Implications of Digital Learning in Dental Education

Elise S. Eisenberg, DDS, MA
Senior Director of Informatics
NYU College of Dentistry
What is digital Learning?

• Analytics (transforming data into insight for fact-based decision making)
• Critical thinking and information literacy skills
• Educational technology
• Self-directed learning
Educational Technology

- Web-based, digital &/or mobile
- Websites, apps, software, hardware
- Good for teaching content
- Flexibility, just in time learning
- Connected & personalized learning (paced to learners needs)
Massive Open Online Courses (MOOCs)
MOOCs

• No tuition, open to anyone, enroll thousands
• Disruptive effect on education
• How do we integrate these with our existing credentialing infrastructure?
• Incorporate adaptive learning routines ... advances in pedagogy?
Blended Learning

... Is a mix of virtual education and face to face instruction. Student control over time, place, path or pace
Flipped Classroom
Generation Z
Generation Z

• 1995-2009
• Internet Generation, digital generation, ‘Digital Natives’
• do not know a world without digital communication tools
• 75% of this generation cannot live without the internet
• Interesting job, good salary, friendly colleagues, flexible and dynamic work place
• Constantly multitasking and more socially responsible
• Sharing means multiplying instead of splitting
• Share everything online; share everything with everybody and openness is important to them
• The most positive generation ever
Generation Z – Education Trends

• 43% prefer a digital approach to learning and find it easiest to learn from the internet
• Learning in smaller bites – short attention span
• Interactive devices as learning tools – iPad
• Learning as a game – instant gratification
• Critical thinking and problem solving
• Collaborative online projects
• Visual learning
Survey
Schools Responding to Survey

Case Western Reserve University
Columbia college of dental medicine
Howard University College of Dentistry
Indiana university
Medical University of South Carolina (MUSC)
Midwestern University - Arizona
New York University College of Dentistry
Nova Southeastern University College of Dental Medicine
Oregon Health & Science University
State University of New York at Buffalo, School of Dental Medicine
The Ohio State University
Texas A&M University Baylor College of Dentistry
Tufts
UMKC SOD--Division of Dental Hygiene
University of Iowa College of Dentistry
University of Maryland, Baltimore
University of Utah School of Dentistry
University of the Pacific School of Dentistry
University of North Carolina at Chapel Hill
University of Florida College of Dentistry
University of California San Francisco
University of Texas School of Dentistry at Houston
University of Mississippi
UT Houston School of Dentistry
UNMC College of Dentistry
Virginia Commonwealth University
What distance or e-learning technologies are currently being used in your dental school?

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What distance or e-learning technologies are currently being used in your dental school?
How successful are these technologies (faculty / student perspective if available)?

- Students find podcasts and webinars very helpful to their learning.
- Students like them very much, the 24/7 availability is essential.
- They are successful when the technology works, frustrating when it doesn't work.
- The students love having access to the digital lectures so they can view them on their own time and speed.
- Students are (more and more) asking faculty about lecture capture. Some faculty are enthusiastic about recording their lectures, others feel strongly that student need to be physically present in class.
What are the difficulties encountered?

- Faculty development, time to learn and support, there is never enough.
- Initial growing pains and getting accustomed to using (the technologies).
- Many faculty still love to stand in front of the classroom and lecture - and they complain mightily about students on their computers doing anything other than following the lecture notes.
- Technical / computer / software glitches.
- Faculty resistance based upon intellectual property concerns or concerns that students will elect to not attend lectures.
Are any of your faculty using blended learning or flipped classrooms and how is it going? How has the faculty / student response been?

• We have a few blended classes and students respond positively.
• A few faculty are using a flipped classroom with great success.
• Yes, moderately successful depending upon the course director using it.
• We have two instructors that are trying out these approaches, to my understanding. The response from the students has been supportive. The response from the faculty teaching these courses is also positive.
• We have a few faculty that are using flipped classrooms. Less than 10% of the faculty are using this and the student response is about 50-50 to this style.
Items to Consider

• Resource & support staffing (lack of IT staff is barrier to innovation in teaching and learning)
• Reliability of technologies selected and ease of use
• Initiatives should be part of the institutions strategic plan and budget
• Faculty Development
• Data security
Items to Consider

• How do we innovate for the education and practice of tomorrow?
• How can technology enable more efficient and effective pedagogies?
• How can these technologies improve the economics of delivery and the potential for student success?
Institutional Questions

• Faculty release time and who pays for it?
• Who owns the material, the college or faculty?
• Platform – where does it reside and how is it delivered, maintained, tech support?
• Our profession requires personal interaction – do we lose listening skill and synthesized thought
Institutional Questions

• Brand separation of the content
• How much resource can an institution invest
• What’s the customizability of the content, ie, does everyone believe in the same methodology? How applicable is the content to each school? One curriculum for all schools?
Trends in Dental Education
2013 ADEA Annual Session Topics
2014 ADEA Annual Session Topics
elise.eisenberg@nyu.edu