EFFECTIVENESS OF AN ANALOGY-CONTAINING VIDEO PROJECT TO REINFORCE PHARMACY STUDENTS' LEARNING OF KIDNEY PHYSIOLOGY

LOMA LINDA UNIVERSITY HEALTH

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"It allowed me to apply concepts which helped me remember information better."

"To be honest, I memorize things and do the quizzes, then I forget most of what I know. However, I believe I won't be able to forget information learned from this project."

01 INTRODUCTION

Kidney physiology is one of the most **difficult** topics covered in health professions education. In fact, difficulties in understanding complex kidney physiology are significant enough to contribute to some medical students' reluctance to pursue further training in nephrology. Incorporation of active learning methods can improve understanding of kidney physiology and counter this barrier to nephrology education.

02 OBJECTIVE

This study examined the effectiveness of an analogy-containing video project to reinforce pharmacy students' knowledge of kidney physiology.

03 METHODS

Students were assigned in groups to create a video that used analogy to explain kidney physiology processes. The following were used to assess the project's effectiveness:

- Surveys
- Rubric (Analogy; Accuracy; Creativity; Time Limit)
- Objective Test

04 RESULTS

Students generated various analogies, such as making tea or coffee, cars and roads and college application process, to explain kidney physiology. Most of the submitted videos successfully met all criteria in the rubric. All students believed that the project was effective, to varying degrees, in reinforcing their knowledge.

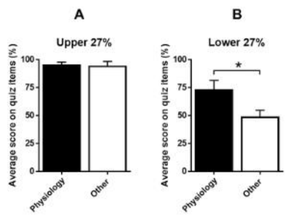


Figure 1. Average percentage scores of top- and bottom-performing students on physiology (n=8) vs. non-physiology (n=7) quiz items. Average percent score of (A) top 27% and (B) bottom 27% of exam takers. *P<0.05

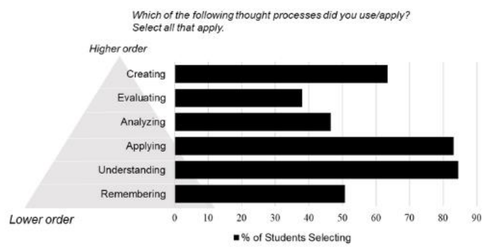
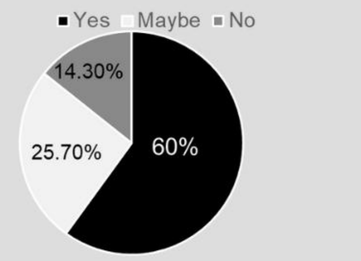


Figure 2. Thought processes used during video production. Percentage of students selecting the different cognitive skills ranging from lower-order (e.g., remembering) to higher-order (i.e., creating) according to the revised version of the Bloom's taxonomy. N=71 students



Would you recommend video-making as a class assignment to learn concepts in a physiology/pharmacology class?

05 CONCLUSION

An analogy-containing video project effectively reinforced student learning of kidney physiology. Further studies are needed to verify the effectiveness of this technique compared to other didactic and learning approaches

Simply scan this QR code to watch a sample video