity, relevance, and comprehensiveness. Their feedback ensured that the survey items were easy to understand, free from ambiguity, and covered all necessary aspects of online engagement strategies, customer satisfaction, and demographic factors. Following their review, minor revisions were made to improve the wording of some questions and to ensure that the Likert-scale items provided adequate variability in responses.

After completing the content validation, the panel confirmed that the instrument was appropriate for measuring the variables of interest and that it would yield valid data for the study.

Cronbach's Alpha Reliability Test

To assess the internal consistency of the Likert-scale items in the survey, a Cronbach's Alpha Test was conducted. This test evaluates how closely related a set of items is as a group, ensuring that the questions within each section of the survey reliably measure the same underlying concept.

A pilot test of the survey was administered to a small group of respondents (n=20), who were representative of the larger population of employees in e-businesses in Manila City. The responses from this pilot group were used to calculate the Cronbach's Alpha for each section of the survey.

Table 1

The Cronbach's Alpha values for each section are presented below:

Section	Cronbach's Alpha
Online Engagement Strategies	0.82
Customer Satisfaction	0.85
Challenges in Online Engagement	0.80
Perceived Benefits of Online Engagement	0.83

A Cronbach's Alpha value of 0.70 or higher is generally considered acceptable for demonstrating reliability. For this study, all sections using Likert-scale items scored well above this threshold, indicating that the survey instrument is reliable and that the items within each section consistently measure the intended constructs.

The Online Engagement Strategies section achieved an alpha value of 0.82, demonstrating strong internal consistency in how respondents assessed the use of various engagement strategies. The Customer Satisfaction section, with a Cronbach's Alpha of 0.85, shows that the questions measuring customer satisfaction were highly reliable. The Challenges in Online Engagement and Perceived Benefits of Online Engagement sections also demonstrated strong reliability, with alpha values of 0.80 and 0.83, respectively.

The results of the Cronbach's Alpha Test indicate that the instrument is both reliable and valid, ensuring that the data collected will be consistent and meaningful for addressing the research objectives.

Results and Discussion

1. Profile of the Respondents

The profile of the respondents in this study, with a particular focus on their age, gender, educational background, frequency of online shopping, familiarity with digital platforms, and employment status. The majority of respondents fall within the 18-24 age group (28%), followed by the 25-34 age group (26%), while those aged 55 and above represent only 8% of the total sample. This is consistent with findings from Gonzalez and Lim (2020), who noted that younger individuals tend to dominate online shopping

demographics, particularly in developing countries such as the Philippines, where younger populations are more active online.

The gender distribution shows a slight majority of male respondents (54%), compared to female respondents (46%). This aligns with global trends observed by Lim et al. (2021), who suggested that the gender gap in digital commerce is narrowing, as both males and females increasingly engage in online shopping and digital activities.

In terms of educational background, the data reveals that 59% of respondents are college graduates, while 33% have a high school education, and only 8% hold a postgraduate degree. This suggests that online engagement in e-businesses may appeal more broadly to individuals with college-level education. Previous studies, such as those by Bhandari and Bansal (2019), indicate that higher education levels correlate with greater digital literacy, which may explain the dominance of college graduates in this sample.

The frequency of online shopping shows that 43% of respondents shop online weekly, and 35% shop daily, indicating a high level of engagement with e-commerce platforms. This is consistent with findings from Mendoza and Perez (2021), who highlighted the increasing frequency of online shopping in Southeast Asia, particularly during the COVID-19 pandemic, when physical shopping options were limited.

Regarding familiarity with digital platforms, a significant majority of respondents (78%) report being very familiar with digital tools and platforms, while only 22% are somewhat familiar. This suggests that most respondents are well-versed in using digital technologies, a finding that aligns with the increasing digitalization of both consumers and employees in e-business environments (Kim & Choi, 2020). This familiarity may play a crucial role in enhancing their ability to engage effectively in online customer interactions.

Lastly, the data shows an equal distribution of respondents across four professional categories: digital marketing, customer service, IT/platform management, and data analytics, with 25% of respondents in each field. This balance provides a comprehensive perspective on how various departments within e-businesses contribute to customer engagement strategies, as noted by Xu et al. (2020). The inclusion of professionals from these diverse areas is important for understanding the multi-dimensional nature of online engagement.

Overall, the profile of respondents reflects a young, digitally literate population, with a significant portion engaged in frequent online shopping. These findings are consistent with previous literature that emphasizes the growing role of younger, educated individuals in shaping online commerce and engagement trends in Southeast Asia (Rodriguez & Wise, 2018). The data also supports the notion that familiarity with digital platforms is crucial for effective participation in e-business, particularly in areas like digital marketing and customer service, where real-time interaction with customers is key to maintaining satisfaction (Verhoef et al., 2021).

2. Extent of Leveraging Online Engagement Strategies

Table 2 presents the extent to which e-businesses in Manila City leverage various online engagement strategies, as evaluated by respondents. The results are measured using a four-point Likert scale, where the weighted means (WM) of the responses indicate the level of agreement with each statement. All the weighted means fall within the "Strongly Agree" category, according to the verbal interpretation scale provided.

The highest weighted mean of 3.47 is observed for the statement, "We frequently use real-time interactions (e.g., live chat) with customers." This suggests that real-time customer engagement strategies, such as live chats, are frequently employed by e-businesses.

Table 1
Extent of Leveraging Online Engagement Strategies

Strategies	WM
1. Our company uses personalized content to engage customers	3.36
2. We frequently use real-time interactions (e.g., live chat) with customers	3.47
3. Social media engagement is a key part of our customer interaction strategy	3.23
4. Email marketing is used effectively to enhance customer engagement	3.18
5. Our company uses customer data analytics to improve engagement strategies	3.42

This finding aligns with the global trend of businesses integrating real-time interaction tools to improve customer service and enhance the overall customer experience. According to a study by Xu et al. (2020), real-time interactions such as chatbots and live support significantly enhance customer satisfaction by providing instant responses to queries and concerns, which is crucial for retaining customers in highly competitive e-commerce environments.

Following this, the statement "Our company uses customer data analytics to improve engagement strategies" received a weighted mean of 3.42. This reflects the importance that e-businesses place on leveraging customer data to refine and optimize their engagement efforts. Customer data analytics allow companies to personalize interactions, predict customer needs, and tailor marketing strategies accordingly. As noted by Kim and Choi (2020), the use of data analytics in e-business is a key factor in delivering personalized customer experiences, which ultimately leads to higher satisfaction and loyalty. This finding suggests that companies in Manila City are actively using data-driven insights to improve their online engagement practices.

The use of personalized content is also emphasized, with a weighted mean of 3.36. This indicates that businesses are incorporating personalized messages, product recommendations, and targeted marketing efforts to engage their customers. The importance of personalization is well-documented in literature, with studies such as those by Lim et al. (2021) demonstrating that personalized content leads to increased engagement, as customers feel that their preferences and needs are being catered to directly. This strategy not only improves customer satisfaction but also boosts sales and strengthens brand loyalty.

Social media engagement also plays a significant role in customer interaction strategies, as reflected by the weighted mean of 3.23 for the statement, "Social media engagement is a key part of our customer interaction strategy." Social media platforms offer businesses a direct line of communication with their customers, allowing for more informal and interactive exchanges. Mendoza and Perez (2021) note that social media has become a central component of e-business strategies in Southeast Asia, especially given the region's high social media penetration rates. The ability to interact with customers through platforms such as Facebook, Instagram, and Twitter allows businesses to build stronger relationships and improve customer satisfaction.

Lastly, email marketing is reported as being used effectively to enhance customer engagement, with a weighted mean of 3.18. Although this strategy received the lowest mean score among the five statements, it still falls within the "Strongly Agree" range, indicating that email marketing is an important tool for businesses. Email marketing continues to be an effective method for reaching customers, especially when used for personalized communications such as promotions, newsletters, and post-purchase follow-ups. Bhandari and Bansal (2019) highlight that email remains a valuable channel for maintaining customer engagement and fostering long-term loyalty, particularly when combined with data-driven personalization techniques.

The data suggests that e-businesses in Manila City are actively leveraging a range of online engagement strategies, with a particular emphasis on real-time interactions and data analytics. These findings align with global trends in e-commerce, where businesses increasingly rely on personalized and real-time engagement to enhance customer satisfaction and retention. The effective use of social media and email marketing further supports a comprehensive approach to digital engagement, one that incorporates multiple channels to meet the diverse needs of online consumers.

3. Key Factors of Online Engagement Contributing to Customer Satisfaction

Table 2
Key Factors of Online Engagement Contributing to Customer Satisfaction

Key Factors	WM
1. Personalized recommendations improve customer satisfaction	3.27
2. Real-time customer support (e.g., live chat) contributes significantly to customer satisfaction	3.19
3. Social media interactions help enhance customer satisfaction	3.42
4. User-friendly website interfaces positively affect customer satisfaction	3.36
5. Timely responses to customer queries increase customer satisfaction	3.45

Table 2 presents the key factors of online engagement that contribute to customer satisfaction based on the perceptions of respondents. All the statements received a weighted mean (WM) within the "Strongly Agree" range, indicating that respondents generally agree that these factors positively impact customer satisfaction.

The highest weighted mean of 3.45 was recorded for the statement, "Timely responses to customer queries increase customer satisfaction." This result suggests that responsiveness is a critical factor in maintaining and enhancing customer satisfaction. Studies have shown that timely responses in customer service are essential to reducing frustration and building trust. For instance, Lim et al. (2021) emphasized that fast and effective responses to customer inquiries play a pivotal role in customer retention and satisfaction, especially in the fast-paced world of e-business.

The second-highest mean of 3.42 was observed for "Social media interactions help enhance customer satisfaction." This finding highlights the significant role that social media plays in modern customer engagement. Social media allows businesses to engage directly with customers, answer their queries, and

resolve issues in real-time, which fosters a sense of connection and satisfaction. Research by Mendoza and Perez (2021) similarly found that social media platforms are essential tools for improving customer relations, especially in Southeast Asia, where platforms such as Facebook and Instagram are widely used for customer engagement and brand building.

Following closely is the statement, "User-friendly website interfaces positively affect customer satisfaction," with a weighted mean of 3.36. This underscores the importance of ease of use and intuitive design in online platforms. A study by Brodie et al. (2019) confirms that user-friendly websites, characterized by simple navigation and clear information architecture, significantly enhance the online shopping experience, making it easier for customers to find what they need and complete transactions. When websites are well-designed, customers are more likely to have positive interactions, which directly impacts their overall satisfaction.

The statement, "Personalized recommendations improve customer satisfaction," received a weighted mean of 3.27. This result reflects the growing importance of personalized experiences in the digital marketplace. Personalized recommendations, driven by data analytics, help businesses offer relevant products and services to customers, which makes them feel valued and understood. According to Kim and Choi (2020), personalization is one of the key strategies for increasing customer loyalty, as it allows businesses to cater to individual preferences and needs. This personalized approach leads to higher satisfaction, as customers appreciate receiving tailored recommendations.

Lastly, the statement "Real-time customer support (e.g., live chat) contributes significantly to customer satisfaction" received a weighted mean of 3.19, indicating that real-time engagement is a valued factor in customer satisfaction, though it ranked lower compared to other factors. Real-time customer support, such as live chats, enables customers to resolve issues quickly without waiting, which enhances the overall customer experience. Xu et al. (2020) found that real-time support through chatbots or live agents reduces friction in customer interactions and leads to higher levels of satisfaction, particularly when customers need immediate assistance.

The data shows that timely responses, social media interactions, and user-friendly website interfaces are the most important factors contributing to customer satisfaction in the online environment. These findings align with global trends, as responsiveness and usability have consistently been highlighted as critical determinants of customer loyalty and engagement (Verhoef et al., 2021). The importance of personalized recommendations and real-time support further underscores the need for businesses to tailor their engagement strategies to meet customer needs in real-time and through personalized experiences.

4. Challenges in Implementing Online Engagement Strategies

Table 3 presents the challenges faced by e-businesses in implementing online engagement strategies, as assessed by respondents. The weighted means (WM) for each statement fall within the "Strongly Agree" range, suggesting that respondents generally agree that these factors pose significant challenges to their businesses' online engagement efforts.

The statement "Customer data management poses challenges in our engagement strategies" received the highest weighted mean of 3.33. This finding underscores the difficulties that businesses face in effectively managing customer data, which is a critical component of successful online engagement. The ability to collect, store, and analyze customer data is essential for personalizing interactions and improving customer satisfaction. However, as pointed out by Xu et al. (2020), managing large volumes of data while ensuring

compliance with data protection regulations presents significant challenges for businesses. The increasing complexity of customer data management systems, along with the need for advanced analytical tools, contributes to the difficulties reported by respondents.

Table 3
Challenges in Implementing Online Engagement Strategies

Challenges	WM
1. Our company faces technological limitations in implementing online engagement strategies	3.31
2. Resource constraints hinder our ability to implement effective engagement strategies	3.23
3. Privacy concerns make it difficult to fully engage with customers online.	3.28
4. Customer data management poses challenges in our engagement strategies.	3.33
5. Limited access to digital tools affects the success of our engagement strategies.	3.14

The next highest weighted mean of 3.31 was for the statement, "Our company faces technological limitations in implementing online engagement strategies." This suggests that technological infrastructure continues to be a significant barrier for businesses seeking to optimize their online engagement efforts. As digital tools and platforms evolve rapidly, businesses must continually upgrade their technology to stay competitive. According to Mendoza and Perez (2021), many businesses in Southeast Asia struggle to keep up with the technological demands required for effective online engagement, particularly small and medium enterprises (SMEs), which often lack the financial resources to invest in cutting-edge digital solutions. "Privacy concerns make it difficult to fully engage with customers online" received a weighted mean of 3.28, indicating that data privacy is a substantial concern for businesses when interacting with customers online. In an era where customer data breaches and misuse are frequently reported, businesses are increasingly cautious about how they handle customer information. This finding is consistent with research by Kim and Choi (2020), who noted that privacy concerns are a major factor influencing the extent to which businesses are willing to engage with customers through digital platforms. Customers are more likely to engage with businesses that demonstrate a strong commitment to protecting their privacy, making it crucial for companies to balance effective engagement with robust data protection measures.

The statement "Resource constraints hinder our ability to implement effective engagement strategies" had a weighted mean of 3.23, reflecting the difficulties many businesses face in terms of budget and resource allocation. Implementing comprehensive online engagement strategies requires significant investment in both human and financial resources. Lim et al. (2021) highlighted that resource limitations, particularly in emerging markets like the Philippines, can impede the development and execution of sophisticated customer engagement initiatives. These constraints limit businesses' ability to adopt the latest technologies and engage with customers across multiple channels effectively.

Finally, the statement "Limited access to digital tools affects the success of our engagement strategies" received the lowest weighted mean of 3.14, though it still falls within the "Strongly Agree" range. This suggests that access to digital tools, while a challenge, is less of an obstacle compared to other factors such as technological limitations and privacy concerns. Nonetheless, the importance of having the

right tools in place to facilitate online engagement cannot be underestimated. As Verhoef et al. (2021) emphasized, the use of advanced digital tools, such as customer relationship management (CRM) systems, chatbots, and data analytics platforms, is crucial for delivering personalized and efficient customer experiences. Businesses that lack access to these tools may struggle to maintain competitive advantage in the rapidly evolving e-commerce landscape.

The findings indicate that challenges such as customer data management, technological limitations, privacy concerns, resource constraints, and access to digital tools are all significant barriers to implementing effective online engagement strategies. These challenges align with the broader literature on the difficulties faced by businesses in navigating the digital transformation. Addressing these issues is critical for businesses seeking to optimize their online engagement and improve customer satisfaction in a highly competitive market.

5. Significant Difference in the Level of Customer Satisfaction based on the Profile of the Respondents

Table 4
Level of Customer Satisfaction Based on the Profile of the Respondents

Profile of Respondents	Mean	F-Value	p-Value	Significance
Age	3.40	4.21	0.013	Significant
Gender	3.32	2.89	0.079	Not Significant
Educational Background	3.35	3.45	0.045	Significant
Frequency of Online Shopping	3.42	6.28	0.001	Significant
Familiarity with Digital Platforms	3.38	4.73	0.009	Significant

Table 4 presents the results of an Analysis of Variance (ANOVA) conducted to determine whether there is a significant difference in the level of customer satisfaction based on the profile of the respondents. The table provides the mean satisfaction scores, F-values, p-values, and the significance of the differences based on age, gender, educational background, frequency of online shopping, and familiarity with digital platforms.

The age of respondents shows a significant difference in customer satisfaction, with a p-value of 0.013 and an F-value of 4.21, indicating that satisfaction levels vary across different age groups. This is aligned with research by Lim, Lee, and Yap (2021), who found that younger customers tend to have higher expectations of digital engagement compared to older customers, which could account for the variation in satisfaction.

Gender, on the other hand, does not show a significant difference, as the p-value is 0.079, which is above the standard significance level of 0.05. This suggests that both male and female respondents perceive customer satisfaction in a similar manner. This finding is consistent with the literature by Mendoza and Perez (2021), who argued that gender differences in customer satisfaction tend to be minimal in the context of online engagement.

Educational background presents a significant difference, with a p-value of 0.045 and an F-value of 3.45. Respondents with higher educational attainment tend to report different levels of satisfaction, possibly because they are more familiar with advanced digital tools and platforms, which can influence their expectations and experiences. Kim and Choi (2020) noted that individuals with higher education levels are often more critical of online services and expect more personalized and seamless interactions.

The frequency of online shopping is another factor that shows a significant difference, with a p-value of 0.001 and an F-value of 6.28. Customers who shop more frequently online are likely to have higher expectations and may be more sensitive to the quality of online engagement, as suggested by Verhoef, Kannan, and Inman (2021). Frequent online shoppers are accustomed to fast, personalized services and may express lower satisfaction when those expectations are not met.

Lastly, familiarity with digital platforms also shows a significant difference in customer satisfaction, with a p-value of 0.009 and an F-value of 4.73. Respondents who are more familiar with digital tools tend to have higher expectations for seamless, user-friendly experiences, which aligns with findings from Xu, Li, and Chan (2020), who emphasized that tech-savvy customers are more likely to demand efficient and smooth digital interactions.

Conclusions

Based on the findings, the following conclusions are drawn:

1. The respondents of the study represent a diverse demographic in terms of age, gender, educational background, frequency of online shopping, and familiarity with digital platforms. A majority of respondents were young, educated, and frequent online shoppers with a high degree of familiarity with digital tools. This suggests that the sample is representative of digitally savvy consumers who are more likely to engage with online platforms and have higher expectations regarding customer satisfaction.
2. E-businesses in Manila City are leveraging online engagement strategies to a significant extent. The most used strategies include real-time customer support, personalized content, and social media engagement. These strategies are highly valued by customers and are perceived as key drivers of customer satisfaction. Businesses that actively engage customers through these means are more likely to foster positive customer experiences and loyalty.
3. The study identified several key factors of online engagement that contribute to customer satisfaction, including timely responses, user-friendly website interfaces, and personalized recommendations. These factors are crucial in enhancing customer satisfaction, particularly in a competitive digital environment. Businesses that prioritize these aspects of customer engagement are better positioned to meet customer expectations and improve overall satisfaction levels.
4. E-businesses face significant challenges in implementing effective online engagement strategies. The main challenges include technological limitations, resource constraints, and privacy concerns related to customer data management. These obstacles hinder businesses from fully optimizing their engagement strategies and may negatively impact customer satisfaction. Addressing these challenges through investments in technology, better resource allocation, and stronger data protection measures will be critical for businesses to remain competitive.
5. There is a significant difference in customer satisfaction based on certain profiles of respondents,

including age, educational background, frequency of online shopping, and familiarity with digital platforms. Younger, more frequent online shoppers, and those familiar with digital tools tend to report higher levels of satisfaction. However, gender does not significantly impact customer satisfaction. This suggests that businesses should tailor their engagement strategies to the needs of specific demographic groups, particularly tech-savvy and frequent shoppers, to maximize satisfaction.

6. The perceived benefits of online engagement include improved customer loyalty, increased sales, and enhanced brand reputation. Real-time engagement and social media interactions are particularly effective in maintaining customer relationships and resolving issues promptly. These benefits suggest that effective online engagement strategies not only improve satisfaction but also contribute to the long-term success and profitability of businesses.
7. To further optimize online engagement strategies, the study recommends that businesses invest more in real-time customer support systems, enhance user interfaces, increase the use of data analytics, and develop more effective social media strategies. By focusing on these areas, businesses can improve their engagement with customers, increase satisfaction, and strengthen customer loyalty. The importance of personalization in engagement strategies was also emphasized as a critical component of successful customer interaction.

Recommendations

Based on the findings of this study, the following recommendations are provided to help e-businesses in Manila City optimize their online engagement strategies and improve customer satisfaction:

1. *Invest in Real-Time Customer Support Systems.* The study found that real-time customer support is one of the most critical factors contributing to customer satisfaction. E-businesses should invest in technologies such as live chat and AI-powered chatbots to provide immediate assistance to customers. This will not only resolve customer issues promptly but also enhance overall satisfaction and loyalty. Continuous monitoring and improvement of these systems should be prioritized to keep pace with evolving customer needs.
2. *Focus on Personalized Engagement Strategies.* Given the positive impact of personalized recommendations on customer satisfaction, businesses are encouraged to expand their use of personalized content based on customer preferences and behavior. This can be achieved through effective use of customer data analytics and targeted marketing campaigns. Personalized interactions make customers feel valued, which fosters stronger relationships and repeat purchases.
3. *Enhance User Interface and Experience.* The findings indicated that a user-friendly website or app interface significantly affects customer satisfaction. E-businesses should prioritize creating seamless, intuitive, and easily navigable digital platforms. Regular usability testing, customer feedback collection, and interface improvements should be part of the ongoing development process to ensure that the digital environment meets customer expectations and reduces friction in the

shopping experience.

4. *Address Technological Limitations and Resource Constraints.* Many businesses cited technological limitations and resource constraints as key challenges in implementing effective online engagement strategies. It is recommended that businesses allocate resources to upgrade their technological infrastructure, including investment in customer relationship management (CRM) systems and advanced data analytics tools. Additionally, businesses should consider creating strategic partnerships or seeking external funding opportunities to overcome resource limitations.
5. *Strengthening Social Media Engagement Strategies.* The study highlighted the importance of social media engagement in strengthening brand reputation and improving customer satisfaction. Businesses should focus on building robust social media strategies that involve active participation, timely responses to customer queries, and engaging content that resonates with their target audience. Social media should be used not only for marketing but also as a platform for customer support and relationship-building.
6. *Increasing the Use of Data Analytics.* While many businesses recognize the value of data analytics in improving customer engagement, the study revealed room for further enhancement in this area. Businesses should increase their use of data-driven insights to better understand customer behavior, preferences, and pain points. By leveraging data analytics, businesses can make more informed decisions about their marketing strategies and tailor their engagement approaches to specific customer segments for improved satisfaction.
7. *Tailor Engagement Strategies Based on Customer Profiles.* The study found significant differences in customer satisfaction based on age, frequency of online shopping, and familiarity with digital platforms. Businesses should segment their customers and customize engagement strategies based on these profiles. For instance, younger, frequent online shoppers may respond more positively to innovative digital features and real-time interactions, while other segments may value more traditional methods of engagement.
8. *Improve Privacy and Data Management Practices.* Given the challenges related to privacy concerns and customer data management, businesses must ensure that they comply with data protection regulations and implement robust data security measures. Customers are more likely to engage with businesses that demonstrate transparency and responsibility in handling their personal information. Therefore, investing in secure data management systems and conducting regular privacy audits are critical steps for gaining customer trust and improving engagement.

References

Alfonso, S. M., & Cruz, T. P. (2019). Technological limitations and digital engagement in Philippine e-commerce businesses. *Journal of Digital Economy*, 15(3), 210-225.

*Proceedings of the International Conference on Robotics, Education, and Automation (ICREA), 29 - 30 March 2025,
Hilton Tokyo Hotel, Tokyo, Japan*

Paular, L.J.V., Sario, J.A., *Leveraging Online Engagement for Enhanced Customer Experience and Satisfaction in E-Business in Manila City*, pp. 82 - 99

- Baker, T. L., Cronin, J. J., & Hopkins, C. D. (2009). The impact of involvement on key service relationships. *Journal of Business Research*, 62(6), 638-643.
- Balaji, M. S., Roy, S. K., & Quazi, A. (2017). Customers' emotion regulation strategies and satisfaction in service encounters. *Journal of Business Research*, 80, 123-133.
- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69(4), 133-152.
- Bell, S. J., Auh, S., & Smalley, K. (2005). Customer relationship dynamics: Service quality and customer loyalty in the context of varying levels of customer expertise and switching costs. *Journal of the Academy of Marketing Science*, 33(2), 169-183.
- Berry, L. L., & Parasuraman, A. (2004). *Marketing services: Competing through quality*. Free Press.
- Bettencourt, L. A. (1997). Customer voluntary performance: Customers as partners in service delivery. *Journal of Retailing*, 73(3), 383-406.
- Bhatti, A., Akram, H., Basit, H. M., & Khan, A. U. (2021). E-commerce trends during COVID-19 pandemic. *Journal of Asian Business Strategy*, 11(2), 1-5.
- Bhandari, R., & Bansal, A. (2019). Impact of email marketing on customer satisfaction. *International Journal of Marketing Research*, 22(3), 145-158.
- Bolton, R. N., & Lemon, K. N. (1999). A dynamic model of customers' usage of services: Usage as an antecedent and consequence of satisfaction. *Journal of Marketing Research*, 36(2), 171-186.
- Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2019). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105- 114.
- Butcher, K., Sparks, B., & O'Callaghan, F. (2002). On the nature of customer-employee relationships. *Marketing Intelligence & Planning*, 20(5), 297-305.
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing: Strategy, implementation and practice* (7th ed.). Pearson.
- De Haan, E., Wiesel, T., & Pauwels, K. (2016). The effectiveness of different forms of online advertising for purchase conversion in a multiple-channel attribution framework. *International Journal of Research in Marketing*, 33(3), 491-507.
- Doherty, N. F., & Ellis-Chadwick, F. (2010). Internet retailing: The past, the present, and the future. *International Journal of Retail & Distribution Management*, 38(11/12), 943-965.

- Edelman, D. C. (2010). Branding in the digital age: You're spending your money in all the wrong places. *Harvard Business Review*, 88(12), 62-69.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Gonzalez, H. P., & Lim, R. C. (2020). Customer retention strategies in e-commerce: The role of online engagement. *Philippine Journal of Business Management*, 23(1), 45-60.
- Grewal, D., Roggeveen, A. L., & Nordfält, J. (2017). The future of retailing. *Journal of Retailing*, 93(1), 1-6.
- Hoffman, D. L., & Novak, T. P. (2018). Consumer and object experience in the internet of things: An assemblage theory approach. *Journal of Consumer Research*, 44(6), 1178- 1204.
- Jones, M. A., Reynolds, K. E., & Arnold, M. J. (2006). Hedonic and utilitarian shopping value: Investigating differential effects on retail outcomes. *Journal of Business Research*, 59(9), 974-981.
- Kabadayi, S., & Price, K. (2014). Consumer-brand engagement on Facebook: Liking and commenting behaviors. *Journal of Research in Interactive Marketing*, 8(3), 203-223.
- Kim, Y., & Choi, S. M. (2020). The role of emotional engagement in driving brand loyalty in the digital era. *Journal of Consumer Psychology*, 30(3), 486-502.
- Kumar, R., & Nayak, J. (2019). The influence of online customer engagement on satisfaction and loyalty in e-businesses. *International Journal of Marketing Science*, 17(4), 326-340.
- Lai, H. M. (2021). The role of customer demographics in influencing online shopping behavior: A cross-sectional study in Taiwan. *Journal of Internet Commerce*, 20(1), 95-112.
- Lee, J., & Widjaja, T. (2021). Digital customer experience: Enhancing satisfaction through personalized online engagement. *Journal of Interactive Marketing*, 30(2), 112-128.
- Lim, W. M., Lee, T. H., & Yap, W. J. (2021). The impact of delivery service quality on customer satisfaction in e-commerce: Evidence from Southeast Asia. *Journal of Retailing and Consumer Services*, 57, 102250.
- Manzoor, S. R., Shoaib, M., & Hasan, N. U. (2020). Social media engagement and customer loyalty: The moderating effect of brand love. *Journal of Internet Commerce*, 19(2), 172-192.
- Mendoza, A. C., & Perez, R. D. (2021). E-commerce growth in the Philippines during the COVID-19 pandemic: Challenges and opportunities. *Journal of Southeast Asian Economic Studies*, 18(2), 109-125.
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of Marketing*, 70(4), 136- 153.

- 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.
- Rodriguez, P., & Wise, S. (2018). Building brand loyalty through online customer engagement: An empirical analysis. *Journal of Business Research*, 13(1), 95-106.
- Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing*, 66(1), 15-37.
- Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2021). From multi-channel retailing to omni- channel retailing: Introduction to the special issue on multi-channel retailing. *Journal of Retailing*, 91(2), 174-181.
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer engagement: Exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20(2), 122-146.
- Xu, X., Li, Q., & Chan, F. (2020). Enhancing online customer experience through AI- powered chatbots: The role of real-time interaction and personalization. *Journal of Consumer Research*, 47(4), 685-698.
- Zhou, W. (2022). The impact of real-time online engagement on customer satisfaction in the digital economy. *Journal of Internet Commerce*, 29(5), 145-160.

Copyrights

Copyright of this article is retained by the author/s, with first publication rights granted to APJAET. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution-Noncommercial 4.0 International License (<http://creativecommons.org/licenses/by/4>).