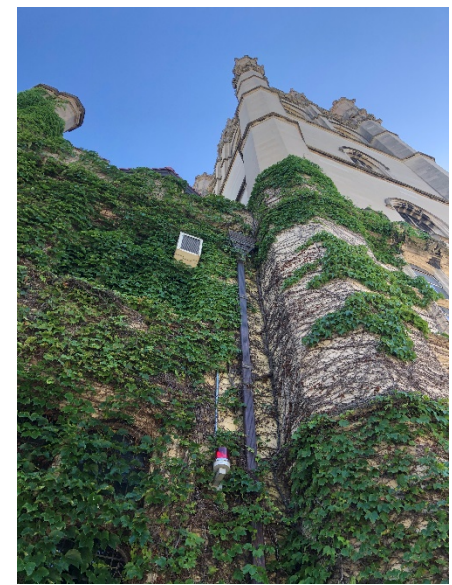
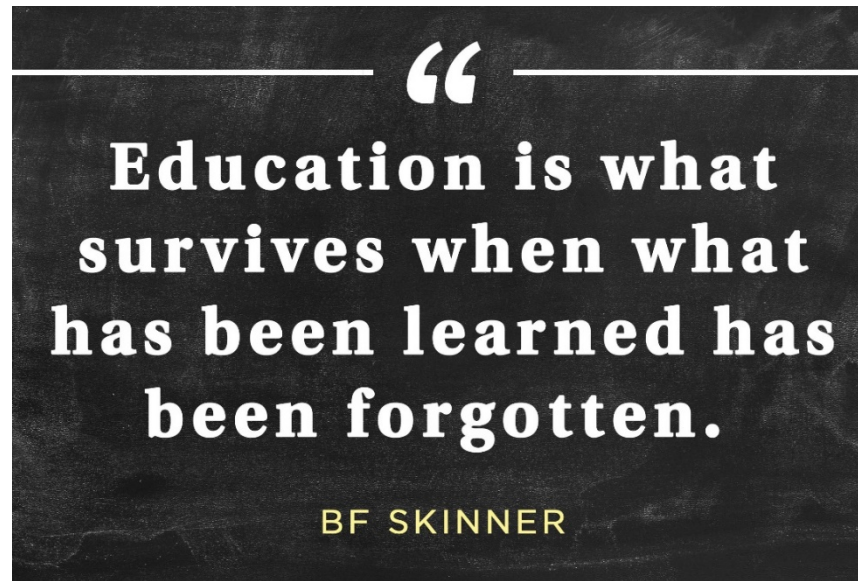


Professionalism and Soft Skills in Residency: Finding a Happy Medium Between Didactic Instruction and Self-directed Learning

AAPM 2020





How are we training residents?

Hania Al-Hallaq, Ph.D.
The University of Chicago
Chair: AAPM MPRTTP



Disclosures

- ▶ Chair of AAPM MPRTP
- ▶ Co-Chair of ETC
- ▶ Chair of SDAMPP Outreach Committee

Unrelated:

- ▶ Research funds from Varian
- ▶ Chair of AAPM TG-302



Learning Objectives

1. Highlight data supporting the need for formalized training for professionalism and soft skills during residency.
2. Investigate how adult learning concepts can be integrated into residency training.
3. Learn about teaching soft skills including how to communicate with patients and other allied health professionals



Session Outline

- ▶ Introduction
- ▶ Current standards for residency programs
- ▶ Current online resources
- ▶ How to teach adult learners?
- ▶ How to teach soft skills (e.g. professionalism)?
- ▶ Conclusions



INTRODUCTION

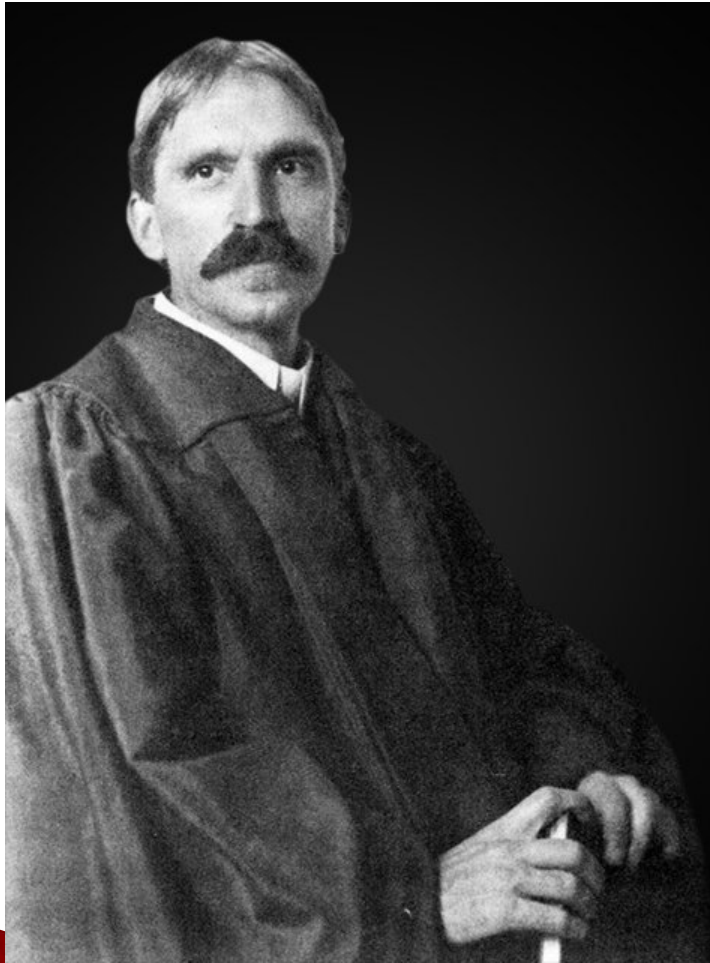


My personal experience as a resident

- ▶ Medical physics graduate
- ▶ 2000–2002
- ▶ Here's a self-study → ABR certification
- ▶ Lots of hands-on-experience!



John Dewey : educational reformer



**Give the pupils something to do,
not something to learn;
and the doing is of such a nature
as to demand thinking;
learning naturally results.**

— *John Dewey*

AZ QUOTES





RESIDENCY STANDARDS



Current standards for residencies

- ▶ AAPM TG-249
- ▶ ABR
- ▶ CAMPEP

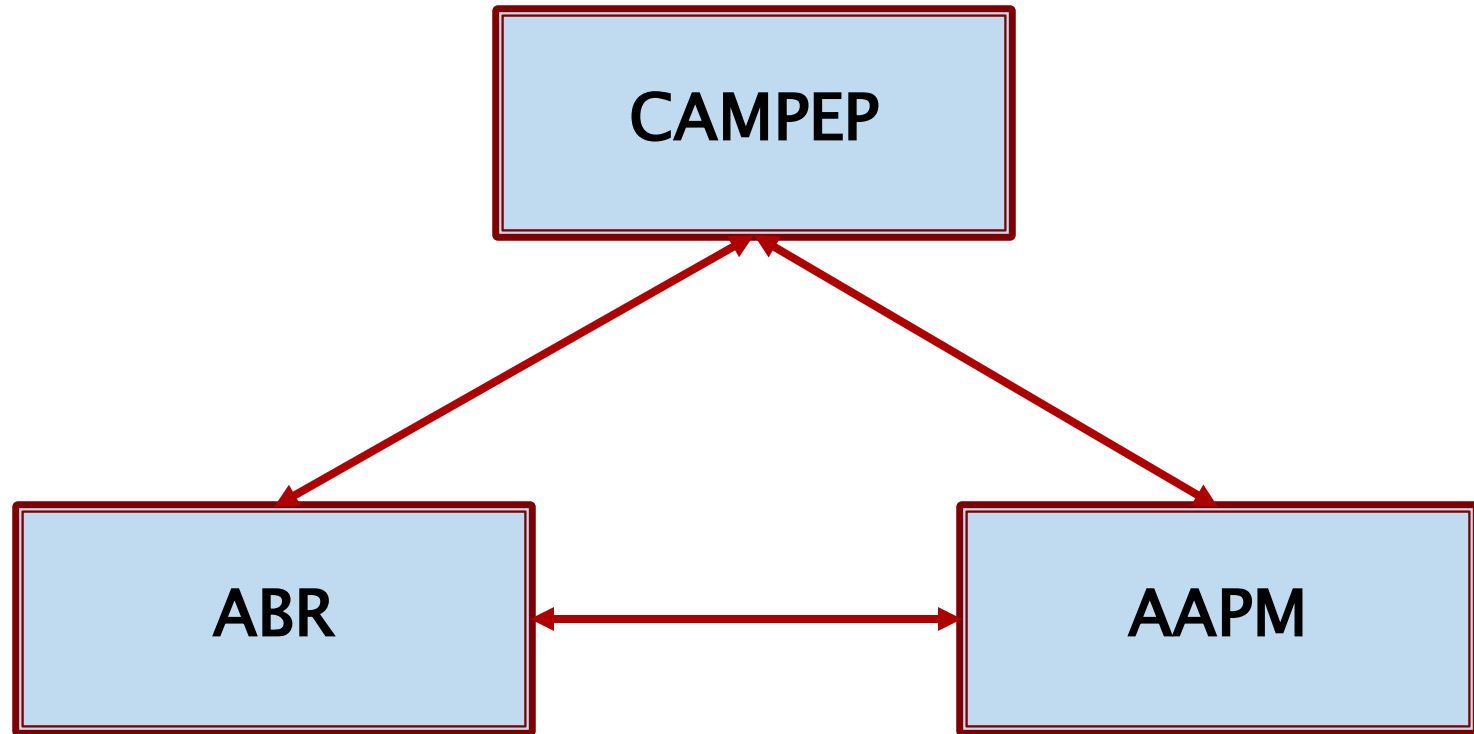


CAMPEP Standards for TMP Residency

- ▶ *Professionalism*
- ▶ *Leadership*
- ▶ *Ethics*
- ▶ Conduct system calibrations, performance evaluations and quality control, safety and compliance tests, including vendor specifications, under supervision of a qualified physicist
- ▶ Treatment planning & delivery
- ▶ Safety
- ▶ Informatics
- ▶ Therapeutic radiopharmaceutical



Standards evolve with clinical practice



ONLINE RESOURCES



Online resources for training residents

JOURNAL OF APPLIED CLINICAL MEDICAL PHYSICS, VOLUME 14, NUMBER 6, 2013

Review of online educational resources for medical physicists

Joann I. Prisciandaro^a

Department of Radiation Oncology, University of Michigan, Ann Arbor, MI
joannp@med.umich.edu

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Medical physicists are often involved in the didactic training of graduate students, residents (both physics and physicians), and technologists. As part of continuing medical education, we are also involved in maintenance of certification projects to assist in the education of our peers. As such, it is imperative that we remain current concerning available educational resources. Medical physics journals offer book reviews, allowing us an opportunity to learn about newly published books in the field. A similar means of communication is not currently available for online educational resources. This information is conveyed through informal means. This review presents a summary of online resources available to the medical physics community that may be useful for educational purposes.



Online resources for training residents



Motivation

- **Medical physicists (MP) are involved in the education of undergraduate and graduate students, as well as residents.**
- **Currently, there is no reliable means of communicating or publicizing new online educational resources.**



Online resources for training residents



Categories

1. List servers
2. Professional organizations
3. National/international agencies
4. Universities websites
5. Miscellaneous websites



Web Modules on Professionalism and Ethics

William Hendee, PhD^a, Jennifer L. Bosma, PhD^b, Linda B. Bresolin, PhD^c,
Leonard Berlin, MD^d, R. Nick Bryan, MD, PhD^e, Richard B. Gundersman, MD, PhD^f

Health care disciplines have always held resolutely to a commitment to professionalism and high ethical standards. With the present emphasis on public accountability, professionalism and ethics are receiving enhanced attention in health care education and practice. A challenge for radiologists, radiation oncologists, and medical physicists is to define the scope and depth of knowledge about professionalism and ethics that are necessary for the practice of the disciplines. A further challenge is to develop accessible educational materials that encompass this required knowledge. About 2 years ago, the ABR Foundation decided to address these challenges through the development of an ethics and professionalism curriculum and production of a series of Web-based educational modules that follow the curriculum. Six organizations agreed initially to contribute financially to construction of the curriculum and modules and were later joined by a seventh. The curriculum was developed by the ABR Foundation and included in a request for proposals that was widely distributed. Teams of authors for each of 10 modules were selected from respondents to the request for proposals. As the modules were developed, they were reviewed in 3 successive stages, including peer review by members of the ACR Committee on Professionalism and the RSNA-ACR Task Force on an Ethics Curriculum. After revisions were prepared in response to the reviews, the modules were translated into a format compatible with the e-learning platform on which they are mounted. The modules are now available to all who wish to study them.

Key Words: Ethics, professionalism, modules, accountability, curriculum

J Am Coll Radiol 2012;9:170-173. Copyright © 2012 American College of Radiology



Online resources from training residents

The screenshot shows a web portal interface. At the top, there is a header bar with logos for the American Board of Radiology (ABR), the American College of Radiology (ACR), the American Society of Neuroradiology (ASNR), the American Society of Nuclear Medicine (ASNM), the American Society of Teleradiology (ASTRO), and the Radiological Society of North America (RSNA). Below the header, the word "Home" is displayed. On the left side, there is a vertical navigation menu with icons for home, help, power, and user profile. The main content area is titled "Ethics and Professionalism" and contains a list of topics, each preceded by a checkbox:

- ☐ Attributes of Professions and Professionals
- ☐ Conflict of Interest
- ☐ Ethical Issues in Human Subject Research
- ☐ Ethics in Graduate and Resident Education
- ☐ Ethics in Research
- ☐ Ethics of Personal Behavior, Peer Review, and Contract Negotiations with the Employers
- ☐ Physician-Physician and Physician-Patient Interactions
- ☐ Publication Ethics
- ☐ Relationships with Vendors
- ☐ Research Involving Vertebrate Animals



ADULT LEARNING STRATEGIES



Teaching adult learners



Adult Learning Techniques: What Are They and How Can You Use Them?

Laura Padilla, PhD DABR
AAPM 2017 59th Annual Meeting &
Exhibition - Denver, CO



AAPM VL L Padilla, 2017



Teaching adult learners

Adult Learners

- Have pre-existing knowledge and experience
- Need to know why this knowledge is useful
- Are task-oriented
- Need to take responsibility for own learning

Laura Padilla, PhD

AAPM 2017, 59th Annual Meeting & Exhibition

AAPM VL L Padilla, 2017



TEACHING SOFT SKILLS



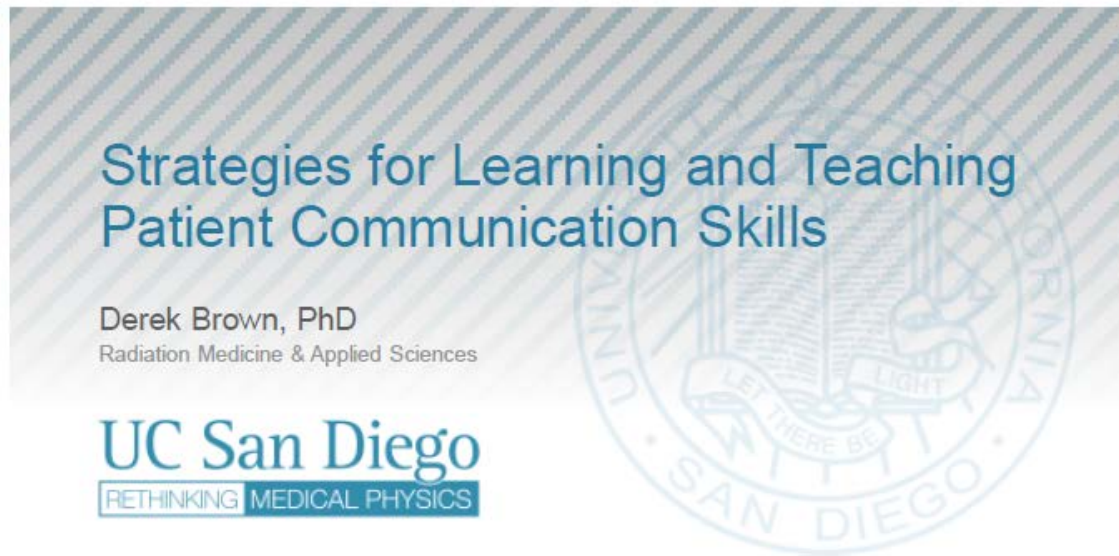
Soft skills vs hard over career time...



<https://images.app.goo.gl/k3UjzxCvdbriHrBj6>



Teaching soft skills



AAPM VL D Brown, 2017



Teaching soft skills

Competency Assessment

- **How do we know when/if trainees are competent?**
 - This is a really important, and difficult, question...
 - When trainer feels comfortable? When trainee feels comfortable?
- **Specific metrics**
 - Did trainee engage/empathize/educate/enlist patient during interaction?
 - Was the patient satisfied with level of technical detail provided?
 - Did the consult increase or decrease patient anxiety?

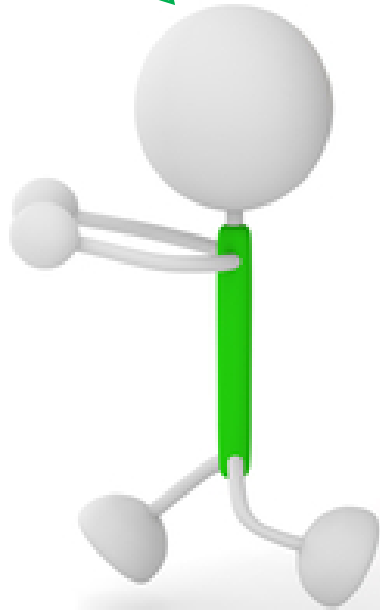


Let's put it all together....

- ▶ Lots of standards to meet
- ▶ Soft skills are becoming increasingly important in our field
- ▶ We may not have all the expertise locally...



Program
Director



Let's put it all together

- ▶ Lots of standards to meet
- ▶ Soft skills are becoming increasingly important in our field
- ▶ We may not have all the expertise locally...
- ▶ Online resources may be helpful
- ▶ We are a *community* of educators!
- ▶ Adults learn by doing!
 - Experiential learning
 - Assuming responsibility

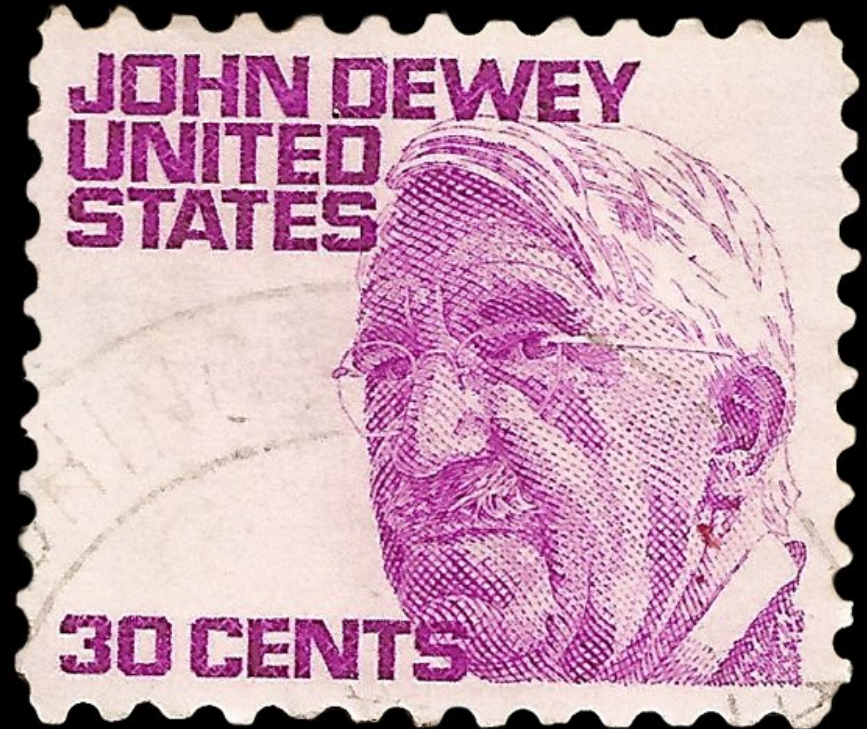


John Dewey : educational reformer

**You cannot teach today
the same way you did
yesterday to prepare
students for tomorrow.**

— *John Dewey*

AZ QUOTES



Thank you for your attention!

► Acknowledgements:

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- Derek Brown

