



The Effect of AI-Powered Chat bots on Customer Satisfaction in E-commerce Marketing (TAM Approach)

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Abstract: The unification of AI-powered chat bots in e-commerce has Trans figure customer interactions, certainly influencing satisfaction and purchase behavior. This paper investigates the effect of chat bot on satisfaction within the substructure of Technology Acceptance Model (TAM). Using quantitative data analysis, we scrutinize the relationships between recognize ease of use recognize usefulness, and user satisfaction with chat bots in e-commerce settings. The finding of this research will subscribe valuable insights to both academics and practical domains. In conclusion this paper aims to provide a complete analysis of the cooperation between AI-powered chat bots, customer satisfaction and e-commerce marketing within the TAM substructure benefaction precious knowledge for additional research and practical applications.

Keywords: AI-powered chat bots, customer satisfaction, e-commerce marketing, TAM, recognize ease of use, recognize usefulness.

1. INTRODUCTION:

E-commerce has diversified consumer behavior contributing convenience and wide product selection. However, customer service in this digital realm can be neutral and annoying, often lacking the human touch. AI-powered chat bots have emerged as a possible answer offering prompt support, personalized recommendation, and automated transaction process. This research scrabble into the impact of these virtual assistants on customer satisfaction, a crucial metric for e-commerce achievement.

2. OBJECTIVES & SCOPE OF THE STUDY:

A. Objective of the study: The study aims to understand how digital payment apps affect the spending habits of youth in India. It also seeks to identify the factors driving app adoption and examine how demographic differences influence usage and financial behaviour.

1. To examine the influence of digital payment apps on the spending patterns of Indian youth.
2. To identify the key factors motivating youth to adopt digital payment apps.
3. To explore the behavioural trends and psychological effects of cashless transactions on youth spending habits.

4. LITERATURE REVIEW:

The landscape of e-commerce is quickly developing, with consumers demanding personalized and suitable shopping experiences. AI-powered chat bots are appearing as a powerful tool to address these demands, influencing research into their effect on customer satisfaction in e-commerce marketing. This literature review examines existing research on chat bots execution. Exploring there benefits, limitations, and key factors influencing customer satisfaction within the e-

commerce factors. Chat bots offer round- the-clock assistance, however of time zone or location, amplifying customer experience and resolving issues instantly.

Enhanced chat bots grip natural language processing and user data to deliver tailored product advice and address individual needs, leading to increase customer commitment and satisfaction. Chat bots can guide customer through the purchase journey, answer question about product and order status, and smooth secure transactions, ultimately optimising the checkout process and enhancing satisfaction.

Chatbot handles daily inquires, freeing up human customer service agents for complex issues. This reduces costs and allows for more efficient allotment of resources. While chat bots excel accurate tasks they can struggle with understanding emotions and shade in human communication, possibly leading to impersonal interactions and customer dissatisfaction. Mistake of user queries and technical problem can annoy customers and hinder their experience. Robust design and testing are crucial for minimizing these problems. Chat bots are often programmed for some tasks and may struggle with complicated inquires or situations.

5. HYPOTHESIS

Drawing upon TAM and important literature, we hypothesize that:

- Higher recognize prompt of use of AI-powered chat bots will lead to increase customer satisfaction.
- Higher recognize functionality of AI-powered chat bots will lead to increase customer satisfaction.
- The Customer satisfaction will conciliate the relationship between recognize prompt of use and recognize usefulness of AI-powered chat bots.

6. RESEARCH METHODOLOGY:

A survey will be distributed to e-commerce customers who have interacted with AI chat bots, estimating their satisfaction with the chat bots experience on various factor such as prompt of use helpfulness, and decision of their inquiries. We will analyze some successful e-commerce business that have implemented AI chat bots to great effect and inspect how these bots have impacted customer satisfaction and key business metrics.

6. DATA ANALYSIS & INTERPRETATION:

1. How frequently do you shop online?

Sr. No.	Responses	No. of Respondent	Percentage of Respondent
1.	Regularly	21	42%
2.	Rarely	2	4%
3.	When Required	26	52%
4.	Not Interested	1	2%

Interpretation : 42% regularly, 4% rarely, 52% when required, 2% not interested in online shopping.

2. Have you ever interacted with an AI powered chat bots during your online shopping experience?

Sr. No.	Responses	No. of Respondent	Percentage of Respondent
1.	Yes	28	56%
2.	NO	21	42%
3.	When Required	1	2%
4.	Not Interested	0	0

Interpretation: 42% yes, 21%no, 1% when required and 0 ever interacted with

an AI- powered chat bots during your online shopping experience.

3. What was the purpose of interaction with the chat bots?

Sr. No.	Responses	No. of Respondent	Percentage of Respondent
1.	Seek information	18	36%
2.	Customer support	24	48%
3.	Casual	7	14%
4.	Provide feedback	1	2%

Interpretation: 36% seek information, 48% customer support, 14% casual, 2% for feedback is the purpose of interaction with the chat bots.

4. How helpful was the chat bots in resolving your issue?

Sr. No	Responses	No. of Respondents	Percentage of Respondents
1.	Very helpful	23	46%
2.	Not Helpful	22	44%
3.	Helpful to some extent	4	8%
4.	Not Interested	1	2%

Interpretation: 46% Very helpful, 44% Not helpful, 8% some helpful, 2% Not Interested.

5. Did you feel comfortable expressing your concern or asking question to the chat bots?

Sr. No	Responses	No. of Respondent	Percentage of Respondent
1.	Yes	31	62%
2.	No	15	30%
3.	When required	2	4%
4.	Not Interested	2	4%

Interpretation: 62% yes, 30% No, 4% when required, 4% Not interested

6. How frequently do you utilize AI-powered chat bots for customer service?

Sr. No	Responses	No of Respondent	Percentage of Respondent
1.	Daily	25	50%
2.	Weakly	22	44%
3.	Monthly	2	4%
4.	Rarely	1	2%

Interpretation: 50%daily, 44%weakly, 4% monthly, 2%rarely utilizes chat bots.

7. Have you ever abandoned a chat bots interaction due to dissatisfaction?

Sr. No.	Responses	No of Respondent	Percentage of Respondent
1.	Yes	21	42%
2.	No	23	46%
3.	Rarely	4	8%
4.	Not Applicable	2	4%

Interpretation: 42% Yes, 46%No, 8% rarely, 4% Not applicable ever abandoned chat bots.

8. Which do you prefer for customer service interaction?

S.no	Responses	No of Respondent	Percentage of Respondent
1.	Exclusively	15	30%
2.	Mostly	31	62%
3.	Equal	2	4%
4.	Human support	2	4%

Interpretation: 30% exclusively, 62% Mostly, 4% Equal, 4% Human support prefer customer service interaction.

7. FINDINGS & SUGGESTIONS

FINDINGS:

- There is a connection between chat bots use and customer satisfaction in e- commerce.
- Improved customer satisfaction: AI chat bots are available 24/7 and can provide instant boost to customers.
- Increased conversion rates: AI chat bots can help customers find the products they are searching and make checkout easy.
- Decrease operational costs: AI chat bots can handle routine inquiries, freeing up human employees.
- Strengths brand image

SUGGESTIONS:

This research provides significant insights for e-commerce businesses considers execute AI chat bots.

: Main recommendations include.

- Categorize user-friendly chat bots design and inborn interfaces.
- Training chat bots with correct and up-to-date product and service information.
- Enabling seamless transitions from chat bots to human agents for major inquiries.
- Measuring and monitoring chat bots performance to identify areas for development.

8. LIMITATIONS

The sample size was limited, which reduces the ability to generalize findings to the entire youth population of India. The study did not incorporate actual transaction data from digital payment platforms, which could have validated behavioural patterns more accurately.

The study was conducted within a limited time frame, restricting longitudinal analysis of behavioural changes over time. The study focused only on individuals aged 18–30, which narrows the scope to a specific demographic group.

The study did not consider the influence of educational background or occupation, which can significantly shape financial behaviour and digital literacy.

9. CONCLUSION

AI-powered chat bots present auspicious avenue for amplify customer satisfaction in e-commerce marketing. By understanding the effect of these virtual assistants on customer experience, businesses can possible to build trust, improve brand perception, and eventually drive customer loyalty and business growth. By applying TAM principles to chat bots design, user interaction, and trust-building strategies, we can create chat bots that people are not only willing to use but also find genuinely helpful and beneficial. Additionally, addressing the challenges and limitations of TAM in the context of rapidly evolving AI chat bots requires continuous research and refinement of the framework. Overall, the gathering of

TAM and AI chat bots presents exciting opportunities for enhancing user acceptance and maximizing the potential of this technology.

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