Virtual reality in dental education

Current paradigm: Constant Change

Transformational process
• How do they keep up to date and adapt to scientific changes constantly?
• How do these changes affect them as a person and way of life?
• What will their relationship be with the environment and their peers (or community?)?
• Raise concerns about ethical issues
• Education in human values

Holistic Formation

- Seminars and case method
- Theoretical lectures
- Research
- Preclinical Laboratories
- New technologies
- Augmented reality dental simulation
- Mentor project
- Clinical training
- Academic and personal counseling
- Holistic Formation

Seminars and case method
Theoretical lectures
Research
Preclinical Laboratories
New technologies
Augmented reality dental simulation
Mentor project
Clinical training
Academic and personal counseling
Holistic Formation
Effectiveness of an Augmented Reality Simulator in dental education.

Lluis Giner; Maria Arregui.
August 25th 2016, Barcelona

1. Introduction
Introduction

Objectives

Materials & methods

Results

Discussion

Conclusions

Future studies

2. Objectives

The aim of this study was to evaluate the effectiveness of an Augmented Reality Simulator (ARS) in preclinical student training.

3. Materials & methods
4. Results

Each student performed 4 Class I cavities in 3.6 acrylic teeth.

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<tr>
<th></th>
<th>Group 1 (ARS)</th>
<th>Group 2 (Non-ARS)</th>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.77</td>
<td>5.17</td>
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<tr>
<td>SD</td>
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<td>2.41</td>
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<td>P</td>
<td>0.092</td>
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<table>
<thead>
<tr>
<th></th>
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<th>Group 2 (Non-ARS)</th>
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</thead>
<tbody>
<tr>
<td>Mean</td>
<td>57.85</td>
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<tr>
<td>P</td>
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Statistical Analysis

Mean & Standard Deviation

Normality: Shapiro-Wilk test
One-way ANOVA

P < 0.05
5. Discussion

Students assessed with DentSim tools obtained the best score in drilling Class I cavities; however, the students took longer time to complete the task. Group 2 students who were guided only by dental instructor, obtained the lowest score.

Analysis on the general evolution of students showed that between the first cavity preparation and subsequent ones, most of the students in group 1 (ARS) obtained a better score and took less time. In contrast, a variation in the final grade of group 2 (Non-ARS) bore no relation to the number of cavities drilled.

6. Conclusions

Survey to know the opinion of dental instructor and students about DentSim and new systems to train psychomotor skills.

7. Future studies

Survey to know the opinion of dental instructor and students about DentSim and new systems to train psychomotor skills.
Effectiveness of an Augmented Reality Simulator in dental education.

Lluis Giner; Berta Paulo; Borja Baldrich; Maria Arregui; Samuel Elhadad; Montse Mercadé.

August 24th 2016, Barcelona