R·I·T

TEACHING ELEMENTS
FLIPPED CLASSROOM

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WHAT IS IT?

Do you wish you had more time to focus on higher order levels of learning in your classes like evaluation, analysis and creation?

The flipped classroom model (sometimes called the inverted classroom) is one in which traditional in-class activity–the lecture—is delivered outside of class via video-taped lectures and other web-based materials. In-class time is used for collaborative project work, small group problem-solving, and other such activities that allow students to engage at a deep level with the content they viewed outside of (and before) class. This model provides faculty with more time in-class to work with individual students and allows students to master the lecture content at their own pace.

For more on the flipped classroom model, review these scenarios.

EVIDENCE

What is the evidence that "flipping" the classroom has a positive impact on learning?

Beyond the anecdotal evidence that the current generation of students prefer learning in this format, emerging research in the effective design of a flipped classroom has shown that:

- Students in a flipped classroom become more aware of their own learning process than students in more traditional settings, allowing them to adjust their activity and focus in order to make necessary connections to course content (Frederickson, Reed & Clifford, 2005; Strayer, 2012).
- DFW rates may decline. The University of North Carolina, Charlotte experienced a 12 percent reduction in the DFW rate in their flipped classrooms (Koproske, 2012)
- Student grades on homework, assignments, projects and the course as a whole improve (Day & Foley, 2006).

Many who have experimented with the flipped classroom model hypothesize that these positive results are due, in part, to the fact that video-based lectures and related content allow students to control the pace by which they are learning. They can pause, rewind, fast-forward and view as many times as they wish.

FLIPPED CLASSROOM IN ACTION

Online Lectures Quick Tips:

The following are just a few ideas to help you effectively transition your lecture content to an online format. More information and examples of video content for flipped classrooms are provided at the end of this section.

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- An effective flipped classroom involves more than simply videotaping lectures (often called lecture capture) and making them available online before class. To help students actively engage with the lecture content, consider augmenting videotaped lectures with content-rich websites, online chats, and self-check activities for students. Self-check activities may include having them create a photo essay, complete a blog or discussion post, complete a take-home practice exercise or quiz, or develop a reflective podcast or essay, which may become additional, required viewing for students before the class meeting.
- As you develop the online lecture material and corresponding in-class activities, make sure that the intended learning outcomes of both align with one another so that students make the connection between what they are viewing before class and what they are applying during class.
- You do not have to develop all of your own online content. Use available (and often free) resources like TED Talks, YouTube for Education and others.
- Divide the video-taped lecture segments into small chunks and intersperse the video segments with activities like visiting a website for an alternative viewpoint.
- Set clear expectations about the amount of time required to do the "homework" (view the lecture/other online content).

The following are just a few ideas to help you use classroom time differently in the flipped classroom model.

- Provide multiple Classroom Assessment Techniques (CATs) to gauge student comprehension of the pre-class viewing/activity.
- To tap into the potential of the flipped classroom to allow time for higher order levels of learning (application, analysis, evaluation, creation), the activity in the classroom must: Be action- or activity/project-based, Require collaboration, Be inquiry-based
- Do not assume students will understand how to fully take advantage of the new focus of class meeting time. Proactively help students learn how to collaborate/do group work.

WHERE CAN I LEARN MORE?

For more information see:

- Embed "need to know" in your videos (pdf)
- Technology that may help you create effective videos (pdf)
- Online lecture examples

Books:

Bergmann, J., Sams, A. (2012). Flip Your Classroom: Reach Every Student in Every Class Every Day. International Society for Technology in Education. Washington.

Bowen, J. A. (2012). Teaching naked. How moving technology out of your college classroom will improve student learning. Jossey-Bass. San Francisco.

Articles:

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Educause Learning Initiative (2012, February 7). 7 Things You Should Know About Flipped Classrooms. *ELI Publications* downloadable PDF. http://www.educause.edu/library/resources/7-things-you-should-know-about-flipped-classrooms

Educause Learning Initiative (2012, November 1). 7 Things You Should Know About Microlectures. *ELI Publications* downloadable PDF http://www.educause.edu/library/resources/7-things-you-should-know-about-microlectures

Berrett, D. (2012, February 24) How "flipping" the classroom can improve the traditional lecture. *Chronicle of Higher Education*, A16-18.

Carter, D. (2012, April 5). Flipped learning: professor tested, student approved. *eCampusNews* online. http://www.ecampusnews.com/technologies/flipped-learning-professor-tested-student-approved/

Websites:

http://flippedclassroom.org/
http://www.knewton.com/flipped-classroom/
http://www.scoop.it/t/the-flipped-classroom

Related Teaching Elements:

Peer Instruction
Classroom Assessment Techniques (CATs)

REFERENCES

Day, J., & Foley, J. (2006). Evaluating web lectures: a case study from HCI. Paper presented at the Conference on Human Factors in Computing Systems, Montreal, Quebec, Canada.

Frederickson, N., Reed, P., & Clifford, V. (2005). Evaluating web-supported learning versus lecture-based teaching: Quantitative and qualitative perspectives. *Higher Education, 50(4)*, 645–664.

Koproske, C. (2012). *The promise and perils of innovation: Part* I. Education Advisory Board webinar aired August 15, 2012. Available on-demand at http://www.eab.com/Research-and-Insights/Academic-Affairs-Forum/Events/Webconferences/2012/The-Promise-and-Perils-of-Innovation-Part-I

Strayer, J.F. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environment Research, 15(2)*, 171–193. DOI 10.1007/s10984-012-9108-4

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