

The Effects of Immersive Technology on Dental and Dental Hygiene Students' Learning

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Objectives: Cognitive load, microlearning, and immersive learning are all crucial to understanding the effects immersive technology can have on educational patterns. Previous research shows that incorporating immersive technology in educational settings has a positive effect on learning outcomes and can serve as a supplemental tool to didactic teaching. The usage of this type of technology may enhance periodontal classification of diagnosis and treatment experience of patients through a better understanding of clinical skill practices. The purpose of this study is to use immersive technology to help students gain an interactive learning experience, improve test scores, and help with retention of learning materials in various subjects.

Experimental Methods: Case-based exam scores and survey results were used to compare and evaluate the immersive technology used for teaching. This study used a non-experimental quantitative method research design. Both first-year dental and dental hygiene students received lectures on periodontal classification for diagnosing periodontal disease in their introduction to periodontology course. A randomized group, noted as Group B, were given access to a Canvas course with several short videos and questions. All 23 participating students were given a mock case-based exam on periodontal classification and a Qualtrics survey, which assessed student engagement and experience with the application.

Results: Group B had an average of 77.5% while Group A had an average of 75.96%. Through the survey, students reported feeling moderately and extremely engaged with the application provided as well as agreeing that the application helped them prepare for the case-based exam.

Conclusion: These results can help us conclude that there is potential for implementation of immersive technology in dental and dental hygiene curriculums. Future studies would need to be conducted to gain a larger participant size and perform statistical analysis.

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