

# Solution to Improve IEQ in Classrooms

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## ABSTRACT

Many studies in recent years have shown that classrooms in Germany often do not have a satisfactory indoor climate. Although further studies have shown that both the health and the performance of students and teachers can be improved by a good indoor environment, the necessary refurbishment measures are being implemented only very slowly and sometimes with the wrong priorities. In this paper, a new concept for a quick and cost-effective renovation of a classroom is presented as part of an intervention study.



The intervention improved the thermal comfort, the indoor air quality, the lighting situation and the room acoustics. The design of the construction work can be planned with a freely available web tool and the construction work can be implemented in a classroom within a few days. The initial results of this renovation process are shown based on an evaluation of the intervention experiment and compared with the previously determined values of the IEQ.

## KEYWORDS

Classroom, intervention, thermal comfort, indoor air quality, lighting, acoustics.