Overview of the scope and opportunity of online education in medical physics

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A transformation in learning is underway…

(screenshot from youtube.com/watch?v=sIFYPQjYhv8 by Erik Qualman)
Expanding landscape of online education

**MIT Open Courseware**
Content from 2150 courses available online

2002

**Coursera**
MOOCs appeal to non-traditional students (9 million users)

2012

**Arizona State Univ**
70 degree programs now available completely online

2014

New paradigms of pedagogy

**Team-based learning**
Content understood better working in teams

**Problem- or case-based learning**
Cases, rather than first principles, become springboard

**Flipped classroom**
Lectures viewed online; classroom time for discussion and problem solving
Relevance of online education to Medical Physics

- Are content delivery methods for online undergraduate education relevant to graduate education?
- How can online resources supplement graduate or residency didactic approaches?
- How can online material be developed for new pedagogy in medical physics?
- How can online material be used in MOC?
- Can online material supplement training of physicians or public?
- Is there a place for MOOCs in med phys?

Ways in which online content is currently being used in MP

- Online lectures by instructors for flipped classroom model
- Virtual library and online learning content for MOC
- Online modules for use in educating physicians
- Resources for the public on medical physics topics
Practical considerations regarding online education

- What content is currently available?
- Who should “own” online content, who should pay for it, and what is a business model to make it viable?
- What are useful tools for creating online content?
- How can one measure the effectiveness of online education?
- What role, if any, does AAPM have in facilitating, producing, or providing content?

Challenges

- Expensive and time consuming to produce
- Difficult to organize and publicize available content (“catalog” or “google” approach?)
- Revamping established courses to include more online content
- Adapting to evolving learning preferences of millennials
- Quality control of content (especially important for resources for the general public)
- Maintaining “control” of the educational enterprise by physicists
TG 250: Online Education
(Dobbins, Bloch, Boyer, Frey, Gingold, Mayo, Oldham, Sprawls)

- Assess what content is currently available
- Evaluate what additional content might be useful in various areas of educational coverage
- Identify challenges in achieving potential of online education
- Identify key parties responsible for advancing efforts in each area of online education
- Recommend AAPM’s role in managing, providing, or supporting online content
- Recommend organizational structure within EC to best implement these recommendations

Today’s symposium content

The Opportunity
Overview – Jim Dobbins

Current Resources
Available content – Joann Prisciandaro
AAPM Virtual Library – Chuck Bloch
AAPM/RSNA online modules – Eric Gingold
Software tools – George Starkschall

The Future
MOOCs – Mark Oldham
A collaborative model – Perry Sprawls

Panel Discussion
Thank you

For comments or questions:

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