

The Impact of Empathic Design on User Experience in Online Learning Environments (Poster)

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השפעת עיצוב אמפתי על חוויית המשתמש בסביבות למידה מקוונות (פוסטר)

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Abstract

The increasing reliance on online learning environments highlights the necessity of designing interfaces that address not only functionality but also the user's emotional experience (Brave et al., 2005; Pei et al., 2024). The current mixed-methods study investigates how empathic design principles influence user engagement and emotional responses. One hundred and nine undergraduate Social Science students were randomly assigned to one of two professional development simulation websites: one incorporating empathic expression attributes based on the Empathic Expression Scale (EES, Suwinyattichai, 2021)—such as supportive language, verbal affirmation, and relatable classroom scenarios—and a standard design site featuring neutral, informational text.

Participants completed the Hedonic-Motivation System Adoption Model (HMSAM) and International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) questionnaires to measure user experience and affect (Lowry et al., 2013; Thompson, 2007). Subsequently, a professional pilot group of ten practicing teachers explored the websites followed by semi-structured qualitative interviews based on the EES constructs to provide depth to the quantitative data.

Quantitative analysis of student data revealed that empathic design significantly influenced curiosity ($p < .05$), which is recognized as an established precursor to flow states (Lowry et al., 2013). However, no significant differences were found in other affective states or immersion levels within the student sample. This finding suggests that while empathic cues are effective at triggering initial interest and exploratory behavior, their impact on deeper immersion may be moderated by the user's professional background and the relevance of the content to their specific lived experience.

Conversely, qualitative findings from the practicing teachers showed a pronounced contrast. Teachers described the empathic design as a "supportive friend" and noted it "gave a good feeling," suggesting a strong emotional connection and intrinsic motivation, while the standard design was perceived as a "dry, functional tool." This divergence suggests that the effectiveness of empathic design depends heavily on audience-context alignment (MacDonald et al., 2023). The features

resonated with practicing teachers because the empathic cues validated their professional identity, whereas they were less relevant to students lacking professional teaching experience. These findings stress the importance of audience-centered design for capturing nuanced impacts and fostering genuine emotional connection in digital learning environments (Hornbæk & Hertzum, 2017).

Keywords: Empathic Design, User Experience, HMSAM, Online Learning, Affective Computing.

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