DENTISTRY

Openventio PUBLISHERS

ISSN 2377-1623 Open Journal http://dx.doi.org/10.17140/DOJ-SE-1-e002

Special Edition
"Radiographic Interpretation as a Teaching Tool for Dental and Dental Hygiene Students"

Editorial

Corresponding author
Michelle A. Wheater, PhD
Professor and Division Director of Biomedical Sciences
Department of Biomedical and Diagnostic Sciences
University of Detroit Mercy School of Dentistry
Clinic Building Room 430
2700 Martin Luther King Jr. Blvd.
Detroit, MI 48208, USA
Tel. (313) 494-6634
Fax: (313) 494-6643
E-mail: wheatemi@udmercy.edu

Special Edition 1
Article Ref. #: 1000DOJSE1e002

Article History
Received: September 8th, 2015
Accepted: September 8th, 2015
Published: September 8th, 2015

Citation
Wheater MA. The relationship between didactic learning and research for the dental and dental hygiene student. *Dent Open J*. 2015; SE(1): e3-e4. doi: 10.17140/DOJ-SE-1-e002

The Relationship between Didactic Learning and Research for the Dental and Dental Hygiene Student

Michelle A. Wheater*

Professor and Division Director of Biomedical Sciences, Department of Biomedical and Diagnostic Sciences, University of Detroit Mercy School of Dentistry, 2700 Martin Luther King Jr. Blvd., 430 Clinic Building, Detroit, MI 48208, USA

In an article published in Dentistry Open Journal entitled "Oral Health, Dental Education, and Research: A Commentary" Dr. Lakshman Samaranayake, considered the foremost international authority in oral candidal infections, touches on the relationship between oral health, teaching and research in the dental academic arena.[1] This is the underpinning of this Special Edition on *Radiographic Interpretation as a Teaching Tool for Dental and Dental Hygiene Students*. An essential and major aim of schools of dentistry is to graduate practice-ready dental and dental hygiene students; this of course is the teaching aspect. Trained dental professionals provide for patient care, this is the oral health aspect of the triad. What of the research component? Admittedly dental schools are professional institutions, but as academic institutions schools of dentistry have an obligation to engage students and faculty in research and other scholarly endeavors. The benefits of research are well-known; new treatment paradigms are discovered and validated, relationships with industry are solidified, and faculty development is assured to name a few. The nature of the teaching-research relationship and how it is presented to the dental and dental hygiene student differs, often based on whether the schools they attend are considered research intensive or non-research intensive institutions.

Discussions of research and scholarly activity naturally center on the faculty at academic institutions since research programs are usually faculty-initiated, led, and sustained. Health professions schools such as medical and dental schools may have formal or informal student research programs that serve to enhance critical thinking and problem-solving skills while providing students with opportunities to publish or present work at meetings. Student research programs may additionally motivate students to pursue academic/research dentistry upon graduation, which is vital to sustain progress in dental research advancements. Student research programs typically operate outside of the standard dental and dental hygiene curriculum. Students complete research studies under faculty mentorship but they are accomplished independently of coursework as extracurricular activities. While a few dental schools have incorporated research into the curriculum[2] this is currently not the norm in United States Universities. A structured research enrichment period was created at one dental school to facilitate student engagement in active research using faculty and student curricular release time.[3]

Clearly research/scholarly activity experiences are available to interested students who self-motivate to join laboratories, participate in school student research programs, attend schools with a research curriculum, or have research as a required component of an individual course. But what is the benefit to the student who engages in research with respect to their learning? Can participation in research enhance the didactic learning experience for the student? Research experiences may be incorporated into individual courses at the discretion of the course director but there are few reports that have been published describing this type of combined research and didactic approach. Osaka City University Hospital introduced a hands-on clinical pharmacy research experience with the result of a significant improvement in the level of knowledge and student satisfaction.[4] In third-year medical students in a research course, end-of-course reflections indicated increased awareness of the linkage between research and learning.[5]

ISSN 2377-1623 Open Journal http://dx.doi.org/10.17140/DOJ-SE-1-e002

At the University of Detroit Mercy School of Dentistry second-year dental hygiene students are required, as part of a course, to conduct a unique research study in which the outcome is not known even to the course instructors. The research topic is based on some aspect of their curriculum that is of special interest to them and hopefully provides them with didactic information to supplement that provided from the curriculum. The students learn to formulate a hypothesis, write a research proposal, gain Institutional Review Board approval, and prepare a poster that is presented at local, state, and national dental professional meetings. Through course-incorporated research, students may come to appreciate the value of didactic information in advancing knowledge that can be directly applied to the clinical situation.

It is aimed that the articles that are a part of this Special Edition will highlight student research experiences undertaken as part of a course or as a participant in organized student research programs. Although this Special Edition focuses on radiology, the concepts of research supporting didactic learning and providing students with a rationale and necessity for didactic learning cross all health disciplines. We hope that the articles provide some insight into the question of whether research experiences result in a better student, one who appreciates the need for didactic information in order to become an effective clinician. Readers may be provided with ideas for incorporating research or scholarly activity-based activities into their existing didactic courses.

REFERENCES

1. Samaranayake L. Oral health, dental education, and research: a commentary. *Dent Open J*. 2015; 2(3): 74-76.

2. Iacopino AM, Pryor ME, Taft TB, Lynch DP. The effect of NIDCR R25 grant support on the curriculum and culture of a research non-intensive dental school. *J Dent Educ*. 2007; 86: 581-585. doi: 10.1177/154405910708600701

3. Kingsley K, O'Malley S, Stewart T, Howard KM. Research enrichment: evaluation of structured research in the curriculum for dental medicine students as part of the vertical and horizontal integration of biomedical training and discovery. *BMC Med Educ*. 2008; 8: 9. doi: 10.1186/1472-6920-8-9

4. Takahashi K, Suda Y, Kawaguchi H, et al. Introduction of a clinical research experience program in hospital practical training for pharmacy students and its evaluation. *Yakugaku Zasshi*. 2015; 135(9): 1077-1082.

5. Imafuku R, Saiki T, Kawakami C, Suzuki Y. How do students' perceptions of research and approaches to learning change in undergraduate research? *Int J Med Educ*. 2015; 12(6): 47-55. doi: 10.5116/ijme.5523.2b9e