

Classroom acoustics: Mainstreaming and application of standards

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Abstract:

Based on a plethora of research proving the importance of suitable classroom acoustics, many countries have developed standards for acoustic conditions in classrooms. Most standards agree that the ideal ambient noise level should be between 30 and 40 dB, with a reverberation time of 0.4 to 0.7 seconds, depending on the age and specific needs of the students and the type of activities taking place. Despite these standards, studies continue to show that many classrooms do not have acoustic qualities that are conducive to good learning outcomes. This study, which takes the form of a review of standards, seeks to establish key criteria to successful implementation. It provides an overview of classroom acoustics standards in several countries around the world, considering how widely standards are applied and identifying key hinderances to implementation. The objective was to seek examples of successful implementation of standards, whether compulsory or voluntary, and recommend interventions that support the uptake of good acoustic design for classrooms. The study concludes that mandatory standards, accompanied by detailed design guidance, contribute to successful implementation of standards, while cost of interventions as well as the cost and ease of access to the standards were identified as likely barriers to implementation.