

Classroom transformation for better education: Part 2 - A preliminary study on acoustic design strategies for hybrid learning classrooms

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ABSTRACT

The education scenario requires drastic changes because of the recent unforeseen global pandemic strikes. The worst global crisis in decades causes fundamental shifts in learning methods, from traditional face-to-face to a hybrid approach. Despite providing flexibility for students to remotely participate in the lessons, it was found that students' ability to comprehend the subject matter has decreased, as they could not hear the lecture because of poor classroom acoustics. Therefore, the aim of this study is to develop acoustic design strategies for the hybrid classroom to provide an effective teaching and learning environment. This study centers on the effect of microphone configurations on speech intelligibility parameters, which include sound transmission index (STI) and speech clarity (C₅₀). The study reveals that the quality of speech intelligibility perceived by the microphone in the lecture rooms is influenced by the microphone's location and distance from the ceiling surface.

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