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Orginal Article

Identification and Validation of Teaching Techniques to Enhance Sense of Presence in Online Learning

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Abstract

Ignoring the challenges associated with online learning, such as feelings of isolation and alienation, has increased the need to pay special attention to fostering a sense of presence in virtual learning environments. In particular, the use of teaching techniques that are appropriate for online settings plays an important role in improving learning experiences and enhancing students' sense of presence. Therefore, the purpose of this study was to identify and validate teaching techniques that strengthen the sense of presence in online learning. In the first phase of the study, teaching techniques were identified using qualitative content analysis of relevant documents and sources, as well as semi-structured interviews with experts who had published articles or books in the field of presence. Data collection continued until information saturation was reached. In total, 25 academic articles were reviewed and 14 interviews were conducted. Based on the findings of this phase, a questionnaire was developed. After confirming its validity and reliability, the questionnaire was administered to 83 instructors and students who were interested in and had experience with online learning, with the aim of validating the identified techniques. The results of the questionnaire analysis showed a reliability coefficient higher than 0.80 and were confirmed from the perspectives of both instructors and students. According to the findings, both groups considered confidentiality, protection of privacy, instructional support, continuous updating and professional development of online instructors, starting classes with appropriate topics, and allocating a session for getting to know students as the most important techniques for enhancing the sense of presence.

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Furthermore, techniques such as building close relationships with learners, using a simple and friendly tone, addressing students by name, referring to learners' messages during instruction, beginning classes with non-academic topics, using emojis, and sending congratulatory or condolence messages were also recognized as effective techniques for strengthening the sense of presence. Overall, the findings of this study can help instructional designers and educators develop more engaging, supportive, and effective online courses by applying teaching techniques that enhance learners' sense of presence and connection in online learning environments. Implementing these strategies can significantly reduce learner disengagement in digital classrooms.

Keywords: Sense of Presence, Online Learning, Teaching techniques

Extended Abstract

Introduction

In recent years, the unprecedented growth of digital technologies and the global shift toward remote instruction have made online learning a central component of higher-education curricula. The rapid expansion of online learning in higher education has reshaped teaching and learning by increasing flexibility and access. Despite these advantages, online learning environments pose notable challenges related to learners' emotional and social experiences. A frequently reported issue is students' sense of isolation and alienation, **especially during the transition to remote instruction periods**, which can adversely affect engagement, motivation, and learning outcomes. Compared with face-to-face classrooms, online settings often lack immediate interpersonal interaction and non-verbal cues, making it difficult to establish meaningful connections. Consequently, the concept of sense of presence has gained increasing attention as a key determinant of effective online learning. Sense of presence refers to learners' perception of social and cognitive connection with instructors, peers, and the learning environment. A strong sense of presence can reduce psychological distance, enhance interaction, and improve satisfaction and persistence. Although prior studies highlight the role of instructional practices in fostering presence, empirically validated and context-sensitive teaching techniques remain limited. Therefore, this study aimed to identify and validate effective teaching techniques for enhancing the sense of presence in online learning environments by incorporating both instructors' and students' perspectives.

Method

This study employed a mixed-methods design consisting of qualitative and quantitative phases. In the qualitative phase, teaching techniques related to

fostering presence were identified through qualitative content analysis of academic documents and semi-structured interviews with experts. The document analysis included 25 peer-reviewed articles and scholarly sources addressing online learning and presence. Additionally, 14 semi-structured interviews were conducted with experts who had published books or articles in this field. Data collection continued until informational saturation was achieved. The qualitative data were coded and categorized, resulting in a comprehensive set of teaching techniques addressing instructional, social, and emotional aspects of presence. Based on these findings, a questionnaire was developed to validate the identified techniques. Content validity was confirmed through expert review, and reliability was established using appropriate statistical measures. In the quantitative phase, the questionnaire was administered to 83 faculty members and students from different disciplines and academic levels at Isfahan University, all of whom had prior experience with online learning. Purposeful and convenience sampling methods were applied, and the data were analyzed to assess the credibility of the identified techniques.

Results

The quantitative findings indicated that the questionnaire demonstrated high internal consistency, with a reliability coefficient exceeding 0.80. The teaching techniques were strongly endorsed by both instructors and students as effective in enhancing the sense of presence in online learning environments. Techniques receiving the highest credibility scores (above 0.85) included maintaining confidentiality and protecting learners' privacy, providing continuous instructional and technical support, and ensuring the ongoing professional development of online instructors. Participants also emphasized the importance of course-structuring strategies, such as initiating classes with engaging topics and dedicating an initial session to becoming acquainted with students. Furthermore, interpersonal communication strategies were identified as critical for fostering presence. These included creating intimacy and approachability, using a simple and friendly tone, addressing learners by name, and referring explicitly to students' messages and contributions. Additional practices, such as beginning sessions with brief non-academic discussions, using emojis to convey emotional cues, and sending congratulatory or condolence messages, were also validated as effective techniques for humanizing the online learning experience.

Discussion and Conclusion

The findings highlight that enhancing the sense of presence in online learning requires intentional teaching practices that extend beyond content

delivery to include social interaction, emotional support, and personalized communication. Implementing these techniques can reduce learners' feelings of isolation and promote engagement and satisfaction. Practically, the results provide clear guidance for instructors, instructional designers, and higher-education institutions seeking to improve online learning quality. Many of the validated techniques are low-cost and easily implementable, yet have a substantial impact on learners' sense of connection. Overall, this study contributes to the literature by offering an empirically validated framework of teaching techniques to support the design and delivery of effective, learner-centered, and presence-oriented online learning environments.

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