Preferred Learning Styles of First-Year Dental Students

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Introduction

In the dental curriculum one of the essential purposes is to create integration between basic science (e.g., anatomy, biochemistry, physiology, etc.) and clinical practice. However, many students note that because of the vast amount of information they must “survive” by rote memorization and determine the applicability of these materials in actual practice (Fang, 2002; Murphy, et. al., 2004). One way we, as educators, can combat this frame of thought is to engage students in learning in the most effective and ingenious ways (Abadia, et. al., 2016). So how do we do this...by understanding that students have different learning styles.

James Keefe and Judith Reiff both noted that faculty who strive to have a better understanding of learning styles can help ease students’ frustrations and improve instructional delivery methods (Keefe, 187; Reiff, 1982).

Currently there are over 71 different learning style instruments and theories. Even with these different learning style models, few have been validated (Murphy, et. al., 2004). One of these validated learning style instruments is the Index of Learning Styles (ILS) questionnaire. The ILS assesses preferences on four domains (i.e., active/reflective, sensing/intuitive, visual/verbal, and sequential/global) of a learning style model formulated by Richard M. Felder and Barbara Solomon of North Carolina State University (Felder & Silverman, 1988 & Felder & Spurlin 2005).

Methods

First-year dental students enrolled in Anatomy 6512 – Human Anatomy for Dental Students II were given the opportunity to consent to participate in a larger study with one aim to investigate student preferred learning styles by filling out the Index of Learning Styles (ILS) questionnaire. All students who consented and completed the ILS questionnaire had their scores calculated (i.e. each of the respective learning styles for the four dimensions) and entered into an Excel database. After coding, the data was transferred into SPSS and descriptive statistics were conducted.

Summary

There were 112 students enrolled in Anatomy 6512 during the spring 2017 semester. At the administration of the ILS and demographics survey. Of these 112 students, 67 consented to use of their responses for the study. This provided a 59.82% response rate for the demographics and preferred learning styles results. Figures 2 through 5 depict the preferred learning styles determined through descriptive statistics.

Conclusions

An understanding of students’ preferred learning styles is two-fold in terms of usefulness. On one hand, this understanding is beneficial to instructors in order to recognize the different learning styles of their students, which can help guide course design. Based on the preferred learning styles of the first-year dental students in this particular human gross anatomy course, course activities should allow for contemplation (i.e., reflective), be grounded in concrete information (i.e., sensing), utilize visual representation such as images, figures, models, etc. (i.e., visual), and should move in small incremental steps that build on each topic (i.e., sequential).

On the other hand, allowing students to fill-out learning style instruments to determine their learning styles enables students to better prepare themselves for their academic careers. Providing students with such information, along with descriptions of each of the learning styles and study strategies for each particular type of learner, can aid in student self-regulation during studying and facilitate metacognition for the student furthering academic and professional development.

If you are interested in utilizing the ILS in your course, please contact Dr. Richard Felder (rmfelder@mindspring.com).

References