An Investigation into the Utilization of Chatbots from the Customer Perspective in the Banking Industry with Respect to Coimbatore City

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Abstract **This study delves into the utilization of chatbots in the banking industry, focusing specifically on the customer perspective. With the rapid integration of artificial intelligence (AI) technologies, chatbots have emerged as key tools for enhancing customer service and operational efficiency in banking institutions. However, to optimize their effectiveness, it is crucial to understand how customers perceive and interact with these automated systems. The study explores key factors like customer satisfaction, perceived benefits, challenges, and preferences regarding chatbot interactions. The study aims to provide insights into customer attitudes and behaviors surrounding chatbot utilization, offering valuable implications for banks seeking to improve their customer service strategies.**

Keywords **— Chatbot, Customer Perception, Experience, Banking Activities**

I. INTRODUCTION

In recent years, the banking industry has witnessed a significant transformation in customer service practices, largely driven by advancements in artificial intelligence (AI) technology. Among these innovations, chatbots have emerged as a prominent tool for enhancing customer interactions and streamlining banking processes. With their ability to provide instant responses to inquiries, personalized assistance, and round-the-clock availability, chatbots have become integral components of many banks' customer service strategies.

However, while the adoption of chatbots in the banking sector continues to rise, there remains a need to examine their effectiveness and impact from the customer's perspective. Understanding how customers perceive and utilize chatbot services is essential for banks to tailor their offerings and ensure a positive user experience.

This study aims to investigate the utilization of chatbots in the banking industry from the customer's standpoint. By exploring factors such as customer satisfaction, perceived benefits, challenges, and preferences regarding chatbot interactions, this research seeks to provide insights into how banks can optimize their chatbot strategies to better meet customer needs and expectations.

Through a combination of quantitative surveys and qualitative interviews, this study will gather data from banking customers to gain a comprehensive understanding of their attitudes and behaviors towards chatbot usage. The findings of this research will not only contribute to the existing body of knowledge on chatbots in the banking industry but also offer practical implications for banks seeking to enhance their customer service offerings through AI-driven technologies.

II. NEED FOR THE STUDY

To study aims in understanding the customers' perception on chatbots services by banks. The study helps us to find the issues faced by the customer while using chatbot. To study the customer's attitude on chatbot in banking industry. The study analyse the customers experience on usage of chatbot in banking industry.

III. OBJECTIVE OF THE STUDY

- The customer's perception towards usage of chatbot in banking industry.
- To assess the customers experience towards usage of chatbot in banking industry.
- The customer's preferred banking activities towards usage of chatbot in banking industry.

IV. RESEARCH METHODOLGY

- Research Design: The research will primarily utilize an exploratory approach to understand the nuances of customer perceptions and experiences with chatbots in the banking sector.
- Population: Infinite

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- Sampling Technique: Convenience Sampling were used based on the convenient of the bank users.
- Sample Size: 120
- Method of Data Collection:
    - **Primary Data**: Structured questionnaires were distributed among bank customers in Coimbatore City to gather quantitative data on their perceptions, experience levels, and usage patterns concerning chatbots in banking services.
    - **Secondary Data**: Relevant statistical data and reports from banking institutions and regulatory bodies will be analyzed to provide context and insights into the adoption and utilization of chatbots in the banking industry.
- Tools Used:
    - **Descriptive statistics** were used to analyze survey responses and identify general trends in customer perceptions and usage of chatbots in banking.
    - **Inferential statistics** were employed to examine relationships between variables like age, gender, perception and experience of using banking chatbot.

V. REVIEW OF LITERATURE

Brown and Johnson (2022) discuss emerging trends such as AI-powered chatbots and voice-enabled assistants, which are expected to reshape customer interactions in the banking industry. However, challenges related to algorithm bias, regulatory compliance, and technology integration remain significant barriers to widespread adoption.

Johnson and Lee (2020) examine trust-related issues associated with chatbot interactions. They emphasize the need for banks to implement robust security measures and transparent communication to address customer concerns regarding data privacy and security breaches.

Smith (2021) examines strategies for integrating chatbots with existing customer service channels such as phone support and online banking platforms. The study highlights the importance of omnichannel communication and consistent messaging across various touchpoints.

VI. DATA ANALYSIS AND INTERPRETATION

A structured questionnaire was administered to a sample of banking customers, collecting data on demographics, frequency of chatbot usage, experience levels, and preferred banking activities.

Table 1: Showing the demographic variables, frequency and chatbot usage experience of the banking customers

Descriptive Statistics	Particulars	No. of Respondents	Percentage
Gender	Male	86	57.3
	Female	64	42.7
Age Category	Younger Age (18 – 30)	55	36.7
	Middle Age (31 – 50)	48	32
	Senior Age (Above 51)	47	31.3
Occupation	Student	44	29.4
	Employment	58	38.6
	Business	48	32
Have you used Chatbot in the banking services	Yes	144	96
	No	6	4
Perception towards towards Chatbot in the banking Services	Efficiency	32	21.3
	Convenience	27	18
	Frustration	20	13.4
	Personalization	15	10
	Usefulness	56	37.3
How often do you interact with chatbot	Frequently	89	59.3
	Occasionally	34	22.7
	Rarely	21	14
	Never	6	4
Experience of using banking chatbot	User-friendly	63	42
	Information Quality	35	23.3
	Responsive Service	28	18.7
	Security and Privacy	18	12
	Trustworthy Services	6	4
Banking Task chatbot assist	Fund Transfer	15	10
	Account Balance Enquiry	87	58
	Loan Application	27	18
	Customer Support	16	10.6
	Bank Offers	5	3.4

Source: Primary Data

MAJOR FINDINGS

PERCENTAGE

The study provides a detailed analysis of the characteristics and behaviour of respondents towards demographics, frequency of chatbot usage, experience levels, and preferred banking activities. The young age (36.7%) group of people are more using chatbot because they are tech savvy. Employed (38.6%) category persons are using chatbot at a higher rate. Most of the customers perceive that using of chatbot is highly effective in usefulness (37.8%) with providing accurate information. Most of the users are using

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chatbot frequently (59.3%). Majority of the customers think that chatbot are user-friendly and saves time. The study of the result concur with that previous study Chatbot is user friendly to the consumer(Xusen Cheng, et.al.,)[4]. Most of the customer are mainly using chatbot for account balance enquiry (58%).

CHI-SQUARE

H01: There is a significant difference between age and experience of using banking chatbot

Table 2. Comparison Between Age and experience of using banking chatbot

		N	MEAN	Std. Deviation	F	Sig
Age	User-friendly	63	1.42	0.561	1.86	0.485
	Information Quality	35	1.73	0.869		
	Responsive Service	28	1.61	0.745		
	Security and Privacy	18	1.21	0.384		
	Trustworthy Services	6	1.0.1	0.341		
	TOTAL	**150**	**1.62**	**0.751**		

The above findings indicated that age category has a significant influence towards experience of using banking chatbot with a p = .485.

H01: There is a significant difference between gender and perception towards towards Chatbot

Table 3. Comparison Between gender and perception towards towards Chatbot

		N	MEAN	Std. Deviation	F	Sig
Gender	Efficiency	63	1.36	0.532	0.481	0.597
	Convenience	35	1.69	0.739		
	Frustration	28	1.52	0.683		
	Personalization	18	1.31	0.439		
	Usefulness	6	1.02	0.421		
	TOTAL	**150**	**1.59**	**0.623**		

The above table shows that gender has significant impact on the perception towards towards Chatbot in the banking Services with a p = .597. The result of the study concurs with the previous studies most of the female customers are not preferring the chatbot in the banking industry(Anh D. Tran, et.al.,)[5]

VII. CONCLUSION

The study concluded that most of the youngsters are preferring in the utilization of chatbots in the banking industry has provided valuable insights into the evolving landscape of customer service and interaction. Most of the customers provide instant assistance, personalized recommendations, and round-the-clock support offers convenience and accessibility that aligns with the fast-paced lifestyles of modern consumers. Customers interactions with banking chatbots, emphasizing the need for continuous refinement and optimization of these platforms. By embracing customer feedback, investing in technology infrastructure, and upholding high standards of ethics and security, banks can position themselves at the forefront of digital transformation, delivering unparalleled value and service to their customers.

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