

Enhancing Student Learning via Developing a Progress Test System in Dentistry

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Context & Objectives

Summary

Via an interactive, online, four-year continuum of progress tests, students will be assessed on the expected competencies of a new graduate dentist.

This system emphasizes the use of an interactive web-based feedback tool where students will complete progress tests, receive immediate formative feedback, engage in online discussion groups, and be directed to specific areas for improvement / remediation.

This Progress Test System aims to encourage self-directed learning, and to enhance communication of program expectations with the students.

Specifics

The Progress Test will be a 2-3 hours long test with multiple choice questions that sample all areas of cognitive knowledge, based on the end of program competencies (and hence is curriculum independent). All student in the DMD Program will take this test twice a year, which will return them a Personal Progress Index (PPI) to evaluate their performance relatively to standard benchmarks and their peer group.

In the World

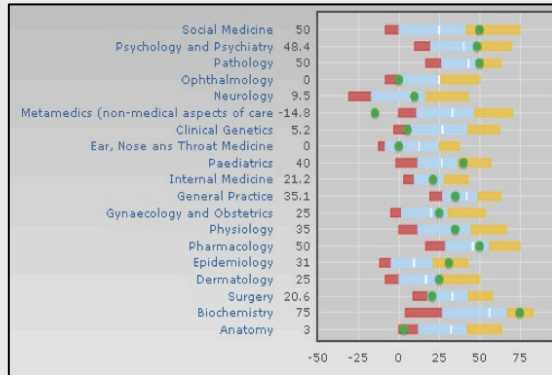
Progress Testing has first been developed in the 1970s in Medical Schools (independently in the Netherlands and in the US). It is used now in over 50 institutions on all continents e.g. Maastricht (NL), McMaster (CA), Missouri-Kansas (US), Peninsula College (UK) and is mostly used in medical education at present.

Rationale

The Testing Effect

In 1992, Carrier and Pashler [1] showed that testing does not only provide an additional opportunity for practice, but produces better learning than other forms of study. In their experiment, learners who tested their knowledge during practice later remembered more information than learners who spent the same amount of time studying the complete information. This invites educators to rethink testing as much more than simply an assessment strategy.

Progress Tests leverage the Testing Effect, offering students an opportunity to enhance their studying of all the knowledge that they are expected to acquire in order for them to effectively practice after their graduation.



Above is an example (from Medicine) of a student's results on one Progress Test. Their performance (green dot) in each area relatively to their peer groups (with three different percentile groups in red, blue and yellow).

Timeline of the Project

2014

Summer 2014: Hiring of a Project Coordinator & Researcher to begin implementation.

Fall 2014: Creation of a blueprint for the Progress Tests based on competencies & matching of existing databases of MCQ to the blueprint for automatic test creation. Identification of needed items.

2015

Spring 2015: Creation of a Pilot Test. Pilot testing students (year One thru Four) with the pilot version of our progress test. Establishment of feedback system.

Fall 2015: Possibly full scale implementation of the Progress Test System for all students.

2016

Spring 2016: Hiring of a Test Manager. If the system works, a test manager will help to create and implement a systemic structure to ensure the sustainability of the Progress Test System in the Faculty.

[1] Carrier, M., & Pashler, H. (1992). The influence of retrieval on retention. *Memory and Cognition*, 20, 632-642.