



Radiologists as Educators: A Narrative Review of the Literature



Kathleen L. Linaker DC, DACBR, PhD*

Dean, Center for Life and Health Sciences Mohawk Valley Community College, Utica, NY

Received 4 August 2015; received in revised form 18 September 2015; accepted 23 September 2015

Key indexing terms:

Chiropractic;
Diagnostic imaging;
Education;
Medical radiology
teaching

Abstract

Objective: The purpose of this study was to examine literature on how radiologists are trained to be effective educators for both residents and undergraduates in the health professions.

Methods: A review of the literature was performed using relevant key words. Articles were retrieved through from 1990 through December 2012 using PubMed, ScienceDirect, ERIC, Proquest, and ICL databases along with a manual review of references.

Results: Of the 4716 unique abstracts reviewed by the author, 51 were found to be relevant to the purpose of this study. Faculty teaching skills seem to be solidified during residency. This may be due to a failure to include scholarship of teaching and learning in education and faculty development. Preliminary research shows that creating opportunity for faculty development is beneficial with much of this literature focused on explaining educational concepts to radiologists.

Conclusion: The literature examining faculty training in the area of radiology education is sparse. Several articles address the need for more academic radiologists and the need for better training of academic radiologists. The few articles aimed at providing insight to radiologists in this area introduce basic educational concepts such as lecture creation, examination writing, and learning styles or simply delineating what makes an effective educator.

© 2015 National University of Health Sciences.

Introduction

In the spring of 1995 Professor Scott Johnson asked “Aren’t the most important questions facing our field related to how students learn and how they can be taught more effectively?”¹ Until recently, only a handful of radiology educators have voiced these questions and pursued meaningful answers.^{2,3} As a result, little literature examines how radiology is taught, learned, or evaluated at the resident

* Mohawk Valley Community College, 1101 Sherman Dr, PH301D, Utica, NY, 13501-5394. Tel.: +1 716 931 1952; fax: +1 315 792 5697.

E-mail address: katlinaker@gmail.com.

level, and even fewer articles examine undergraduate radiology education specifically. Therefore, the purpose of this study was to examine literature on how radiologists are trained to be effective educators for both residents and undergraduates in the health professions.

Methods

This article provides a narrative review of the literature from 1990 through 2012 relating to the training and preparation of radiologists to function as teachers that was retrieved using MEDLINE, ScienceDirect, ERIC, Proquest, and ICL databases along with manual review of references. The comprehensive sampling strategy used the terms *radiology OR diagnostic imaging AND education OR teaching OR resident OR medical student OR chiropractic student OR curriculum OR medical education OR medical school OR medical students OR medical curriculum OR chiropractic education, OR chiropractic school OR chiropractic students OR chiropractic curriculum*. Articles were limited to those in the English language and to humans.

Results

The resultant 4716 unique article abstracts and/or titles were reviewed by the author. All articles that appeared germane to effective teaching in diagnostic imaging education were obtained and reviewed by the author, which led to the inclusion of 51 articles in this paper.

Discussion

Ensuring that faculty members are effective educators is an area of interest in the radiology education literature. Scheiner and Mainiero⁴ found that radiology residents were just as effective as attending radiologists at presenting lecture material. This finding suggests that radiology faculty *never improve beyond the teaching skill set that they had as residents*, and this, if accurate, is troubling. This is most likely a result of a failure to include the scholarship of teaching and learning in their educational training; without consciously reflecting upon their practice or integrating new learning, people tend to reinscribe what they experienced as students (KM Hibber, personal communication, University of Western Ontario, January 22,

2012). The author that addresses this area most extensively in the radiology education literature is Dr Jannette Collins. In 2002, she published an article entitled "Motivation of Radiology Residents" wherein she discusses a variety of methods to motivate students to learn, drawing from both educational and psychological foundations.⁵ In 2006, Collins⁶ presented 3 keys to being an effective educator: knowledge, skill, and professional traits. She defines *knowledge* as mastery of facts within an area of expertise and as understanding pedagogy. Skills include communication; professional relationship building; ability to create interactive learning environments and develop organized learning activities with clearly defined goals and expectations; ability to provide quality feedback to students; adequate skills at self-evaluation; ability to adapt to different learning styles; and enthusiasm for teaching. *Professional traits of an effective educator* are defined as engaging in lifelong learning; being an advocate of, and demonstrating, sound ethics in all aspects of life; and collaborating with others to improve the quality of education.

Others have observed that experts may not always be the best instructors because their depth of knowledge may render them unable to view the material from the learners' point of view.⁷ Indeed, individuals who are often deemed excellent instructors are often the individuals who simply show a "sincere commitment to the comprehensive welfare of those they teach".^{8(p329)} In short, excellent instructors are mentors as well as teachers^{9–12} and create supportive learning environments¹³; in effect, they are student-centered individuals. Mentoring can be an important part of successful career development¹⁴ and is perceived by radiology residency program directors as important for residents to establish mentoring relationships.¹² This is supported by recent research that found that involving medical students more in imaging procedures and fostering a mentor-mentee relationship improve the interest of the student and result in an increased likelihood of the student choosing a radiology residency.¹⁵ In fact, a 2011 *Journal of the American College of Radiology* article reviews mentorship characteristics and provides an outline of how to develop a formal mentorship program in the academic setting.¹⁶

A current shortage of academic radiologists, combined with financial difficulties, has resulted in an increased reliance on computers and digital imaging for at least part of the teaching workload in most radiology departments.¹⁷ Another result of this shortage was the piloting of a 3-month residency elective in education at the Indiana University School of Medicine. This pilot

Download English Version:

<https://daneshyari.com/en/article/1157371>

Download Persian Version:

<https://daneshyari.com/article/1157371>

[Daneshyari.com](https://daneshyari.com)