

Personal Statement and Executive Summary – Rad Doc

Teaching Philosophy

What is my teaching philosophy? I've asked myself this question countless times while preparing my educator's portfolio. I've also read as many teaching philosophies as I can get my hands on to see how people put into words such a personal and abstract concept. Most teaching philosophies I read seem to be riddled with catchphrases such as "resident-centered education", "my door is always open", "put the resident first," "incorporate teaching and research," "I learned a great deal from my trainees," etc. Undoubtedly the authors truly believe in these admirable principles and strive to achieve them. I find myself also being drawn to such grandiose ideals. However, I want my statement to be uniquely personal, informative and a true reflection of my more pragmatic and concrete ideas about resident, fellow, and medical student education.

I picture in my mind's eye, a resident or fellow during her last day of training at Seattle Children's Hospital. In what way have I affected her life? How is she different from her first day as a trainee? What has she learned from me? My number one hope is that she regards patient care as the most important aspect of her professional life. I also hope I have instilled in her a desire for life-long learning, the humility to accept her limitations, and the fortitude to stand up for her beliefs. I do not see myself as someone to teach her all of pediatric radiology, and I do not see her as a vessel into which knowledge must be poured like a glass of water. Practically, she should have a certain fund of knowledge, which includes skills such as performing an Upper GI and reducing an intussusception. However, I want her to know where to turn for answers when faced with issues outside her expertise. In today's world with data literally at our fingertips, knowing how and where to obtain reliable information is just as important as the knowledge we carry with us.

It is my strong belief that the future of radiology education lies in on-line learning. My aim is to apply up-to-date instructional strategies in combination with multimedia technologies to produce and deliver radiology lectures and training modules. Ultimately, my goal is to engage and teach students from all over the world, and assess their learning outcomes in online environments. I have already taken steps towards achieving this goal and making my philosophy more concrete. In late 2008, we created a PowerPoint plug-in, PACStacker, that facilitates the creation of stackable image sets in a simple and intuitive manner, permitting real-time scrolling, editing, and manipulation of imbedded image stacks within a PowerPoint presentation. An article describing the use of this freely distributed software was published in the American Journal of Roentgenology in February 2009.

More recently, I participated in the University of Washington's Teaching Scholars Program, a yearlong course designed to help participants become academic leaders, to conduct research related to educational endeavors, and to develop and disseminate educational innovations. This course taught me to view teaching as a legitimate subject of scholarly investigation. We read and discussed peer-reviewed materials pertaining to clinical reasoning, evidence-based medicine, professionalism, inter-professional education and instructional technology and

informatics. All participants were required to complete an education-related project, and I chose to create a website to house radiology based Enhanced Podcasts. An Enhanced Podcast permits images and video to be displayed in time with the audio and can be viewed online or downloaded to a computer or an MP3 device such as an iPod. The Dual Coding Theory, first advanced by Alan Paivio, suggests the combination of auditory and visual information allows for improved learning over either method alone (Paivio A. *Mental Representations: A dual Coding Approach*. Oxford Science Publications. 1986). I have authored and uploaded several Enhanced Podcasts. Topics include Pediatric Foot Alignment Assessment, Writing Effective Learning Objectives, and Hypertrophic Pyloric Stenosis. I have since shown these Enhanced Podcasts to other departments, and there is strong interest from Pediatric Surgery, Urology, and Cardiology in creating their own Enhanced Podcasts. I am currently collaborating with the Pediatric Surgery department to make Enhanced Podcasts of common procedures such as congenital diaphragmatic hernia repair and appendectomy. I also recently wrote an article about Enhanced Podcasting and its role in radiology education (*Academic Radiology*, March 2010).

I am a strong believer that multimedia technologies and on-line tools do not have to be limited to resident education. I have applied these strategies for medical student education also. Currently, I am chair of the first year Medical Student Radiology/Anatomy Correlation course where I work hand in hand with Dr. John Clark, Chair of the Department of Biological Structure. Along with other instructors, I teach radiological anatomy to first year medical students in a structured, classroom environment using software such as Osirix, Keynote, PowerPoint, and QuickTime. Immediately after students perform cadaveric dissection, we provide radiologic correlation. This helps the students to consolidate their knowledge and appreciate the importance of anatomy/radiology in the clinical setting. The course, which is in its fourth year, has been extremely well received both by students and the anatomy faculty. Along with an instructional guide, I have also developed questions to test the students' knowledge base. We have pre- and post-test data to demonstrate the effectiveness of our teaching. As part of my teaching philosophy, I believe we must establish an environment, which allows junior faculty to be better educators. This medical student course has provided valuable teaching opportunities for other junior radiology faculty. I envision such early integration of Radiology into the medical student curriculum as the first step towards fostering interest in our specialty. As we have done for Gross Anatomy, we can offer expertise in other areas such as Microbiology and Pathology. For example, immediately after the student learns about the microscopic and gross appearance of Wilm's Tumor, he or she can view its characteristic appearance on CT and MRI in multiple planes and with 3-D reconstructions. I can only imagine how much richer my medical school experience would have been if we had such integration with radiology.

Another key component of education is mentorship. The mentor/mentee relationship is one that can span the course of an entire career. As Pediatric Fellowship program director, I see myself as a confidant, a counselor, and a guide to help residents, fellows, and medical students obtain strong letters of recommendation, contact faculty with like educational/research interests, and secure sought-after positions in reputable jobs and programs.

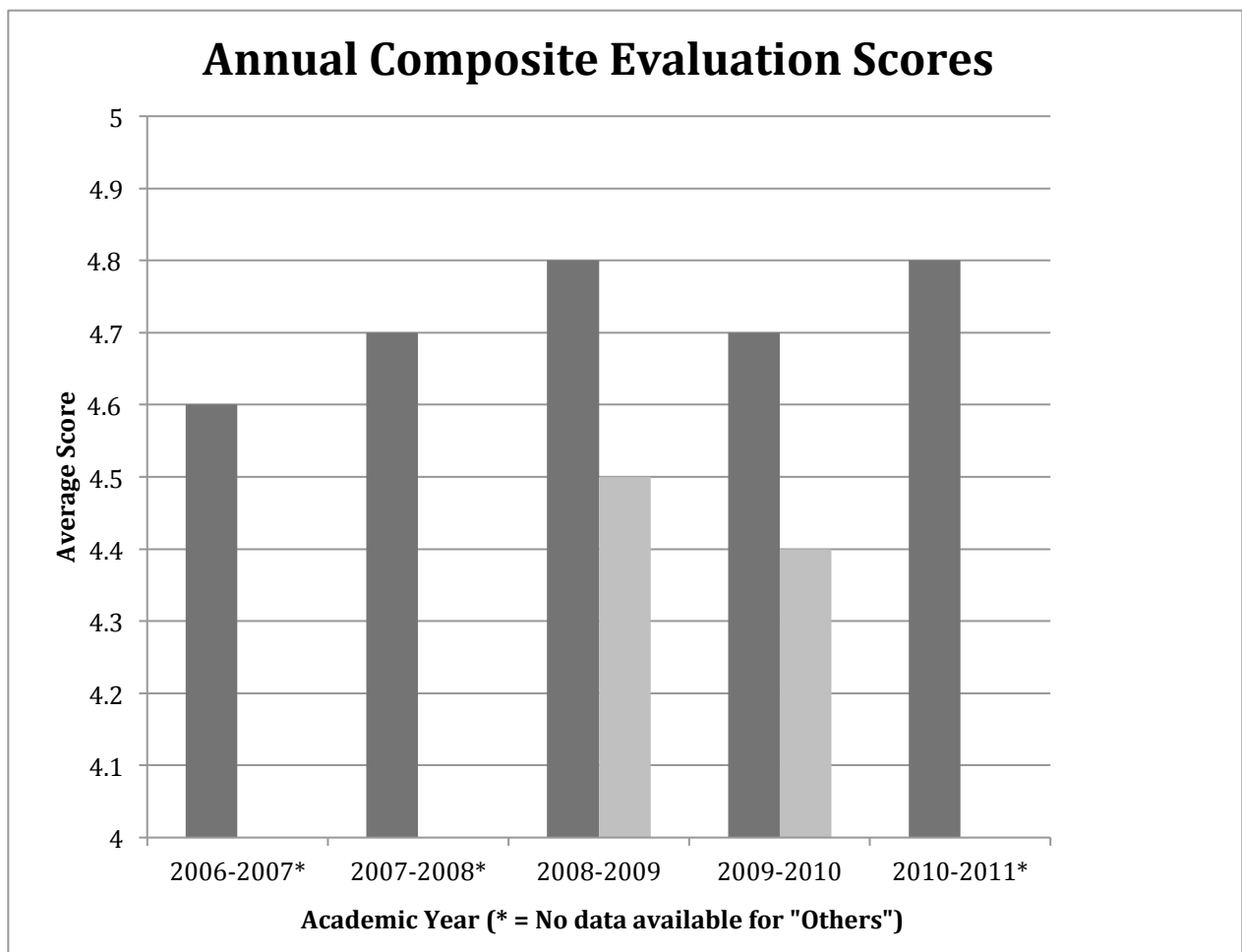
When starting this process of self-reflection, I wanted to convey my uniquely personal philosophy, ideas and passion for teaching with concrete examples. I hope I have been successful.

I. Teaching Activities

Please see the Excel Spreadsheets at the end of this executive summary, which outlines all my major teaching activities based on academic year. In the tables, I have included the following information:

1. Teaching activity and type of learner(s)
2. My Role in the teaching activity
3. Total number of contact hours
4. Total number of hours in preparation
5. Total number of learners
6. Evaluation averages with group comparisons when available

The graph below represents all evaluation scores averaged per year and compared to other instructors (when those scores are available).



At the end of this executive summary, I have included a one-page document listing some specific comments I received throughout the years about the effectiveness of my teaching.

II. Curriculum Development

In 2008, our Pediatric Radiology Fellowship program was reviewed by the ACGME and received six citations. In the spring of 2009, I took over as fellowship program director and was asked to respond to and correct the citations. I collaborated with other program directors and educational leaders from various departments and wrote a response letter to the ACGME outlining the steps we were taking to correct the violations. The response was received favorably, and our program was NOT put on probation. Since becoming fellowship program director, I have completely rewritten our curriculum along with new goals and objectives to reflect the competency based requirements stressed by the ACGME. These documents may be found in the "Fellowship Handbook" provided in the "Curriculum Development" section of the appendix.

As part of my crusade to integrate resident and fellow education, I have closely collaborated with the Pediatric Surgery and Pathology departments to establish a series of Enhanced Podcasts and Vodcasts to teach common pediatric pathologies. These educational recourses can be found at the following website I authored: The resources have also been submitted to MedEdPORTAL, an online peer-reviewed journal, for publication.

III. Mentoring

Being a Fellowship Program Director and educator has allowed me to be mentor to many talented trainees and junior faculty. I have been the primary mentor on over a dozen peer-reviewed publications, scientific abstracts, and educational exhibits. I have also helped mentees obtain academic positions at other institutions and acquire jobs in a tight and competitive market. For each of the past two academic years as Fellowship Program Director, I have been able to obtain \$1250 of travel funding for our fellows through the Cockery Grant. I have provided counseling to mentees during times of personal and academic turmoil. I am a proud member of the recently established Faculty-Resident Mentorship Program in the UW radiology department. In the "Mentorship" section of the appendix, I have included two letters of support from prior mentees.

IV. Educational Administration and Leadership

I have already mentioned my role as Fellowship Program director under the "Curriculum Development" section. I am also a reviewer for several academic journals including *Pediatric Radiology* and *American Journal of Roentgenology*. However, I am especially proud to be a deputy editor for *Academic Radiology*, the official journal of the Association of University Radiologists. I am the Co-Chair of the Electronic Communication Committee for the Alliance of Clinician-Educators in Radiology and assistant course director for University of Washington's Radiology review course. In 2010, I was asked to serve as one of five members on the ABR certifying examination committee for Pediatric Radiology. As a member, I help

write questions for the new certifying examination format. I see this as a wonderful opportunity to be at the forefront of radiology education.

V. Research and Publications

For a complete list of publications, please refer to my CV at the end of this executive summary. My primary research focus has been in Pediatric Musculoskeletal Imaging and electronic-based resident education, in keeping with my overall teaching philosophy and vision of the future of education. In addition to the publications listed in my CV, I'm currently working on these projects:

1. Radiation dose reduction in children
2. Contrast reaction
3. Optimizing Peer-Review
4. Important Photoshop tools for radiologists
5. Ultrasound-guided pediatric musculoskeletal procedures
6. MRI of the pediatric foot and ankle: A Review

Currently I'm also editing a textbook, "Pediatric Radiology: A Teaching File," to be published by Lippincott, Williams, and Wilkins. I have recruited junior faculty, many of whom are on the clinician-educator tract, from Seattle Children's to write most of the chapters. Pediatric radiologists from other institutions such as Vanderbilt, Texas Children's, and University of California Davis have also contributed. The textbook is in the final stages of editing and will be completed by July of 2011.

Since May of 2007, I've also been part of an NIH funded project investigating early, aggressive therapy in juvenile idiopathic arthritis (TREAT Study). The project funds approximately 5% of my salary and benefits. Dr. Carol Wallace is the principal investigator. The study is about to finish, and I am in the process of writing an abstract on the MRI findings.

VI. Regional/National/International Presentations and Recognition

For a complete list of invited lectures at national and international meetings please see my CV. Briefly, I've given over twenty invited talks at national and international meetings, including refresher courses at the RSNA, AUR, and ARRS. My two most recent talks were at the 2010 RSNA: A refresher course on Congenital Musculoskeletal Diseases and another on Photoshop, Podcasting, and Screencasting for Radiologists. The audience was comprised of over 2000 radiologists, residents, and technologists.

I have also been a visiting faculty at University of California, Davis and Memorial Health University Medical Center in Savannah, GA. Next year I plan to be a visiting faculty at Texas Children's Hospital.

Since 2009, I have been a member of the Emergency Radiology Conference Committee. Our most recent CME course was very successful, scoring 5.32 out of 6 for content relevance and

5.43 out of 6 for quality of presentations. In 2010, I also served as Assistant Course Director for University of Washington's Radiology Review course. My responsibilities included recruiting faculty, establishing the pediatric curriculum, and helping with presentations.

VII. Professional Development in Education

In addition to the yearlong Teaching Scholars program, I have also participated in several workshops to improve myself as an educator. Below is an abbreviated list of such activities. A more complete list is available in the appendix and the entire list can be found in the provided CD under "Faculty Development."

1. Demystifying the Teacher's Portfolio
2. How to be Successful in the Clinician Educator Pathway
3. Leadership and Promotion
4. Measuring Quality and Improving Your Program
5. Teaching and Learning with Technology

Throughout the years, I have also contributed to the professional development of other junior faculty and trainees in the following ways:

1. Providing junior faculty and trainees opportunities to lecture at the medical student anatomy course
2. Inviting junior faculty to write chapters in a Pediatric Radiology textbook I'm editing.
3. Inviting junior faculty to national meetings held locally in Seattle. These meetings include the Radiology Review Course and the Emergency Radiology Conference.
4. Giving lectures at national clinician educator development programs sponsored by AUR, RSNA and ARRS.

VIII. Honors and Awards

I am an Alpha Omega Alpha member, and received the Thoracic Radiology Resident of the year award as a first year resident at the University of Washington. I was also selected to be a participant in the Teaching Scholars Program at the University of Washington, a yearlong course emphasizing the scholarship of education. In 2009, I was chosen to participate in the AUR-Philips Academic Faculty Development Program. That same year, I was a member of the winning team for Philips-Vydareny film interpretation competition at the AUR meeting.