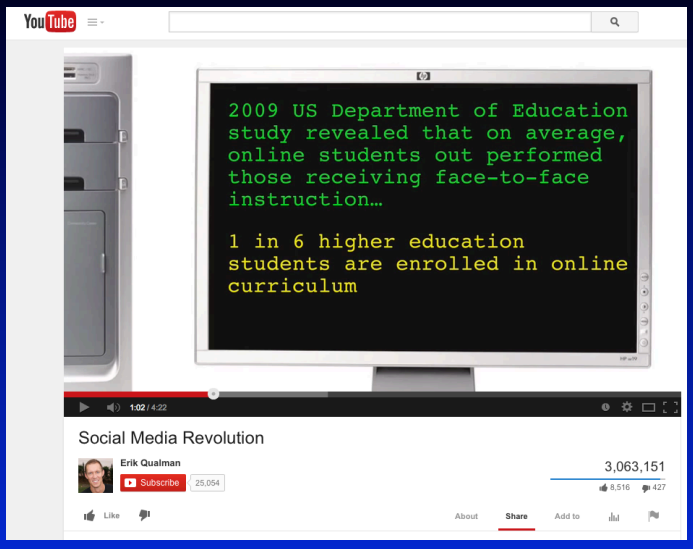
AAPM Education Council Symposium

Online Education in Medical Physics

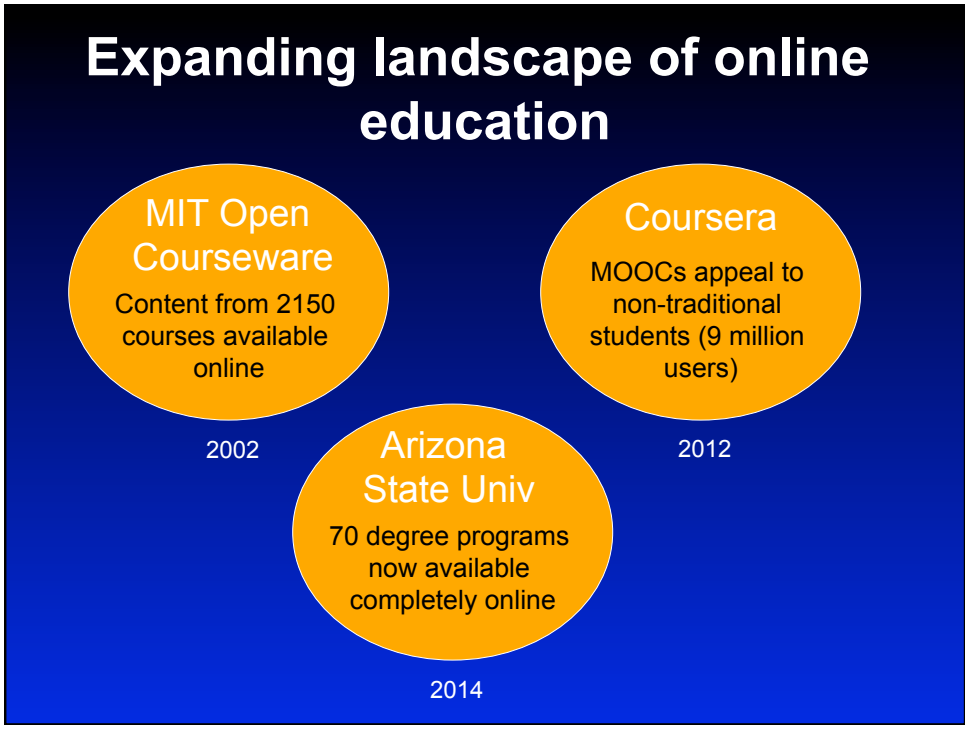
Overview of the scope and opportunity of online education in medical physics

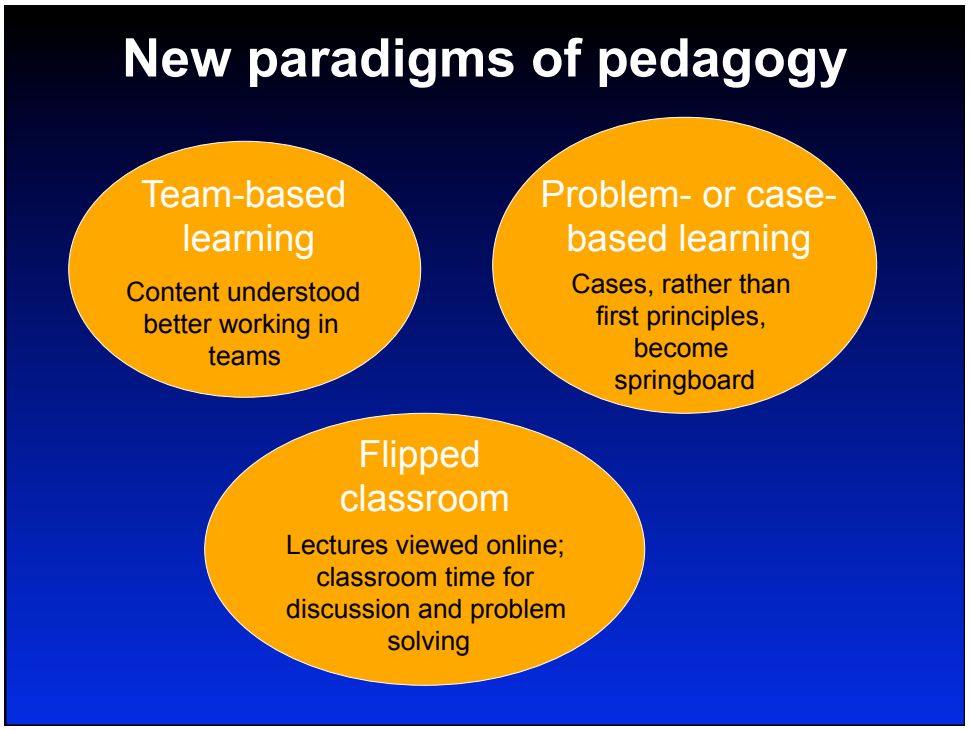
James T. Dobbins III, Ph.D., FAAPM
Vice-chair, AAPM Education Council

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:

james.dobbins@duke.edu