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Augmenting Reality in PA Education

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INTRODUCTION

- Common in marketing and game applications, beginning to diffuse into education.
- Few studies in graduate education and none (yet!) in PA education.
- Technology allows users to 'layer' graphics, texts, photos, videos, etc.
- Use as an engaged learning technique allows the combination of topics across the curriculum
- PA faculty and students can increase engagement with the material and personalize educational tools for their own use.

PURPOSE

- Increase student application and synthesis of material by integrating information from a variety of sources
- Enhance student engagement with course material
- Allow students the flexibility of personalizing learning to assist in knowledge retention and attainment

OBJECTIVES

- Determine if the utilization of augmented reality technology in PA education offers any significant pedagogical learning impact
- Collect study material that includes information from multiple sources
- Create concept for personalized study that engages the individual learner or learning group
- Utilize augmented reality app to develop trigger images and overlays that combine information
- Improve confidence in knowledge retention and recall
- Increase levels of retention of complex medical topics

REFERENCES

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- Kugelmann, D, Stratmann, L, Nuhlen, N, et al. An Augmented Reality Magic Mirror as Additive Teaching Device for Gross Anatomy. 2017 Oct 7. pii: S0940-9602(17)30131-0. doi: 10.1016/j.aanat.2017.09.011
- Noll, C, von Jan U, Raap U, Albrecht, UV. Mobile Augmented Reality as a Feature for Self-Oriented, Blended Learning in Medicine: Randomized Controlled Trial. JMIR Mhealth Uhealth. 2017;5(9)
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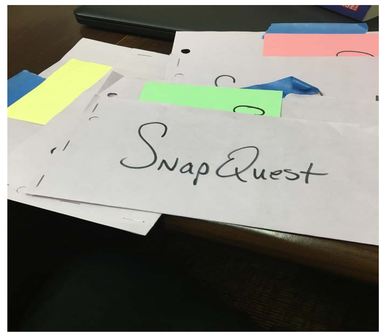
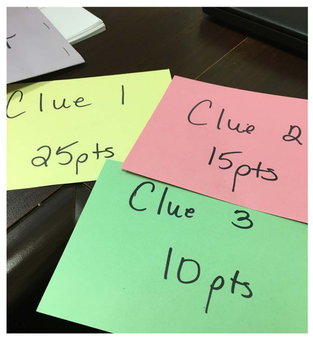
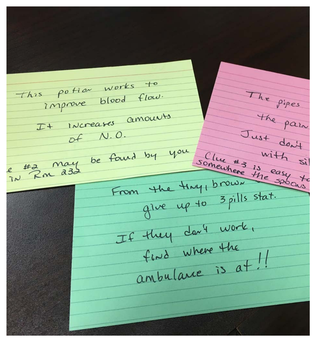
SNAPQUEST

- Pharmacology scavenger hunt utilizing SnapChat



- 3 clues with varying point values are hidden throughout the building
- Clues are utilized to guess a specific drug
- Students may choose which clue to guess the drug
- Only one guess per group or individual student

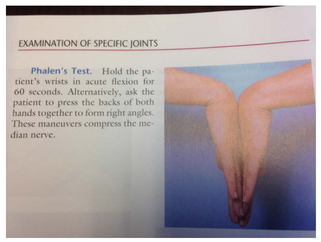




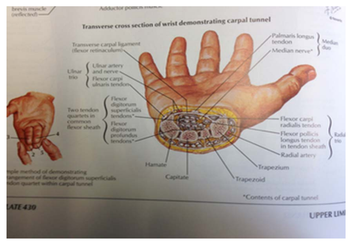
- Students guess by sending a photo via SnapChat or email with their answer and the clue that they are guessing
- Honor code in place. No guessing the 25 pt clue after reading all three
- Points are used as extra credit in Pharmacology courses

HP REVEAL

Trigger Image



Overlay



STUDY GUIDE WALL

EVIDENCE

- The use of augmented reality in PA education is still in its infancy, thus evidence for its effective use is sparse.
- Studies in medical students, particularly in the area of gross anatomy
- Majority of data is currently in the areas of math and science education.
- Current, readily-available augmented reality apps leave something to be desired in terms of functionality and intuitive use.
- Students are impressed by the 'wow' factor of augmented reality in the classroom
- Further study is needed and planned to determine if this is a truly impactful pedagogical technique.