**Virtual Reality (VR) Program of Dental Implant Surgery: Student Perception**

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**OBJECTIVES**

To investigate the Advanced Predoctoral Implant Program (APIP) student perception regarding the use of VR on Dental Implant Surgery.

**METHODS**

- Students given instruction and demonstration
- Pre-survey completed
- VR program explored by student
- Additional 8 questions about VR program
- Post-survey completed
- Focus group discussion completed with all students

**RESULTS**

**A. Survey**

- I think the VR can improve the quality of implant education in general.
- I want to use more implant treatment procedures developed into VR procedures.
- I think the VR application will increase the confidence of surgical trainees before they perform real surgery in the operating room.
- I think the VR can enhance my education through "learning-by-doing it!"
- I think the VR increases student's engagement in an immersive experience.
- I think the VR can provide outstanding visualization that can't be possible in the traditional classroom.
- I think I can use the VR as supplement to the traditional lectures.
- I think the VR helped me to prepare for clinical applications of implant surgical placement.
- I think the VR provided easier access to learning materials than traditional lectures and textbooks.
- I think the use of VR improves my enthusiasm and motivation toward learning.
- I benefited from the imagery and visualization of implant surgical placement that was VR provided.
- I think the VR helped me develop my 3-dimensional visualization skills.
- I think the use of the VR encouraged me to actively participate more in class.
- I think the VR should be used without any classroom discussion.
- I think I would prefer traditional lectures over use of the VR in class.
- I think I found the VR application very interesting.
- I think the VR has added my learning of implant surgical placement.
- I found the VR application very motivating.
- I would not use the VR application in the future.
- I think the VR was very useful in my education.

**B. FOCUS GROUP DISCUSSION**

Students have a positive outlook for using virtual reality as a resource in dental education. They are hopeful to use it in the future for particular topics and subjects such as endodontics, station exams, and emergency clinical situations.

**CONCLUSION**

- Supplemental learning aid
- Good for improving chair positioning and ergonomics
- Accessible anywhere if headset and WiFi present
- Able to learn sequence of procedures
- Haptic feedback beneficial and more can be added
- Can be used to standardize pre-clinical station exams
- Better suited for visualizing endodontic procedures
- Applicable for learning BLS, CPR, and emergency situations

**REFERENCES**


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Figure 1. Virtual reality for dental implant surgery.

Figure 2. Average student response to additional survey questions after testing the VR program (1: Strongly Disagree - 5: Strongly Agree).