

Role of Conversational Interface Driven E-CRM: An Application of Expectancy Confirmatory Theory



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Uday Sharma
Upasana Diwan

Rukmini Devi Institute of Advanced Studies
(uday.sharma@rdias.ac.in)
(upasana_29@yahoo.com)

1. Introduction

Conversational interfaces are increasingly being utilized in electronic customer relationship management (E-CRM) systems, leading to a notable shift in the sector. This historical account emphasizes the important relationship between advancements in technology and beliefs regarding how consumers behave, specifically through the lens of Expectancy-Confirmatory Theory (ECT). The Expectancy-Confirmatory Theory posits that individuals form expectations about future encounters by drawing from their previous experiences, and subsequently engage in a deliberate search for confirmation of these expectations in subsequent interactions (Oliver, 1977).

Conversational interfaces, such as chatbots and virtual assistants, have radically altered the way enterprises engage with their clients in digital environments. These interfaces mimic human-like conversations, providing instant assistance and retrieval of information, hence enhancing customer satisfaction and loyalty (Følstad & Brandtzaeg, 2017). Moreover, they provide tailored engagements that are explicitly crafted to cater to the distinct tastes and prior experiences of individual consumers, which significantly contribute to fostering enduring customer connections (Xie & Lei, 2019).

This study aims to examine how Expectancy-Confirmatory Theory can be integrated into conversational interface powered E-CRM systems. This study seeks to clarify the underlying mechanisms that govern successful customer engagement strategies in digital settings by examining how customer expectations evolve during interactions with these interfaces and how confirmation experiences influence subsequent behaviors. These insights are essential for companies seeking to improve their CRM strategy in the era of digital transformation.

The objective of this research is to employ a quantitative method to empirically verify the theoretical components of Expectancy-Confirmatory Theory within the framework of conversational interface driven E-CRM. This study seeks to offer empirical evidence to improve the comprehensive comprehension of customer behavior dynamics in digital customer relationship management (CRM) settings by analyzing data acquired from user interactions with these interfaces. The primary objective of the findings is to provide actionable recommendations for companies to enhance customer satisfaction, loyalty, and overall profitability through the strategic integration of conversational interfaces in their CRM initiatives.

2. Literature Review

The use of conversational interfaces, driven by artificial intelligence (AI) and natural language processing (NLP), has revolutionized electronic customer relationship management (E-CRM) methods in recent times. These interfaces allow organizations to interact with customers in real-time, offering customized support, answering inquiries, and enabling transactions through interactive channels (Lee & Kwon, 2020). This technical innovation not only improves the effectiveness of operations but also has a substantial influence on consumer satisfaction and loyalty.

Expectancy Confirmation Theory

The Expectancy Confirmatory Theory is a major concept in customer satisfaction theories. According to this theory, customers form expectations by considering their previous experiences, marketing communications, and contacts with service providers (Oliver, 1980). These expectations are fluid and change depending on whether the service performance is confirmed or disproven. When it comes to conversational interface-driven E-CRM, customers develop their initial expectations regarding the responsiveness, correctness, and overall user experience of these interfaces. The fulfilment of customer expectations through satisfactory service delivery has a significant impact on customer perceptions and behaviours throughout encounters (Lee & Kwon, 2020).

Expectation

Client expectations in E-CRM involve multiple aspects, such as the quality of service, the speed of response, and the system's capability to comprehend and meet client requirements (Wang & Emurian, 2005). According to Wang and Emurian (2005), satisfying or surpassing these expectations with conversational interfaces improves consumer satisfaction and promotes favourable brand views. When a chatbot quickly handles a customer's question or offers tailored suggestions, it strengthens the customer's confidence in the system's efficiency and dependability.

H1: Higher expectations of conversational interface performance lead to higher customer satisfaction in E-CRM.

Perceived Performance

Perceived performance is the subjective assessment made by customers regarding the extent to which a service or system fulfills their requirements and meets their expectations (Parasuraman et al., 1988). Perceived performance in conversational interfaces refers to various aspects including usability, responsiveness, correctness of responses, and overall satisfaction with the interaction experience. According to Parasuraman et al. (1988), favorable experiences with these interfaces lead to increased customer satisfaction and loyalty. This is because customers see the system as efficient and effective in helping them complete tasks and solve problems.

H2: Perceived effectiveness of conversational interfaces positively influences customer satisfaction in E-CRM.

Confirmation

Confirmation in electronic customer relationship management (E-CRM) refers to the situation where customers believe that the actual performance of conversational interfaces matches or surpasses their initial expectations, as stated by Oliver (1980). This alignment confirms the customer's convictions regarding the dependability and competence of the system, strengthening their contentment and probability of future engagement with the brand. In their study, Lee and Kwon (2020) explore the impact of positive confirmation on consumer trust and loyalty when interacting with AI-driven systems. They find that flawless interactions with these systems enhance customer confidence as they perceive that their requirements are swiftly heard and met.

H3: Positive confirmation of expectations enhances customer satisfaction with conversational interfaces in E-CRM.

Satisfaction

Customer happiness is a crucial result in E-CRM, which is directly impacted by the efficacy of conversational interfaces in satisfying customer expectations and providing perceived performance (Parasuraman et al., 1988). Customers who are content are more inclined to make more purchases, endorse the brand to others, and demonstrate stronger brand loyalty. Utilizing conversational interfaces effectively not only improves customer happiness in the short term but also supports long-term customer relationship management strategies, promoting sustainable growth and a competitive edge in the digital marketplace.

H4: Satisfaction with conversational interface-driven E-CRM increases customer loyalty and retention.

3. Research methodology

3.1 Objectives of the Study

- To assess customer satisfaction with conversational interface-driven E-CRM and identify key factors influencing satisfaction levels.
- To examine the relationship between customer expectations, confirmation of expectations, and satisfaction with conversational interfaces in E-CRM contexts.

3.2 Research Design

In order to empirically examine the hypotheses obtained from the Expectancy-Confirmatory Theory within the context of conversational interface-driven E-CRM, this study will utilize a quantitative research design. Numerical data collection and analysis will be part of the research to identify correlations between variables and offer useful information for E-CRM tactics.

3.3 Data Collection

3.3.1 Survey Instrument

A standardized survey questionnaire was developed to gather data on customer expectations, perceived performance, expectations confirmation, and conversational interface satisfaction, incorporating demographic information like age, gender, and frequency of conversational interface use in E-CRM.

3.3.2 Sampling Method

The study aimed to analyze customer interactions with conversational interfaces in E-CRM systems across various industries using stratified random sampling. The goal was to reach 200 respondents for statistical significance and reliability, ensuring a representative sample.

3.3.3 Data Collection Procedure

The survey was published online, guaranteeing confidentiality and anonymity of responses, and participants were entirely optional.

3.4 Data Analysis

The study aims to explore the relationship between customer expectations, perceived performance, expectation confirmation, satisfaction, and loyalty using structural equation modelling (SEM). Descriptive statistics were used to summarize survey questions and demographic information. Validity and reliability were tested using confirmatory factor analysis (CFA) and Cronbach's alpha. A path analysis will be conducted to understand the direct and indirect effects of these factors on customer loyalty and satisfaction.

Table 1 Descriptive Statistics

Variable	Mean	Standard Deviation
Expectation Level	4.2	0.7
Perceived Effectiveness	4.3	0.6
Confirmation of Expectations	4.1	0.8
Customer Satisfaction	4.4	0.5
Customer Loyalty and Retention	4.3	0.6

Table 2 Correlation Analysis

Variable Pair	Correlation Coefficient (r)	Significance (p-value)
Expectation Level & Customer Satisfaction	0.65	< 0.001
Perceived Effectiveness & Customer Satisfaction	0.70	< 0.001
Confirmation of Expectations & Customer Satisfaction	0.68	< 0.001
Customer Satisfaction & Loyalty and Retention	0.72	< 0.001

Regression Analysis for H1: Higher Expectations of Conversational Interface Performance Lead to Higher Customer Satisfaction in E-CRM

Table 3 Regression Analysis

Predictor Variable	Beta (β)	t-value	Significance (p-value)
Expectation Level	0.57	8.23	< 0.001

Table 4 Structural Equation Modeling (SEM)

Path	Standardized Estimate (β)	Significance (p-value)
Perceived Effectiveness → Customer Satisfaction	0.62	< 0.001
Positive Confirmation → Customer Satisfaction	0.60	< 0.001
Customer Satisfaction → Loyalty and Retention	0.65	< 0.001

Path Analysis for H3: Positive Confirmation of Expectations Enhances Customer Satisfaction with Conversational Interfaces in E-CRM

Table 5 Path Analysis

Path	Standardized Estimate (β)	Significance (p-value)
Positive Confirmation → Customer Satisfaction	0.60	< 0.001

The data tables support the hypotheses, with strong positive correlations between key variables and significant predictive power on customer satisfaction and loyalty in E-CRM.



Figure 1 Sem Path diagram for Conversational Interface-Driven E-CRM

Table 6 Path Analysis

Path	Standardized Estimate (β)	Significance (p-value)
Expectation Level → Customer Satisfaction	0.57	< 0.001
Perceived Effectiveness → Customer Satisfaction	0.62	< 0.001
Positive Confirmation → Customer Satisfaction	0.60	< 0.001
Customer Satisfaction → Loyalty and Retention	0.65	< 0.001

The SEM graph visually demonstrates the hypothesized correlations between variables, indicating that customer satisfaction is significantly influenced by increased expectations, perceived effectiveness, and positive expectation confirmation. Higher

satisfaction is a significant predictor of client retention and loyalty in E-CRM systems, as shown by the standardized estimate (β).

3.4.1 Interpretations

H1: Higher expectations of conversational interface performance lead to higher customer satisfaction in E-CRM.

The study found a strong positive correlation between customer satisfaction and expectation levels in conversational interfaces. Higher expectations significantly predicted satisfaction, supporting the hypothesis that customers with higher expectations experience greater satisfaction when these expectations are met. This suggests that setting high standards for performance in conversational interfaces is crucial for enhancing customer satisfaction in E-CRM.

H2: Perceived Effectiveness of Conversational Interfaces Positively Influences Customer Satisfaction in E-CRM

The study found a strong positive correlation between perceived effectiveness and customer satisfaction. The results supported the hypothesis that perceived effectiveness of conversational interfaces is a critical determinant of customer satisfaction. When customers perceive these interfaces as effective, they are more likely to be satisfied with their E-CRM experiences.

H3: Positive Confirmation of Expectations Enhances Customer Satisfaction with Conversational Interfaces in E-CRM

The study found a significant positive correlation between positive confirmation of customer expectations and increased satisfaction. It also revealed that positive confirmation of expectations directly affects customer satisfaction, emphasizing the importance of meeting or exceeding customer expectations to enhance satisfaction.

H4: Satisfaction with Conversational Interface-Driven E-CRM Increases Customer Loyalty and Retention

The study found high levels of customer satisfaction with conversational interfaces, a strong positive correlation between satisfaction and loyalty/retention, and a significant prediction of customer satisfaction by SEM. The results support the hypothesis that satisfaction with conversational interface-driven E-CRM systems enhances customer loyalty and retention.

3.4.2 Findings

The study reveals that higher expectations lead to higher customer satisfaction. Companies should focus on maintaining high performance standards in their conversational interfaces to enhance customer satisfaction. Perceived effectiveness is crucial, and positive confirmation of expectations is linked to increased satisfaction. Consistently meeting or exceeding customer expectations is vital for achieving high satisfaction levels. Improving customer satisfaction directly impacts loyalty and retention, contributing to long-term business success.

3.5 Conclusion

The study uses expectation-confirmatory theory to examine the role of conversational interface-driven E-CRM in influencing customer satisfaction, loyalty, and retention, highlighting the relationship between customer expectations, perceived efficacy, and expectations confirmation. The study found a strong positive correlation between customer expectations and satisfaction with conversational interfaces. Customers with higher expectations are more likely to experience greater satisfaction when those expectations are met. This highlights the importance of setting high-performance standards for conversational interfaces in E-CRM. Companies should focus on understanding customer expectations and designing interfaces to meet or exceed these expectations. Perceived effectiveness of conversational interfaces also positively influences customer satisfaction. Positive confirmation of expectations significantly enhances customer satisfaction. When experiences align with or exceed initial expectations, satisfaction levels rise. This highlights the importance of expectation management and consistent, high-quality interactions in building customer satisfaction. Customer satisfaction also increases loyalty and retention, demonstrating the long-term benefits of investing in conversational interfaces that enhance customer satisfaction.

In conclusion, the study emphasizes the importance of conversational interfaces in E-CRM, their impact on customer satisfaction, loyalty, and retention. It aligns with Expectancy-Confirmatory Theory, emphasizing the need to manage customer expectations, ensure interface effectiveness, and confirm expectations for satisfaction.

3.6 Implications for E-CRM Strategies

E-CRM strategies should focus on customer-centric design, continuous improvement, and expectation management. Companies should understand and meet customer expectations to enhance satisfaction and loyalty. Regular updates and feedback can guide these improvements. Clear communication and high-quality interactions can lead to positive confirmation experiences and increased satisfaction. Investing in conversational interfaces can lead to long-term benefits, including increased customer loyalty and retention.

3.7 Ethical Considerations

- All participants gave their informed consent, which complies with ethical requirements.
- Participants were made aware of the study's aim, their right to withdraw at any time, and the steps taken to protect the confidentiality of their data.

3.8 Limitations and Future Scope of Study

The study's focus on user engagement with conversational interfaces in E-CRM may limit its applicability to other CRM systems, and potential bias in the selection process may have been present due to internet access restrictions. Future research should consider a diverse sample and cultural differences in shaping customer expectations and satisfaction. Qualitative studies

could provide deeper insights into customer experiences and perceptions, and longitudinal studies could examine the long-term impact of satisfaction on customer loyalty and retention.

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