

## Development of Technology Adoption Framework on the use of Smart Classrooms

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### Abstract

In light of the COVID-19 pandemic, educational institutions have had to rethink their traditional teaching approaches to deliver quality education to their students. One innovative solution that has emerged is the implementation of smart classrooms. These classrooms leverage the power of technology to create a dynamic and engaging learning environment for students and educators alike. The focus of this study is to delve into students' perspectives and preferences regarding smart classrooms, identify potential areas for improvement, and recommend effective implementation strategies based on the experiences of educators and a well-established Technology Adoption Framework (TAF). The study employed a mixed-methods approach, combining quantitative and qualitative research methods. The data collection process was done through purposive sampling. The quantitative research involved a survey of 188 students who had experienced learning in a smart classroom. The survey is based on the Technology Acceptance Model (TAM) to evaluate the students' perception of the smart classroom's ease of use, usefulness, attitude, intention, and actual use. On the other hand, the qualitative research centered on experienced teachers who have taught in smart classrooms. 16 teachers took part in the study and were asked survey questions based on SWOT and PESTLE analyses. Based on the researcher's analysis, it has been found that students are highly interested in the concept of having a smart classroom in their educational institution. The study highlights students' receptiveness and sheds light on the valuable insights shared by teachers regarding the optimum utilization of smart technology in the classroom environment. Because of this study, the researcher has developed a Technology Adoption Framework named SMARTCLASS, which includes several crucial components such as communication, training, management support, and user involvement. This framework is expected to enhance the classroom's overall teaching and learning experience, ensuring optimal technology and resource utilization.

*Keywords: Technology Adoption Framework (TAF), Technology Acceptance Model (TAM), SWOT analysis, PESTLE analysis*