Digital Innovation & Curricular Integration: Educating Dentists of the Future

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Introduction

WesternU CDM has an innovative model of curricular delivery which enables integration of all disciplines, including biomedical sciences, training students to apply evidenced-based information to provide the best oral health care. WesternU provides this curriculum using adaptive learning technology that dynamically adjusts the level or types of instruction based on individual student abilities or preferences. The platform provides: the delivery of the content to be learned; algorithms that continually analyze students’ knowledge level and proficiency; a method of matching content in a personalized model to accelerate learning. Adaptive learning is the next generation of a truly personalized learning experience, and offers a range of online courses, blended learning environments, remedial education, reinforcement education, and assessment based activities.

Methods

All curriculum is mapped using a content map template. Each faculty divides topics into 15 minute increments and maps these to pre & post-requisites, topic learning objectives and program learning objectives. Assessments are determined and all content is ingested into the platform. The Curriculum Design Committee, Course Directors and Managers plan the level and timing of integration for seamless delivery of the curriculum. As content is delivered online, it is partnered with classroom, small group and simulated activities. Various assessments are utilized including MC, essay, simulated, formative and summative capstone assessments. Topics can be moved to other courses for further integration and selective redundancy, based on the educational goal.

Results

To date the pre-clinical sciences, oral pathology and some BMS curricular content are mapped using the content map template. The goal is to continue to add content to the online platform and enable the entire curriculum to be delivered in this integrated model. Students perform at the same or at an increased level of knowledge.

Conclusions

Developing an integrated and innovative curriculum is a team-based and college-wide endeavor. The project takes thoughtful planning and methodical implementation. Students desire hands on, clinically applicable learning. They perform at an increased level didactically and in clinical skill performance. As dental programs move towards delivering curriculum with new learners in mind, this pedagogy enables successful integration and delivery. Graduates will be prepared to apply evidenced-based information and provide the best oral health care.

References

3. Relationship Between Dental Students’ Performance on Standardized Multiple-Choice Examinations and OSCEs. Padraig C. Dennehy, D.M.D (May 2008 JDE)