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How Emotional Perception Moderates Public Expectation and Satisfaction With Seoul Government Chatbot

Jingmiao Liu
https://orcid.org/0009-0006-1834-4508
Shandong Women's University, China

Junkai Zhao
Beijing Normal University, China

Yuanyuan Guo
https://orcid.org/0000-0002-3042-8417
Tsinghua University, China

Qingqing Wu
Shenzhen Polytechnic University, China
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ABSTRACT

This study examines how public expectations and emotional perception affect user satisfaction with Seoul Talk, a government chatbots launched by the Seoul Government as part of its digital public service strategy. Based on survey data from residents of Seoul who have interacted with the chatbots, the study employs grouped and quantile regression analyses to investigate differences across various social groups. The results show that higher public expectations lead to greater satisfaction, particularly when users perceive positive emotional responses from the chatbots. However, the influence of emotional perception varies among different occupational and gender groups, with some users showing less positive or even negative reactions. Furthermore, the positive effect of expectations and emotional perception on satisfaction is most evident among users with lower initial satisfaction levels. The findings suggest that tailoring chatbots interactions to better reflect citizens' expectations and emotional needs can enhance public satisfaction and trust in digital government services.

KEYWORDS

Government Chatbots, Emotion Perception, Emotion Governance Theory, Public Expectation, Public Satisfaction

INTRODUCTION

Integrating artificial intelligence into public services has become an essential step in the broader effort to modernize public administration (Guo & Dong, 2024). This strategy is designed to improve operational efficiency and enhance citizen satisfaction. One clear example of this shift is the growing use of government chatbots. These tools have been widely implemented by both central and local authorities, including major city governments. At present, chatbots are mainly used to support two key functions in digital public services. They help users access government-related information and assist with policy-related inquiries. In both cases, they are expected to deliver information that is accurate and timely. For instance, they may guide users through administrative processes or provide

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policy updates that align with the public's current needs (Ju et al., 2023). How users receive and interpret this information plays a critical role in shaping their overall experience with digital services. Many government chatbots adopt a conversational tone that mimics human interaction. They often use cheerful, polite, or even humorous language to create a more engaging atmosphere. While these systems do not possess real emotions or awareness, their emotional language functions as a form of simulated expression. This use of emotional language is often referred to as "simulated emotional information." It is designed to foster a sense of empathy and build a more personal connection between users and digital interfaces. The intention is to make interactions feel more natural and emotionally engaging, even though the responses are generated by machines. Despite the growing application of such features, it remains unclear whether simulated emotional information has a measurable impact on user satisfaction with public services. This question has received limited attention in academic research. Although interest in human-like characteristics within digital government tools is increasing, few studies have specifically examined how emotional expression in chatbots might influence public trust or satisfaction with digital services more broadly.

Previous research has focused on identifying and categorizing the emotional expressions embedded in government chatbots. Scholars have classified these simulated emotions into negative types, such as anger, disgust, fear, and sadness, and positive ones, including anticipation, joy, trust, and humor (Ju et al., 2023). This classification has supported further exploration into how emotional content shapes user experiences during interactions with public service chatbots. Several studies have examined different aspects of this interaction. Some have looked at how chatbot emotional behavior affects users' emotional reactions. Others have investigated the role of emotional responses in online crisis events. Additional research has explored how anthropomorphic features influence individuals' willingness to use or accept chatbots (García-Martínez et al., 2025; Yang & Qi, 2024).

Although progress has been made, relatively few studies have considered how people perceive the emotional expressions presented by government chatbots. There is also limited evidence on how these perceptions influence satisfaction with digital public services. Much of the current literature on satisfaction still relies on the Expectation Confirmation Model (ECM), which explains how the alignment between expectations and actual experiences shapes satisfaction. However, only a small number of studies have applied this model to the context of government chatbot services. This gap is especially relevant in settings where digital public services are expanding and automated systems are taking on more prominent roles. As chatbots become more common in administrative processes, understanding how users form expectations and how emotional responses influence satisfaction becomes increasingly important. Using the ECM framework, the present study examines the link between user expectations and satisfaction with government chatbots. It also draws on the theory of emotional governance to explore whether the perception of simulated emotional information shapes this relationship. By addressing these questions, the study contributes to a better understanding of emotional dynamics in digital service environments. It also offers practical insights for improving the design and management of government chatbots in the future.

LITERATURE REVIEW

Emotion Governance Theory

This paper develops Emotion Governance Theory (EGT) as a new conceptual framework for enhancing the emotional design and governance of government chatbots. EGT is grounded in five foundational theories, drawing on key concepts from Affective Computing, Media Equation Theory, Social Presence Theory, Human-Computer Interaction (HCI), and Computer-Mediated Communication (CMC). Together, these theories provide a multi-dimensional foundation for understanding how simulated emotional expressions in chatbots can be strategically managed to shape user perceptions, improve interaction quality, and strengthen public trust. Affective Computing contributes the technical basis for emotion recognition and expression in artificial systems, while