An Empirical Study on AI Powered Chatbot on WhatsApp

(Examining User Experience, Adaptation and Engagement)

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Abstract

The exponential expansion of messaging platforms has given rise to the utilization of WhatsApp chatbots as a crucial instrument for client engagement. This study looks into how WhatsApp chatbots are used, adopted, and engaged by users, as well as how they affect customer service and business communication. Using surveys in a mixed-methods manner with a sample size of 100 provides important advantages like faster response times, more productivity, and better personalization. The results emphasize the significance of AI developments, smooth integration, and chatbot creation tools. This study adds to our knowledge of the possibilities, constraints, and potential directions of WhatsApp chatbots, offering useful information to researchers, developers, and businesses.

Key Words: Artificial intelligence, WhatsApp, Digital Assistance, natural language processing (NLP), WhatsApp chatbots, pre-programmed, Messaging platforms, machine learning, its User Experience, Adaptation and Engagement

Introduction

An artificial intelligence-driven chatbot on WhatsApp is a digital assistant that helps companies and their customers communicate through the messaging service. It understands and has conversational conversations with customers by utilizing machine learning, sentiment analysis, natural language processing (NLP), and other state-of-the-art technologies. Businesses may engage with consumers and potential customers at every level with WhatsApp chatbots. By using a bot on WhatsApp, brands may efficiently enhance their sales, engagement, acquisition, and post-sale support. Using the chat interface, users may converse with the WhatsApp chatbot just like they would with a real person. It's a series of pre-programmed responses on WhatsApp that mimic human dialogue. Messaging platforms have transformed the way businesses communicate with their clients in recent times.

"WhatsApp chatbots will change the way businesses interact with customers, making it more convenient, efficient, and cost-effective." - Mark Zuckerberg, Meta CEO

Objectives

- To Know About the WhatsApp Chatbot User Experience
- To Know About the User Engagement in WhatsApp Chatbot
- To Know About the Loyalty and Adoption in WhatsApp Chatbot
- To Know About Customer Satisfaction of WhatsApp Chatbot

Scope

This Research helps to know about the WhatsApp Chatbot`s User Experience and User Engagement, and to know about loyalty and adaptation in WhatsApp chatbot

Definition of the Concept

A WhatsApp chatbot is a piece of software that mimics human-like communication with users on the well-known messaging program WhatsApp by utilizing artificial intelligence (AI) and natural language processing (NLP).

Types of chatbot

- ✓ 1. Rule-based chatbots
- ✓ 2. AI-powered chatbots
- ✓ 3. Hybrid chatbots
- ✓ 4. Voice-enabled chatbots

1. Rule-Based Chatbots

- React to user enquiries using specified rules;

- Restrictions to particular instances and phrases
- Easy to put into practice

2. AI-Powered Chatbots
- Apply natural language processing and machine learning (NLP)
- Recognize context and user intent
3. Hybrid Chatbot

- Integrate AI-powered and rule-based technologies
- Strike a balance between complexity and simplicity

4. Voice-Enabled Chatbots

-Ideal for straightforward enquiries and transactions;

- Improve accessibility and user experience

Chatbots are used in many industries, including:

- **Real estate:** The top industry that profits from chatbots, accounting for 28% of the total.
- **Travel:** The second top industry that profits from chatbots, accounting for 16% of the total.

- **Education:** The third top industry that profits from chatbots, accounting for 14% of the total.
- **Healthcare:** The fourth top industry that profits from chatbots, accounting for 10% of the total.
- **Finance:** The fifth top industry that profits from chatbots, accounting for 5% of the total.

Research methodology:

1. Mixed-methods approach (quantitative and qualitative) are used in this article to gain knowledge about the WhatsApp chatbot and its User Experience, Adaptation and Engagement

2. Survey research design is the structured plan for collecting data through surveys to answer research questions or test hypotheses.

Data collection methods:

Quantitative Data:

1. Online survey questionnaire was taken using questionnaire method using google form

2. Sample size: 100 WhatsApp users

3. Stratified random sampling

4. Demographic data: age, gender, education, occupation

Qualitative Data:

1.Purposive sampling (WhatsApp power users, businesses using WhatsApp chatbots)

Observations

SAMPLE DATA ANALYSING OF COLLECTED SAMPLE

DEMOGRAPHIC FACTORS	PARTICULARS	FREQUENCY	PERCENTAGE
Gender	Male	21	21.6%
	female	78	78.4%
	under 18	3	3%
	18 - 24 years old	90	90%
Age Group	25 - 34 years old	7	7%
	10th/12th	6	6.2
Education	Under graduate	47	46.9
	Post graduate	47	46.9

Chat bot experience

User experience	Response		
Interaction	Yes 76.65%	No 11.8%	Maybe 11.8%
Frequency	Daily 17.6%	Weekly 41.2%	Never 17.6%
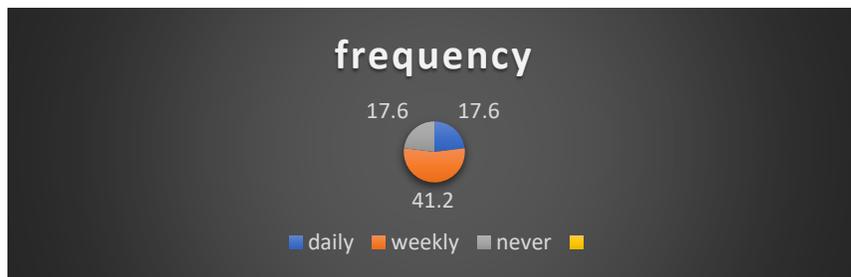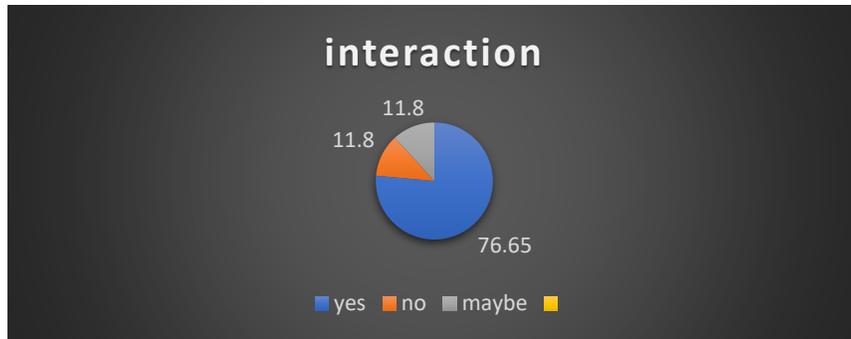
User engagement

Engagement	Response		
Time spent	5-15 min (47.1%)	Less than 5min (41.25)	Never (0)
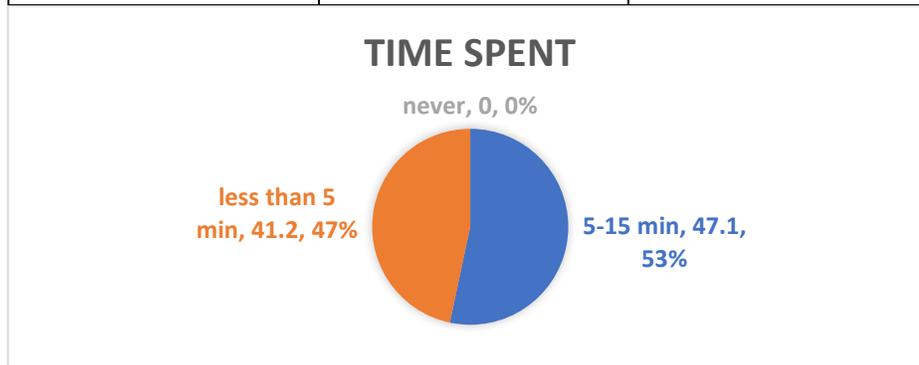
Loyalty and adaptation

Loyalty and adaptability	response		
Continued usage	Yes 47.1	No 17.6	Maybe 35.3
recommendation	Not recommended 0	Maybe 42.7	Highly 41.2
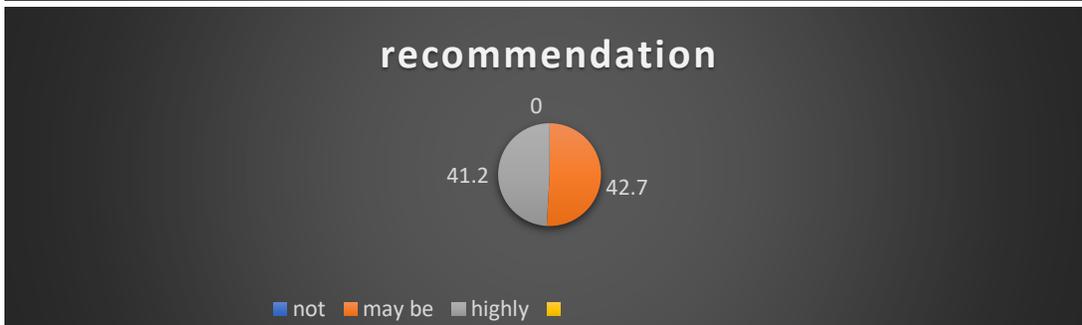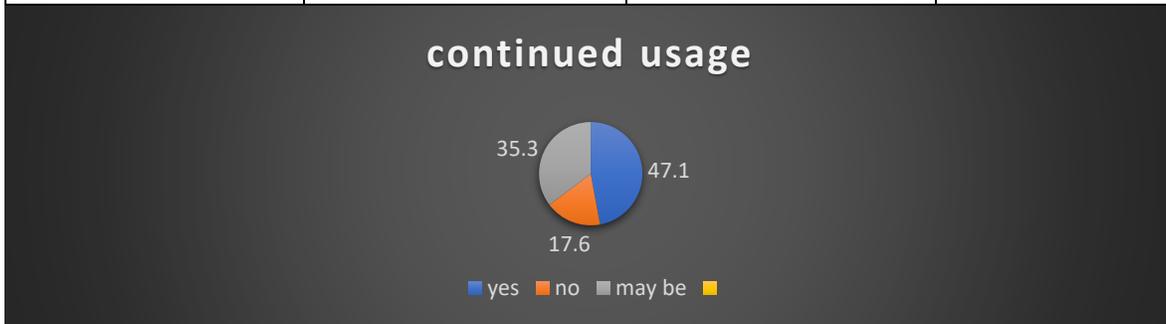
 Suggestions

• To boost customization, give chatbots the capacity to remember previous conversations and offer tailored interactions.
• Provide clearer, more concise answers to frequently asked queries to improve interaction speed and satisfaction.
• Incorporate more human-like traits like voice engagement and emotional understanding to make talks feel more organic.
• Increase chatbot intelligence to handle complex queries and provide accurate responses.
• Expand a chatbot's language set and improve accessibility by enabling voice-activated interactions.

Conclusion

A new era in consumer engagement has begun with the introduction of WhatsApp chatbots, which are revolutionizing the way businesses communicate with their clientele. This report highlights WhatsApp chatbots' potential to transform customer service and business communication by offering insightful information about their use, adoption, and engagement. WhatsApp chatbots, which provide unmatched ease, effectiveness, and customization, have revolutionized consumer interaction. Chatbots will continue to influence customer service and corporate communications going forward, completely changing how companies engage with their clientele as technology develops.

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