


Chapter 3


AI Service Quality, Employee Satisfaction, and Well-Being in Modern Workplaces: The Moderating Role of AI Literacy

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ABSTRACT

This research explores how employees' perceived quality of artificial intelligence (AI) services shapes their satisfaction and psychological well-being at work. Drawing on the ISS model and the SERVQUAL framework, the study focuses on four key AI service quality dimensions: reliability, transparency, responsiveness, and empathy. AI literacy is introduced as a moderating factor, offering insight into how employees' knowledge and comfort with AI tools influence their experience. Based on data collected from 278 professionals across various sectors, findings reveal that higher perceived AI service quality leads to greater employee satisfaction, which in turn enhances psychological well-being. Moreover, AI literacy strengthens the impact of system-related AI quality attributes while diminishing the relative influence of Interaction-Related AI quality attributes. These results offer meaningful theoretical insights and actionable guidance for organizations aiming to improve employee

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experience through intelligent systems.

INTRODUCTION

The advent of artificial intelligence (AI) has profoundly reshaped the dynamics of work within organizations. Once a futuristic concept, AI has now become a cornerstone of operational efficiency and innovation, enabling organizations to streamline workflows, harness the power of big data, and significantly reduce operational costs (Marinova et al., 2017). At its core, AI refers to a suite of algorithms designed to replicate human intelligence in tasks such as visual recognition, natural language processing, and decision-making (Al Araj et al., 2022). Ubiquitous in both personal and professional spheres, AI is now widely integrated across industries, generating value and enhancing stakeholder experiences, especially for customers and service providers (Prentice et al., 2020).

AI-driven systems are increasingly capable of handling complex tasks and responding to customer requests with speed and precision, thus augmenting employee productivity and service delivery. Employees remain critical actors in service innovation, playing a pivotal role in sustaining a firm's competitive advantage in an ever-evolving marketplace (Ahn et al., 2025). As such, the implementation of advanced technological solutions is not merely a matter of operational necessity but a strategic imperative to support employees, automate repetitive processes, and redirect human capital toward high-impact, value-generating activities.

AI's transformative potential spans a wide range of sectors. In the banking industry, for example, AI enhances customer journeys through predictive analytics and voice-assisted technologies, offering seamless, 24/7 support (Al Araj et al., 2022). It also improves fraud detection, regulatory compliance, and anti-money laundering efforts through the automation of intricate procedures (Alhajeri and Alhashem, 2023). In tourism, AI enables personalized service and efficient booking management by leveraging user data, thereby freeing employees to focus on strategic service design (Prentice and Nguyen, 2020). In education, AI supports pedagogical innovation by minimizing administrative tasks and delivering real-time feedback, thereby fostering individualized learning experiences (Bhojak et al., 2025; Almaki et al., 2024).

Despite its widespread adoption, the implications of AI service quality on employee satisfaction and psychological well-being remain underexplored. This study seeks to address this research gap by investigating the interplay between AI service attributes, employee satisfaction, and workplace well-being, drawing on the Information Systems Success (ISS) model developed by DeLone and McLean (2003). This framework posits that the success of any technology implementation is contingent upon user satisfaction (Nguyen and Malik, 2022). Yet, current literature

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