

Improve Student Learning with Bite-Sized Online Teaching Bits

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TOPIC

An online multidisciplinary educational exercise, *Dental Bite-sized Bits*, was developed to foster dental education with our inter-professional colleagues in pharmacy and physicians' assistants at Midwestern University, Glendale, Arizona

PROBLEM STATEMENT

Dentistry, pharmacy, and healthcare education is not general associated with online curriculum. Face-to-face interprofessional courses were fraught with challenges. Our interprofessional education goals had to be reconfigured, reimagined, and reconsidered for digital format. This led to creative solutions for distance learning.

OBJECTIVES

1. Identify ways to implement learning modalities of visual, written and auditory in an online format.
2. Discover a new format for interdisciplinary education.
3. Share effective ways to incorporate the ten-minute rule in online learning.

QUESTION

Educating the next generation of healthcare providers means moving away from the traditional limited "silo" approach of education into a multidisciplinary model. Multidisciplinary education in healthcare begets a collaborative mindset when entering the workforce for an optimal outcome of patient care. By working together to supplement the weaknesses of one discipline with the strengths of another, members of each discipline work collectively to enhance the well-being of the patient

SCHOLARSHIP

The aim of this study was twofold. First, to assess multi-professional students concerning an educational exercise in teaching with pre-recorded modules about dental care entitled *Dental Bite-sized Bits*. Second, to gain faculty feedback on this teaching model. Based on brain science, videos using Medina's 10-minute attention rules provides students with multiple channels of online learning with visual, written, and auditory formats.

REFERENCES

- Brent Schlenker, How to Use the 10 minute Rule in Your Instructor Led Training. <https://www.litmos.com/blog/training-management/how-to-use-the-10-minute-rule-in-your-instructor-led-training>
- Medina, John. Brain Rules: 12 principles for surviving and thriving at work, home, and school. Pear Press.com T+D (1535-7740), 67 (8), 75.
- Hurt, J (2012) *10 Brain-based learning laws that trump traditional education*. <https://velvetchainsaw.com/2012/01/31/10-brainbased-learning-laws-that-trump-traditional-education/>

Medina's 10-minute Attention Rules

1. Influenced by culture and genes, the brain loses attention after 10-minutes.
2. Re-engage the audience after 10-minutes with emotional prompts of stories, videos, and demonstrations. We don't pay attention to boring things!
3. Multisensory environments promote greater recall.
4. The brain can remember 65% of an image, but only 10% of what it has heard.



METHODS

Dental faculty at Midwestern University College of Dental Medicine developed four 10-minute recorded modules on medicines effect on the mouth, dry mouth, multiple medications, and oral thrush. The pharmacy program presented these modules as optional assignments on an online course learning management system (LMS) to its fall 2020 first year students. The introduction to each module was with a patient case study. Students then took a pre-test to assess prior knowledge on the module topic. The student then watched the dental health video module, completed a post-test, and reviewed the correct answers to the tests. A student and faculty post-use questionnaire was developed to assess learning objectives, use of video modules, and interprofessional awareness.

RESULTS

Using a Likert Scale evaluation in the post-use questionnaire, 100% of the participants agreed or strongly agreed that the learning objectives of each recorded module were achieved. The pre- and post-tests helped students understand the content and gained a valuable learning experience in oral health. The majority positively commented on willingness to collaborate with interprofessional members of the health care team regarding a mutual patient's oral health after completing the dental modules.

CONCLUSIONS

Distance learning was a creative solution for effective multidisciplinary interprofessional training. An educational exercise, *Dental Bite-sized Bits*, was developed to foster dental education with our inter-professional colleagues. A collaborative online (LMS) allowed for ease of accessibility to video modules, testing, and enhanced teaching opportunities in oral health topics. The results were so successful that Pharmacy and Physician Assistant programs have incorporated these modules into the 2021 fall curricula with the goal to also expand into other multidisciplinary fields.

