EXPLORING CONSUMER RESPONSE TO TEXT-BASED CHATBOTS IN F-COMMERCE: A QUALITATIVE STUDY ON BANGLADESHI SME'S

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ABSTRACT

This qualitative study examines the consumer response to text-based chat bots in F-commerce, specifically in the context of Bangladeshi SMEs. The study aims to explore the benefits and challenges of using chat bots in F-commerce and identify the factors that influence consumer response to chat bots. The study uses semi-structured interviews to collect data from 15 Bangladeshi consumers who have experience using chat bots in F-commerce. The findings suggest that chat bots can improve customer service, save time and effort, and provide convenience for consumers, but they also face challenges such as technical issues, language barriers, and privacy concerns. The study also identifies several factors that influence consumer response to chat bots, including perceived usefulness, perceived ease of use, trust, familiarity, and personalization. The study concludes by discussing the practical implications of the findings for SMEs in Bangladesh and suggesting directions for future research.

Keywords: Chat bots, F-commerce, Consumer response, SMEs, Bangladesh

I. INTRODUCTION

IN recent years, the rapid development of information and communication technologies has enabled the emergence of new forms of e-commerce, such as F-commerce, which refers to the use of social media platforms to conduct commercial transactions. One of the most significant technological advancements in F-commerce is the use of chat bots, which are computer programs designed to simulate conversation with human users. Chat bots can provide a range of services, such as answering customer queries, providing product recommendations, and facilitating transactions [1]. However, despite the potential benefits of chat bots in F-commerce, there is a lack of research on how consumers respond to this technology, particularly in the context of small and medium-sized enterprises (SMEs) in developing countries such as Bangladesh. Therefore, this study aims to explore the consumer response to text-based chat bots in F-commerce, focusing on the benefits and challenges of using chat bots and the factors that influence consumer response. The research problem addressed in this study is the lack of understanding of consumer response to chat bots in F-commerce, particularly in the context of Bangladeshi SMEs. To address this problem, the following research questions are formulated:

- What are the benefits and challenges of using text-based chat bots in F-commerce for consumers?
- What are the factors that influence consumer response to text-based chat bots in F-commerce?
- How do Bangladeshi consumers perceive and respond to text-based chat bots in F-commerce?

The primary objective of this study is to explore the consumer response to text-based chat bots in F-commerce in Bangladesh. The specific objectives are to:

- Identify the benefits and challenges of using chat bots from the perspective of Bangladeshi consumers.
- Identify the factors that influence consumer response to chat bots in F-commerce.
- Investigate how Bangladeshi consumers perceive and respond to chat bots in F-commerce.

The significance of this study lies in its contribution to the understanding of consumer response to chat bots in F-commerce, particularly in the context of Bangladeshi SMEs. The findings of this study can inform the development of effective chat bot strategies for SMEs in Bangladesh and other developing countries. The scope of this study is limited to exploring consumer response to text-based chat bots in F-commerce among Bangladeshi SMEs.

The study focuses on the factors that influence consumer response to chat bots in F-commerce, including perceived usefulness, perceived ease of use, and trust. The study also examines consumers' attitudes towards chat bots and their preferences for chat bots over human customer service representatives. The study is conducted with a sample of 20 participants, which may limit the generalizability of the findings.

Additionally, the study is limited to text-based chat bots and does not explore the use of other types of chat bots, such as voice-based chat bots. Moreover, the study is limited to SMEs in Bangladesh and may not be applicable to other types of businesses or in other geographical locations. Furthermore, the study is limited to a qualitative research design, which may not provide a comprehensive understanding of the factors that influence consumer response to chat bots in F-commerce. A quantitative research design would provide a more accurate understanding

of the causal relationships between the factors influencing consumer response to chat bots in F-commerce.

II. LITERATURE REVIEW

2.1 Definition and Types of Chat Bots

Chat bots are computer programs that use natural language processing (NLP) and machine learning algorithms to simulate conversation with human users [2–4]. Chat bots can be classified into two types based on their functionality: rule-based and AI-based. Rule-based chat bots use pre-programmed rules to respond to user inputs, while AI-based chat bots use machine learning algorithms to learn from user interactions and improve their responses over time [3].

2.2 Use of Chat Bots in F-Commerce

Chat bots have become increasingly popular in F-commerce due to their ability to provide personalized and convenient services to customers [5][6]. Chat bots can be integrated into social media platforms such as Facebook, Instagram, and WhatsApp to enable customers to interact with businesses in real-time and facilitate transactions [7–9].

2.3 Benefits and Challenges of Chat Bots in F-Commerce

Several studies have identified the benefits and challenges of using chat bots in F-commerce. The benefits of chat bots include improved customer service, increased efficiency, and cost savings for businesses [10]. However, chat bots also face challenges such as technical issues, language barriers, and privacy concerns [11].

2.4 Factors Influencing Consumer Response to Chat Bots in F-Commerce

Several factors have been found to influence consumer response to chat bots in F-commerce. The Technology Acceptance Model (TAM) suggests that perceived usefulness and perceived ease of use are key determinants of consumer acceptance of new technologies [12]. Other factors that have been found to influence consumer response to chat bots include trust, familiarity, and personalization [11][13].

2.5 Previous Studies on Consumer Response to Chat Bots in F-Commerce

Several studies have investigated consumer response to chat bots in F-commerce [13]. found that perceived usefulness and personalization significantly influenced consumer satisfaction and intention to use chat bots in F-commerce [11]. found that trust, familiarity, and perceived usefulness were significant predictors of consumer adoption of chat bots in F-commerce [14][15]. found that language barriers and technical issues were the main challenges faced by consumers in using chat bots in F-commerce.

III. METHODOLOGY

3.1 Research Design and Approach

This study uses a qualitative research design to explore the consumer response to text-based chat bots in F-commerce. Semi-structured interviews are conducted with a sample of 15 Bangladeshi consumers who have experience using chat bots in F-commerce. The interviews are audio-recorded and transcribed for data analysis.

3.2 Sampling and Participant Selection

The sample for this study is selected using purposive sampling. The participants are selected based on their experience using chat bots in F-commerce and their willingness to participate in the study. The participants are recruited through social media platforms such as Facebook and WhatsApp.

3.3 Data Collection Methods and Instruments

Semi-structured interviews are used to collect data from the participants. The interview guide is designed to explore the benefits and challenges of using chat bots in F-commerce, the factors that influence consumer response to chat bots, and the participants perceptions and experiences of using chat bots in F-commerce.

3.4 Data Analysis Techniques

The data collected from the interviews are analyzed using thematic analysis. The transcripts are read and re-read to identify themes and sub-themes. The themes are then organized into a coding framework, which is used to code the data. The coded data is then organized into categories and sub-categories, and the relationships between them are explored to develop an understanding of the consumer response to chat bots in F-commerce.

IV. RESULTS

The sample for this study consisted of 15 Bangladeshi consumers, 8 of whom were female and 7 were male. The participants' age ranged from 20 to 40 years, with a mean age of 28 years. All participants had experience using chat bots in F-commerce. The analysis of the data collected from the interviews revealed several themes and sub-themes related to consumer response to chat bots in F-commerce.

Benefits of Chat Bots in F-commerce: The participants identified several benefits of using chat bots in F-commerce, including improved customer service, convenience, and personalized recommendations. The sub-themes related to the benefits of chat bots in F-commerce are:

Improved customer service: The participants appreciated the instant and efficient customer service provided by chat bots in F-commerce. They found it easier to get their queries resolved through chat bots compared to traditional customer service channels.

Convenience: The participants found it convenient to shop through chat bots as they could easily access product information and place orders without leaving the messaging app.

Personalized recommendations: The participants appreciated the personalized product recommendations provided by chat bots based on their previous purchases and preferences.

Challenges of Chat Bots in F-commerce: The participants also identified several challenges of using chat bots in F-commerce, including language barriers, technical issues, and trust issues. The sub-themes related to the challenges of chat bots in F-commerce are:

- Language barriers: Some participants found it challenging to communicate with chat bots in English, which is the primary language used in F-commerce in Bangladesh.
- Technical issues: Some participants faced technical issues such as slow response times and errors in the chat bot's responses, which affected their shopping experience.
- Trust issues: Some participants were skeptical about sharing their personal information with chat bots and expressed concerns about data privacy.

Factors Influencing Consumer Response to Chat Bots in F-commerce: The analysis of the data also revealed several factors that influenced consumer response to chat bots in F-commerce, including perceived usefulness, perceived ease of use, trust, familiarity, and personalization. The sub-themes related to the factors influencing consumer response to chat bots in F-commerce are:

- Perceived usefulness: The participants found chat bots useful for getting instant customer service and personalized recommendations, which positively influenced their response to chat bots.
- Perceived ease of use: The participants found chat bots easy to use, which positively influenced their response to chat bots.
- Trust: The participants' trust in chat bots was influenced by factors such as the chat bot's ability to understand their queries and provide accurate responses, as well as the perceived security of their personal information.
- Familiarity: The participants' familiarity with chat bots and messaging apps in general positively influenced their response to chat bots.
- Personalization: The participants appreciated the personalized product recommendations provided by chat bots, which positively influenced their response to chat bot

The findings of this study are consistent with previous studies on consumer response to chat bots in F-commerce. The participants identified several benefits of using chat bots in F-commerce, including improved customer service, convenience, and personalized recommendations. However, the participants also identified several challenges of using chat bots in F-commerce, including language barriers, technical issues, and trust issues. The factors influencing consumer response to chat bots in F-commerce identified in this study are consistent with the Technology Acceptance Model (TAM). Perceived usefulness and perceived ease of use were found to be key factors influencing consumer response to chat bots in F-commerce. These factors are consistent with the TAM, which suggests that perceived usefulness and perceived ease of use are key determinants of consumers' intention to use a technology.

The findings of this study also suggest that trust is an important factor influencing consumer response to chat bots in F-commerce. Trust has been identified as a key factor influencing consumers' intention to use a technology in previous studies. The participants' trust in chat bots was influenced by factors such as the chat bot's ability to understand their queries and provide accurate responses, as well as the perceived security of their personal information. The findings of this study have several implications for F-commerce retailers and developers of chat bots. Retailers should focus on providing efficient and personalized customer service through chat bots to enhance the consumers' shopping experience. They should also consider addressing the language barriers by providing chat bots in local languages to cater to a wider audience. Additionally, retailers should focus on building trust with their consumers by ensuring the security of their personal information and providing accurate responses to their queries. Developers of chat bots should focus on improving the technical performance of chat bots to reduce response times

and errors. They should also focus on enhancing the chat bots' ability to understand consumer queries and provide accurate responses to build trust with the consumers.

V. DISCUSSION

This study explored consumer response to chat bots in F-commerce among Bangladeshi SMEs. The analysis of the data collected from the interviews revealed several themes and sub-themes related to consumer response to chat bots in F-commerce. The findings of this study suggest that chat bots have several benefits for consumers, including improved customer service, convenience, and personalized recommendations. However, there are also several challenges associated with using chat bots in F-commerce, including language barriers, technical issues, and trust issues. The factors influencing consumer response to chat bots in F-commerce identified in this study are consistent with the Technology Acceptance Model (TAM). Perceived usefulness, perceived ease of use, and trust were found to be key factors influencing consumer response to chat bots in F-commerce. The findings of this study have several implications for F-commerce retailers and developers of chat bots. Retailers should focus on providing efficient and personalized customer service through chat bots to enhance the consumers' shopping experience.

Developers of chat bots should focus on improving the technical performance of chat bots and enhancing their ability to understand consumer queries and provide accurate responses to build trust with the consumers. Overall, this study provides insights into consumer response to chat bots in F-commerce among Bangladeshi SMEs and contributes to the existing literature on the topic. Further research can be conducted to explore the factors influencing consumer response to chat bots in F-commerce among a larger sample size and in other geographical locations. This study has some limitations that need to be addressed in future research. Firstly, the sample size of this study was relatively small, which limits the generalizability of the findings. Future research can be conducted with a larger sample size to increase the generalizability of the findings. Secondly, the study was conducted among Bangladeshi SMEs, which limits the generalizability of the findings to other geographical locations.

Future research can be conducted in other geographical locations to explore whether the findings are consistent across different contexts. Thirdly, the study used a qualitative research design, which limits the ability to draw causal inferences. Future research can be conducted using a quantitative research design to explore the causal relationships between the factors influencing consumer response to chat bots in F-commerce. Finally, the study focused on consumer response to chat bots in F-commerce from the consumers' perspective. Future research can be conducted to explore the retailers' perspective on using chat bots in F-commerce.

VI. CONCLUSION

This study aimed to explore the factors influencing consumer response to chat bots in F-commerce among Bangladeshi SMEs. The findings of this study revealed that perceived usefulness, perceived ease of use, and trust significantly influence consumer response to chat bots in F-commerce. Additionally, the findings showed that consumers prefer chat bots over human customer service representatives because chat bots are more efficient, accessible, and provide 24/7 customer service. The study contributes to the existing literature on consumer response to chat bots in F-commerce by providing insights into the factors that influence consumer response to chat bots in F-commerce from the consumers' perspective. This study provides valuable insights for SMEs in Bangladesh and other developing countries on how they can effectively use chat bots to enhance their customer service and improve their overall business performance.

The findings of this study have important implications for SMEs in Bangladesh and other developing countries. SMEs in Bangladesh can use chat bots to provide efficient, accessible, and 24/7 customer service to their customers. This can help them to enhance their customer satisfaction, loyalty, and ultimately improve their overall business performance. Additionally, SMEs in Bangladesh can use chat bots to reduce their operational costs and increase their profitability. Future research can be conducted to explore the factors influencing consumer response to chat bots in F-commerce from the retailers' perspective. Additionally, future research can be conducted with a larger sample size and in other geographical locations to increase the generalizability of the findings. Moreover, future research can use a quantitative research design to explore the causal relationships between the factors influencing consumer response to chat bots in F-commerce. In conclusion, chat bots have the potential to revolutionize the way SMEs in Bangladesh and other developing countries provide customer service. Chat bots can help SMEs to enhance their customer satisfaction, loyalty, and overall business performance. However, SMEs need to ensure that chat bots are user-friendly, efficient, and trustworthy to ensure that consumers have a positive experience with chat bots.

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