A GUIDE TO TECHNOLOGY ENABLED LEARNING

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MASSIVE OPEN ONLINE COURSES (MOOCs)

MOOCs are a new form of online course development. A massively open online course (MOOC) is a new model of delivering online learning content to anyone who wants to take a course, without any limitation on the number of participants. Participants can be students enrolled at the institution hosting the MOOC or could be any individual with internet access who is interested in joining the course.

MOOC course activities can include videos, posting on discussion boards and blogs and commenting through social media. Participants in completely open MOOC courses do not receive credit for the course and may not receive any feedback or correspondence from the course instructor. The curriculum for a MOOC is similar to a standard online course; however learning activities are restructured to accommodate many participants, which could be in the thousands. There are some challenges with MOOCs due to the lack of guidance or learning support and a lack of active learning and effective instructional design which leads to a vast majority of participants dropping out of these courses. (Educause).

MOOC Resources

- 7 Things You Should Know About MOOCs – Educause
  http://www.educause.edu/library/resources/7-things-you-should-know-about-moocs
- What is a MOOC – Dave Cormier, University of Prince Edward Island
  http://www.youtube.com/watch?v=eW3gMGqcZQc
- U of T Signs on to Startup Offering Online Courses – Globe and Mail article
- Introducing the Latest Thing in Online Education – CBC Podcast

MOOC Hosting Sites

- Coursera
  https://www.coursera.org/
- Udacity
  http://www.udacity.com/
- edX
  http://www.edxonline.org/

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OPEN EDUCATIONAL RESOURCES (OER)

Open Educational Resources are a growing trend in the educational field. **OER are teaching and learning materials made available online through open licenses which allow access to resources that would otherwise not be available due to copyright laws.** OER are made available to educational institutions and users such as instructors, students and lifelong learners who are able to use these resources free of charge. There are some challenges with OER regarding the quality of resources and the financial sustainability of offering course materials without charge.

OER content can include courses, course materials, learning modules, learning objects, collections and journals. OER tools can include software, content and learning management systems and on-line learning communities. OER can also include materials on teaching and learning best practices. (Educause).

**OER Resources**

- 7 Things You Should Know About Open Educational Resources – Educause  
  [http://www.educause.edu/library/resources/7-things-you-should-know-about-open-educational-resources](http://www.educause.edu/library/resources/7-things-you-should-know-about-open-educational-resources)
- Enhance Your Teaching and Enable Others to Learn with Open Educational Resources – Reflections Newsletter Teaching Support Centre, Western University  
  [http://uwo.ca/tsc/resources/publications/newsletter/current_issue/enhance_your_teaching_and_enable_others_to_learn_with_open_educational_resources_oer.html](http://uwo.ca/tsc/resources/publications/newsletter/current_issue/enhance_your_teaching_and_enable_others_to_learn_with_open_educational_resources_oer.html)

**OER Sites**

- OER Commons  
- Commonwealth of Learning  
  [http://www.col.org/resources/crsMaterials/Pages/OCW-OER.aspx](http://www.col.org/resources/crsMaterials/Pages/OCW-OER.aspx)
- MIT’s OpenCourseWare  
  [http://ocw.mit.edu/index.htm](http://ocw.mit.edu/index.htm)
- Open Learn (The Open University, U.K.)  
  [http://openlearn.open.ac.uk/](http://openlearn.open.ac.uk/)

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WIKIS

Wikis are simple web pages that individuals or groups can create and edit together using any web browser. Using wikis, both the content and the organization of that content can be edited by users.

Wiki Resources

- Wikify Your Course: Designing and Implementing a Wiki for your Learning Environment – Educause Review
- PB Works Online Team Collaboration
  www.pbworks.com
- Wikispaces
  www.wikispaces.com

SMART/WIRED CLASSROOMS

A smart or wired classroom is a classroom space that is equipped with various computer and audiovisual equipment and technology allowing a professor to incorporate a variety of media into their instruction. Smart classrooms allow for introduction of the ‘flipped classroom’ model where the traditional lecture material is reviewed by students as homework and the in-classroom sessions are devoted to interactive problem-solving exercises, laboratories, studios, collaborating and many other forms of active learning.

Some of the newer technologies being incorporated into wired classrooms are; interactive white boards, document cameras, tablet computers, handheld response devices, telecommunication, multimedia presentation tools, virtual labs, smart classroom furniture and electronic textbooks.

Smart Classroom Resources

- Smart Technologies
  http://www.smarttech.com/ca
- 7 Things You Should Know About Flipped Classrooms – Educause
  http://www.educause.edu/library/resources/7-things-you-should-know-about-flipped-classrooms

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SIMULATIONS

A computer simulation is an interactive, digital model of a real-world system in which users can manipulate variables and observe the system’s responses. Countless free simulations are available online and have been developed for almost every discipline – they are simply a Google search away.

Simulations have found particular use in scientific and engineering disciplines because they allow instructors to bring ‘experiments’ into the classroom without the cost of laboratory equipment. In anatomy and biological sciences, simulations can be used to replace expensive and sometimes controversial animal or human cadavers.

Simulation Resources

- Physics Education Technology
  http://phet.colorado.edu/
- The Chemistry Collective
  http://www.chemcollective.org/
- Cybertory
  www.cybertory.org
- Rice Virtual Labs in Statistics
  http://onlinestatbook.com/rvls.html

LECTURE/SOFTWARE CAPTURE

Lecture and software capture is technology which allows instructors to digitally record what happens in their classrooms or on their computer screens. Software capture technology can record cursor movement, typing and other on-screen activity for demonstration with an audio voice over. Lecture capture technology allows for audio and visual recording of presentations and supplementary material such as slide presentations or other digital resources. (Educause).

Lecture/Software Capture Resources

- Tegrity – McGraw Hill
  http://www.tegrity.com/
- Camtasia Relay – TechSmith
  http://www.techsmith.com/camtasia-relay.html
- 7 Things You Should Know About Lecture Capture

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SOCIAL MEDIA IN THE CLASSROOM

Social media includes both web-based and mobile-based technologies which are used for interactive dialogue among individuals, organizations and communities. Social media can include internet forums, blogs, wikis, social networking websites, virtual game-based applications, virtual social-world applications, podcasts, instant messaging, picture-sharing, video-sharing, music-sharing and social bookmarking.

Social media is being used as a teaching tool and is being incorporated into the curriculum as a valuable method for encouraging collaborative learning as the students of today see social media as a part of daily life. There are some challenges with incorporating social media into the classroom and instructors must become familiar with copyright laws as they apply to social media and follow their institutions established guidelines or policies regarding the use of social media in the classroom. Social media when is used correctly can offer many unique and creative methods for engaging students with course material. (Educause).

Web-Based Social Media Resources
- One Thousand Inspiring Ways to Use Social Media in the Classroom http://www.onlineuniversities.com/blog/2010/05/100-inspiring-ways-to-use-social-media-in-the-classroom/

Mobile-Based Social Media Resources
- 7 Things You Should Know About Mobile Apps for Learning-Educause http://www.educause.edu/library/resources/7-things-you-should-know-about-mobile-apps-learning
- Apple iTunes University http://www.apple.com/ca/education/itunes-u/
- College Mobile http://www.collegemobile.com/
- 7 Things You Should Know About iPad Apps for Learning-Educause http://www.educause.edu/library/resources/7-things-you-should-know-about-ipad-apps-learning

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BLOGS

A blog is a type of website or part of a website where an individual records personal reflections, descriptions of events, or other material such as graphics or video. "Blog" can also be used as a verb, meaning to maintain or add content to a blog.

Blog Resources
- Blogger
  www.blogger.com
- Wordpress
  www.wordpress.com
- Blogs in Higher Education: Pedagogy, Practice, and Really Simple Syndication (RSS)-Educause

PERSONAL RESPONSE SYSTEMS (CLICKERS)

A clicker is a device that allows individual students to respond anonymously to instructor questions during class at the press of a button. Clicker questions are generally posed in multiple choice format. These devices are accompanied by software which collects and presents the data in real time for everyone in the class to see in the form of a bar graph. Thus, clickers provide a rapid means of collecting an answer to a question from every student, allowing rapid reliable feedback to both you and the students. Clickers can also be used to facilitate dialogue between students.

Clicker Resources
- The Effect of Performance Feedback on Student Help-Seeking and Learning Strategy Use: Do Clickers Make a Difference? – Dawson, D., Meadows, K. & Haffie, T., Western University
  http://ir.lib.uwo.ca/cjsotl_rcacea/vol1/iss1/6/
- Top Hat Monocle
  http://www.tophatmonocle.com/
- Using Clickers in the Classroom – Russell James, University of Georgia
  http://www.youtube.com/watch?v=CnnP0uCqD4k&feature=email
YOUTUBE VIDEOS

*YouTube is a video-sharing website on which users can upload, share, and view videos.* The site displays a variety of user-generated video content, including movie, TV and music video clips, as well as amateur content such as video blogs and short original videos.

**YouTube Resources**

- YouTube
  [http://www.youtube.com/](http://www.youtube.com/)
- A Vision of Students Today – Michael Wesch, Kansas State University
  A YouTube video summarizing the important characteristics of the students of today.
  [http://www.youtube.com/watch?v=dGCJ46vyR9o](http://www.youtube.com/watch?v=dGCJ46vyR9o)
- YouTube Mash-up – Salford University Project
  An example of a YouTube Mash-up project using BBC archives created by University of Salford Manchester students.
  [http://www.youtube.com/watch?v=PvTuw0TiFxY](http://www.youtube.com/watch?v=PvTuw0TiFxY)

SKYPE

*Skype is a software application that allows individuals to engage in phone conversations and video conferencing over the internet.* The software is free as are ‘calls’ between Skype accounts and videoconferencing requires minimal hardware (a simple webcam will do).

**Skype Resources**

- Skype in the Classroom
  [http://education.skype.com/](http://education.skype.com/)
- Skype Explained Visually – YouTube Video
  [http://www.youtube.com/watch?v=m1mfIr-kQlk&feature=player_embedded](http://www.youtube.com/watch?v=m1mfIr-kQlk&feature=player_embedded)
- 10 Ways to Use Skype in a Course – University of Notre Dame
- Skype Out – University of Regina Centre for Teaching and Learning
  [http://ctl.uregina.wikispaces.net/Skype](http://ctl.uregina.wikispaces.net/Skype)