6. Unveiling Customer Expectations of Chatbot Interactions: A Systematic Literature Review

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Extended Abstract

Introduction

Chatbots serve as vital customer communication tools, with rising investment trends indicating their importance in modern business (Belanche *et al.*, 2020). Despite their growing acceptance, many customers still find chatbot interactions unsatisfactory, often due to unmet expectations (Crolic *et al.*, 2022; Zamora, 2017). As a result, understanding these expectations, which may be influenced by past experiences and/or media portrayal, is important. However, existing research lacks insight into pre-interaction customer expectations. Our paper aims to fill this void by conducting a systematic literature review focused on identifying the expectations of customers who interact with AI-powered chatbots, and analysing the factors shaping these expectations.

Method

The paper follows the systematic review approach proposed by Denyer & Tranfield (2009). The search strategy employed keywords aligned with the study's aims, constructed within the PICO framework. Five leading databases were utilised, resulting in a total of 879 records. Following a filtering process, 66 studies remained for thematic analysis (Figure 1).

Figure 1. PRISMA Flow Diagram, adapted from Moher et al. (2009)
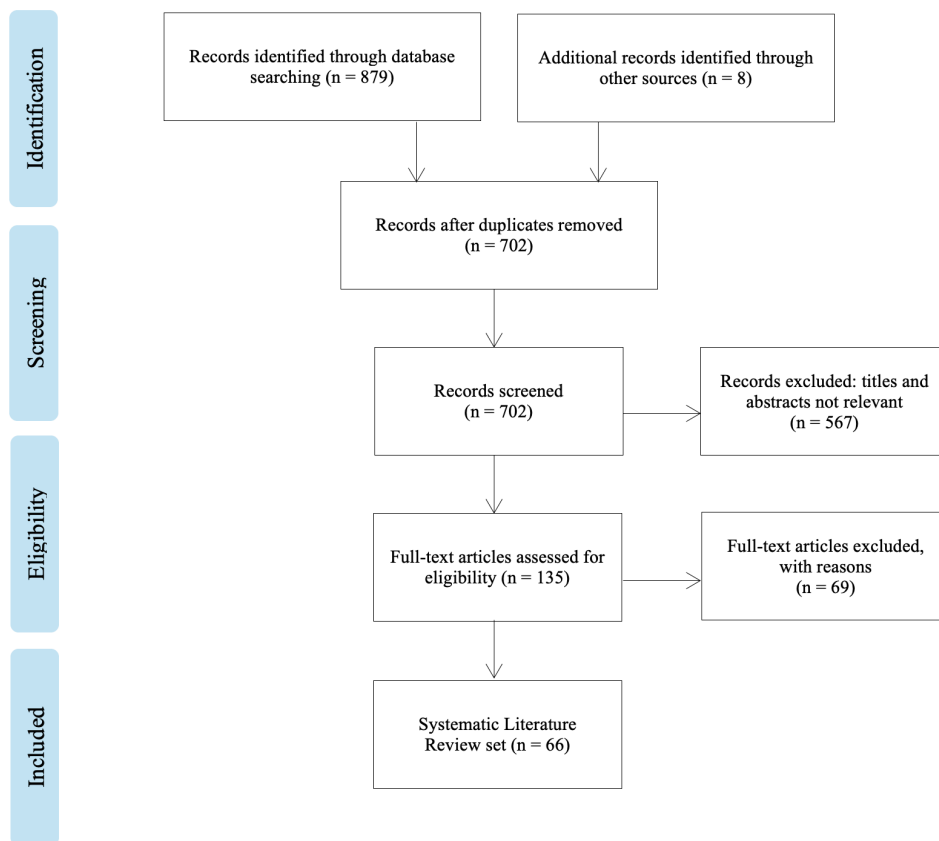
Findings

Descriptive Analysis

An analysis of the number of publications over the years shows a general upward trend suggesting that the topic is becoming increasingly relevant in recent years. The discussion takes place in a variety of journals, with the most frequently utilised journals being the International Journal of Human-Computer Interaction and Computers in Human Behavior.

A trend analysis of the most frequently used author keywords is illustrated in Figure 2. This analysis reveals that in 2023, 'trust' surpassed 'artificial intelligence' as the second most highly used author keyword. This result continues to underline the relevance of research on customer trust in relation to AI chatbots, indicating that customers prioritise trustworthiness and reliability in their interactions with AI-driven chatbots over the mere technological features.

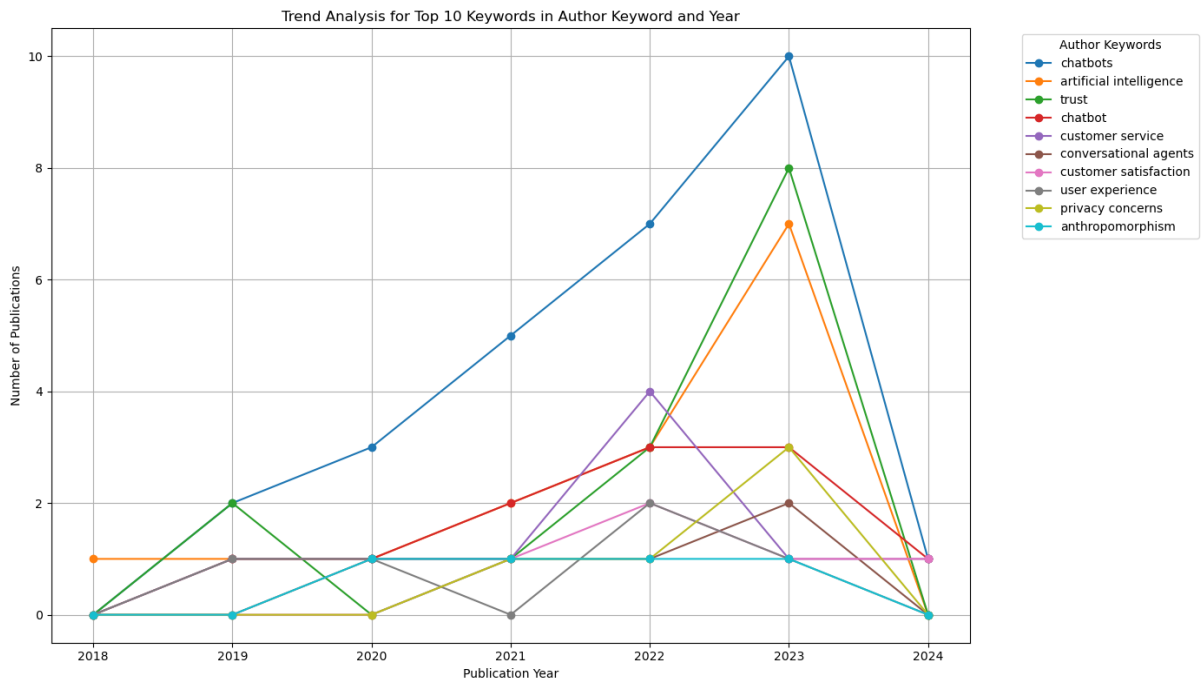**Figure 2.** Trend analysis of author keywords

Table 1 summarises the most frequently adopted theoretical frameworks within the reviewed articles. Theories relating to chatbot acceptance, anthropomorphism and customer dis/confirmation of expectations were among the most frequently adopted by the articles reviewed.

Table 1. Summary of theoretical frameworks used

Theoretical Framework	Frequency
Technology Acceptance Model (TAM)	9
Anthropomorphism	8
Expectation Confirmation Model (ECM)	8
Computers as Social Actors (CASA) theory	6
Information System Success (ISS) model	6
Social presence theory	5
Expectancy Violation theory	4
User eXperience (UX) design	4
Service quality (SERVQUAL)	4
Trust theory	4

In the majority of cases, data collection involved the utilisation of questionnaires and experiments. Qualitative methods, such as interviews, were used to a much smaller extent. A trend analysis of the different methods used, disclosed in Figure 3, reveals a discernible upward trend in the use of experiments and questionnaires throughout the years. On the other hand, methods such as focus groups discussions and interviews exhibit a consistent but comparatively lesser frequency of utilisation.

Figure 3. Trend analysis of research methods used
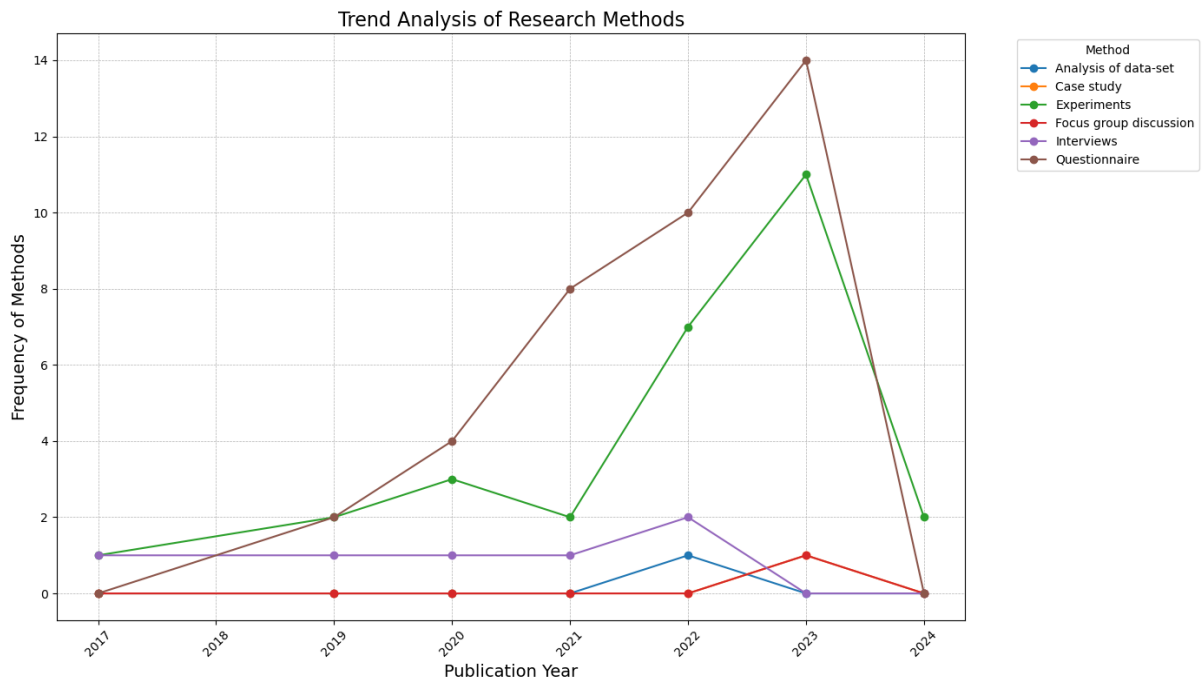

Thematic Analysis

   (1) **Customer expectations of chatbot interactions**

Our examination revealed that within the existing literature there is a predominant concentration on customer perceptions rather than expectations. In contrast, our emphasis on customer expectations denotes the preconceived notions and anticipations that customers bring to the interaction, that actually form the foundation for their initial engagement (Oliver, 2015). This divergence between the prevalent literature's focus on general or post-interaction perceptions and our targeted exploration of pre-interaction expectations is important in highlighting the need for a comprehensive understanding of the customer-chatbot dynamic from the outset, rather than solely through retrospective evaluations.

While the existing literature predominantly delves into customer perceptions, it is important to acknowledge the utility of such insights. Perceptions serve as a valuable foundation in providing a possible categorisation that can inform our thematic analysis relating to customer expectations. By understanding customer perceptions, researchers can extract valuable information to explore the factors that make up pre-interaction expectations.

In view of this, our research leveraged the insights derived from the categorisations prevalent in existing literature to discern the expectations that customers may hold in the context of AI-powered chatbot interactions. Our analysis led to the identification of two overarching dimensions: functional dimensions and experiential dimensions, as depicted in Figure 4.

Figure 4. Customer expectations of chatbot interactions
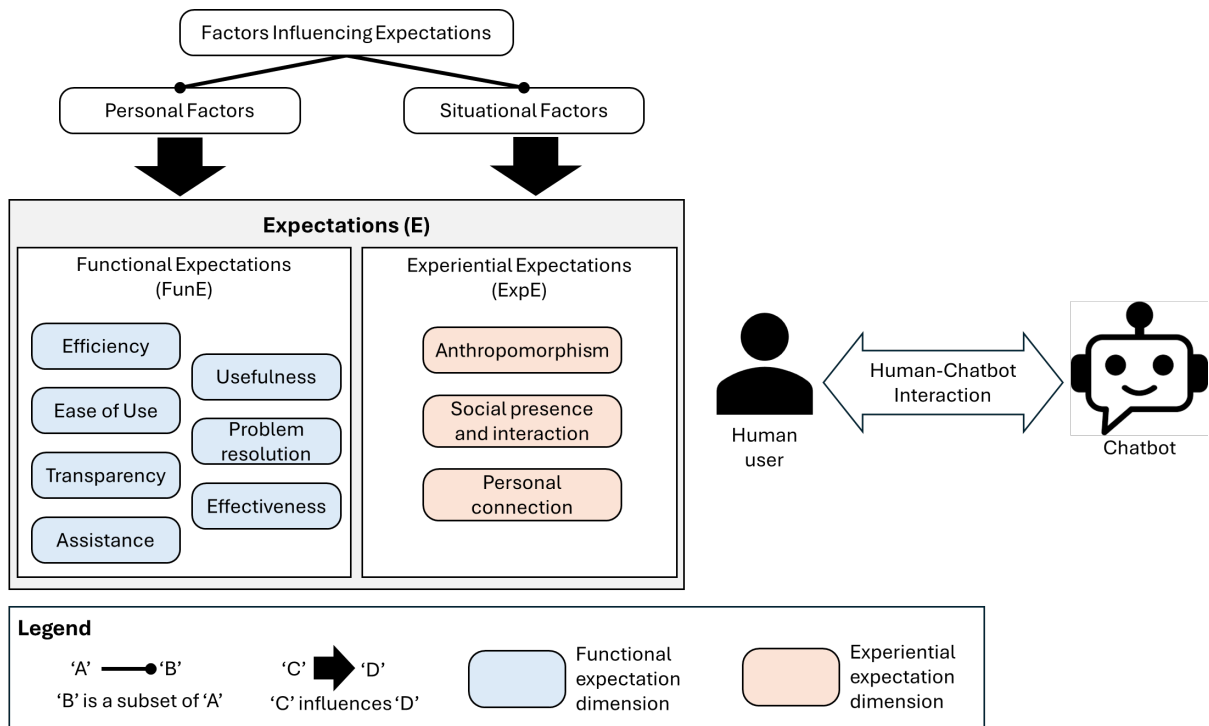
(2) Factors influencing expectations

While our primary focus was to identify customer expectations of chatbot interactions, it was clear from the literature set being evaluated that these expectations do not exist in isolation. Rather, customer interactions with chatbots are context specific and are subject to the influence of various factors (Oliver, 2015). Thus, our exploration into customer expectations naturally extended to an investigation of the different elements that shape these expectations. We identified two primary factors that predominantly contribute to shaping customer expectations during chatbot interactions: personal factors, which are specific to the individual customer, and situational factors, which relate to the surrounding environment. These are also depicted in Figure 4.

Discussion and Conclusion

Our systematic literature review evaluating the expectations of customers who interact with AI-powered chatbots, uncovered a multifaceted array of possible customer expectations as well as factors that may influence such expectations. The elements brought to light within the systematic review demonstrate the complex nature of the relationship between customers and AI-powered chatbots and the need to appreciate the contextual and individual dimensions that shape customer expectations.

A prevailing trend observed within the evaluated literature is the reliance on the Expectancy Confirmation Model (ECM). ECM (Oliver, 2015) involves a retrospective analysis of customer experiences in light of their pre-established expectations. Essentially, customers engage in comparative assessments subsequent to their interactions with AI-powered chatbots. While this approach yields valuable insights, it fundamentally operates within a post-interaction framework, ignoring an evaluation of customers' expectations preceding the initiation of the interaction. It can be compared to reviewing a movie after watching it – it is certainly useful, but it does not capture the expectations people had before the start of the movie.

As a result, the current literature does not provide enough insight on the unaffected and unaltered expectations customers hold before interacting with a chatbot. This gap introduces a consequential limitation. More specifically, the absence of an exploration into customers' pre-interaction expectations hinders a more complete understanding of the different desirability levels relating to various chatbot features. For example, establishing a metric for what is considered ideal, desired, needed, or merely adequate becomes challenging in the absence of a pre-interaction expectations framework.

Focusing on a deliberate exploration of pre-interaction expectations is important for two distinct reasons. Firstly, it aids the understanding of the unique dynamics surrounding customer interactions with chatbots, which are distinct from their physical robot counterparts. Secondly, it also paves the way for a more comprehensive understanding of the entire customer experience. Such a research focus bridges the gap between the retrospective analyses found within the literature and prospective investigations, in the process offering a more nuanced exploration into the evolving relationship between customers and AI-powered chatbots.

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