AI Chatbots: Elevating Customer Interactions Amidst Challenges

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Abstract: In the current era of rapid technological advancement, businesses must stay abreast of current trends to maintain competitive edge and ensure continued success. Prioritizing customer experience is paramount wherein showcasing a deep commitment to customer-oriented style is the differentiator. The modern marketing technologies give rise to intelligent conversational agents that has revolutionized customer engagement. As technology continues to shape the global business landscape, this study assessed the customer experience through their extent of interaction and challenges encountered in using artificial intelligence (AI) chatbots.

Descriptive-quantitative research method was employed using validated survey questionnaire distributed to 258 locals from targeted respondents in the barangays of Las Pinas City who have experiences in interacting with AI-chatbots. The respondents were clustered to smaller groups who are knowledgeable about the topic, experienced using AI Chatbots by top e-commerce shops and are willing to participate. While AI chatbots have the potential to improve customer experience, their limitations and challenges must be addressed to ensure more effective and satisfying customer transactions.

Keywords: AI Chatbots, Customer Experience, E-commerce shops, Technology, Modern Marketing

I. Introduction

Providing an amazing customer experience is not only beneficial for the consumer, but also for the business itself because they are often willing to pay more for a wonderful, personalized shopping experience that meets their needs. Focusing on creating an exceptional shopping experience drives business success that leads to increase customer lifetime value and competitive advantage in the market. Customers are more empowered these days and tend to find seamless customer experience from top e-commerce shops. The term "customer experience" refers to the entire customer process when researching, buying, and inquiring about a product or service. The definition of seamless customer experience is that customers who shop simultaneously on all channels and devices will encounter customer-retailer interactions that deliver a consistent value proposition and channel reciprocity [7].

A seamless customer experience is free of mistakes, delays, and setbacks. In other words, this type of customer experience is quick, easy, and delightful. It should be consistent across all channels as well. This type of customer experience is important because it is the most effective way to keep the customers happy and loyal to the business. However, key challenges need to be addressed for e-commerce shops to well-positioned itself in delivering the best customer experience.

Customer experience has a direct impact on customers' purchasing decisions wherein positive experience can lead to repeat business and customer loyalty [15], while a negative experience can drive customers away. The use of AI-powered chatbots can significantly enhance customer experience, operational efficiency, and cost-effectiveness for businesses, making them a valuable tool for modern customer experience.

A. Research Objectives

The main objective of this study is to assess customer experience through their extent of interaction and challenges encountered in using AI chatbots by top e-commerce shops. Specifically focused on the following; (1) assessment of the extent of interaction limited to automatability, problem solving ability, personalization, and availability and (2) challenges encountered based on AI chatbots understanding and knowledge, empathy and emotions, decision making, usage and overall system design.

II. Literature Review

1. Artificial Intelligence (AI)

Artificial Intelligence vary in learning ability, adaptability, and connectivity [14]. A chatbot is a typical example of an AI system and one of the most basic and often used forms of intelligent Human-Computer Interaction (HCI) [18]. It is a computer program capable of speaking at least one human language and acting intelligently responding to text or voice messages [1][2]. The AI chatbots must collect relevant information and data, then safely transmit it over the internet. Businesses must ensure that information exchanged with chatbots is secure if they intend to use them for customer interactions.

2. Customer Interactions

Businesses can employ technology to achieve long lasting customer experience especially given how it affects purchase decision making, service delivery, and customer relationship management [9]. Artificial intelligence (AI) is radically changing marketing strategies, including how customers are handled, and modern marketing is more sophisticated, automated, and data-driven than ever before. The emergence of intelligent agent technologies has made it possible for robots and people to communicate with one another. Different marketing opportunities are used in today's competitive world to accomplish business objectives. Customer interactions is crucial to marketing initiatives. Businesses may employ technology to accomplish this, especially given how it changes the nature of customer service [19] and the customer experience.

Customers demand empathy, especially when struggling with a brand or business. When a conversation [25] [29] deviates from a predetermined course, an AI chatbot's incapacity to improvise and lack of human touch led to a poor customer experience [26]. In addition, AI chatbots cannot respond when a customer's question is complex or confusing. Moreover, to fully exploit this technology's potential, it is crucial to comprehend the user experience of chatbots [5] for customer support [3] [13]. The dynamic nature of user experience [6] suggests that the experience may change over time if users get used to an interactive system, run into issues, or lose interest which needs to focus on how emotional intelligence of AI chatbots provide must be balanced [28][8] within the parameters of ethical and moral decision making [16].

3. Challenges Encountered

Businesses should ask themselves how they can overcome the implementation challenges with AI chatbots. Hence, a need to dedicate a lot of time to invest in training as well as major decision on the features that best fit their e-commerce shop as well as customer preferences. As a result, it can quickly recognize the appropriate feelings and emotions in a human voice and reply appropriately [4] leading to a customer-centered AI design [17] including information support [10] [11] [12]. With the help of cutting-edge machine learning theories, chatbots are becoming very good at mimicking human speech. However, technological investments should avoid high mistake rates and low client satisfaction [20] wherein online business should consider that customer purchase intent affects the customer's ultimate choice.

B. Research Framework

Fig. 1 Research Paradigm of the Study
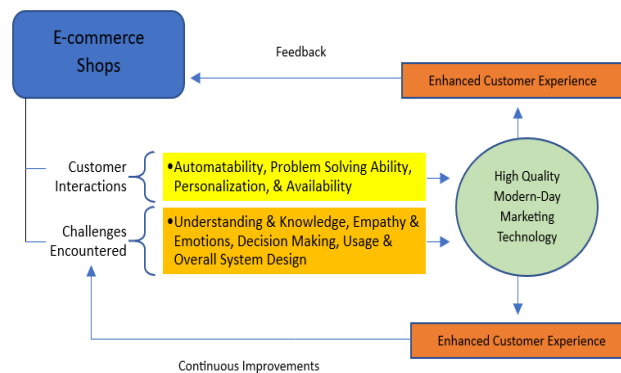
The research paradigm surrounding ecommerce shops' customer interactions and challenges encountered to enhance customer experience through AI chatbots is an important area of online retail. It is evident that e-commerce platforms are increasingly integrating AI chatbots to engage with customers in a personalized and efficient manner. These chatbots leverage technologies to streamline the shopping experience by simulating human-like interactions, creating a more engaging and interactive environment for customers. The primary goal of implementing AI chatbots in e-commerce shops is to enhance the overall customer experience requiring a balance between automated efficiency and human empathy. Appreciating the evolving landscape of chatbot technology, addressing challenges, and prioritizing customer satisfied experience are crucial aspects for businesses seeking to leverage AI chatbots effectively in the dynamics of e-commerce wherein a need to use technology that can design high-quality modern-day marketing is a priority now and in the future [21].

III. Research Methodology

Descriptive-quantitative research method was used in the study. A descriptive design is employed to learn more about the phenomenon's current state. The three main purposes of descriptive design can be explained as describing, explaining, and validating research findings. For this study, descriptive research was used to analyze the customer interactions and challenges encountered when using AI chatbots in transacting using e-commerce platforms. Hence, survey questionnaire was formulated

based on the parameters set for customer interactions and challenges encountered. Results were used as basis for formulating strategic recommendations [27] with aim of building better customer experience through modern-day marketing technology. The researchers used the descriptive quantitative research design to extract and determine the needed data, thus, making it a suitable method to achieve the research objectives.

The sampled population are Filipinos living in (20) barangays in Las Piñas City, with ages ranging from 20 to 59 for both men and women. However, individuals were clustered to those with experience and knowledge on the use of AI chatbots when canvassing or purchasing from top e-commerce shops. The data gathered from the 258 respondents has been tallied, analyzed, and interpreted using statistical tools such as percentage, weighted mean, and standard deviation.

IV. Results and Discussions

Table 1: Customer Interactions in Using AI Chatbots of E-Commerce Shops

Indicators	Mean	Std. Dev	Verbal Interpretation
Automatability	3.01	0.39	To a Moderate Extent
Problem Solving Ability	2.89	0.42	To a Moderate Extent
Personalization	2.96	0.44	To a Moderate Extent
Availability	3.01	0.44	To a Moderate Extent

All indicators exhibit moderate extent on customer interactions when using AI Chatbots when canvassing or purchasing from E-commerce shops. Automatability implies that AI chatbots are like virtual customer service representatives that are responsive to customer inquiries and provide instant responses such as personalization through recommending products based on customers' search activities, problem solving abilities by responding fast and available for 24/7. They are designed to provide instant responses, offering fast, personalized support to customers. Hence, the automatability, problem solving ability, personalization, and availability of AI chatbots are key features that enhances customer service. However, AI chatbots that use natural language processing (NLP) and machine learning needs to enhance the natural-sounding response using language generation techniques as well as responses to queries according to customer needs.

Table 2: Challenges Encountered in Using AI Chatbots of E-Commerce Shops

Indicators	Mean	Std. Dev	Verbal Interpretation
Understanding and Knowledge	3.1751	.40081	Agree
Empathy and Emotions	3.0607	.43587	Agree
Decision Making	3.0071	.42109	Agree
Usages	3.0491	.44712	Agree
Overall System Design	2.9871	.46569	Agree

Respondents sees challenges when AI-chatbots tends to be robotic with limitation on conveying appropriate and empathic answers on queries. AI Chatbots lack human empathy; however, they can imitate human responses, but they are still far from imitating human emotions [22] [23] [24]. When question to a query isn't clear or is too specific, an AI chatbot may have a hard time helping customers. Hence, AI chatbots which specialize on automated replies, are still incapable of making immediate and complicated decisions. Other challenges of customers include without confidence on sharing personal information, difficulty in filtering responses, rewriting same inquiry, slow and similar responses for different queries.

V. Conclusions

Customers interact with chatbots when they feel the need to ask questions but generally they rarely use it when purchasing in e-commerce shops. Several challenges associated with AI chatbots, particularly their limitations in conveying empathetic and appropriate responses to customers due to unclear or overly specific queries as well as inability to make immediate and complex decisions can lead to frustration. Despite their ability to mimic human responses, AI chatbots lack the emotional intelligence and empathy that humans possess, which can lead to a lack of trust and satisfaction affecting customer experience. Furthermore, customers may be hesitant to share personal information due to a lack of confidence on the AI chatbots safety and security systems. In addition, filtering of responses and rewriting of inquiries can be time-consuming and inefficient. Furthermore, while

AI chatbots have the potential to improve customer experience, their limitations and challenges must be addressed to ensure a more effective and satisfying customer transactions.

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