Student performance in 3D versus 2D vision in a virtual learning environment

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Introduction
The aim of this study was to investigate the performance and appreciation of students working in a virtual learning environment with two (2D) or three (3D) dimensional vision.

Materials and Methods
124, randomly divided, first year dental students performed a manual dexterity exercise on the Simodont dental trainer with automatic assessment. Group 1 practised in 2D vision; group 2 in 3D. All students practised 5 times 45 minutes and then took a test using the vision they had practised in. After test 1, all students switched the type of vision to control for the learning curve: group 1 practised in 3D and took a test in 3D. Group 2 practised in 2D and took the test in 2D. To pass the test, three out of five exercises had to be successful within a time limit. The students filled out a questionnaire after completing test 2.

Conclusion
The use of 3D vision in a virtual learning environment showed to have a positive effect on the results as well as on the appreciation of the environment.

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