SELECT RESOURCES ON THE FLIPPED CLASSROOM

Flip Your Classroom by Jonathan Bergmann and Aaron Sams. ISTE and ASCD Publication, 2012.

The Flipped Classroom collection of *Inside Higher Ed* articles and essays about changing the instructional paradigm by having students review content on their own time and using in-class time for other purposes. The articles and essays reflect key discussions about pedagogy, technology and the role of faculty members.
Free download: http://www.insidehighered.com/content/flipped-classroom#sthash.ZVVKDqwp.dpbs

Articles:

"Flipped classrooms may not have any impact on learning," *USA Today College*, October 22, 2013
Accessed on May 27, 2014: http://www.usatoday.com/story/news/nation/2013/10/22/flipped-classrooms-effectiveness/3148447/

"The biggest lesson from the flipped classroom may not be about math," *Chronicle of Higher Education*, October 7, 2013 – faculty observations on students' ability to manage time and tasks.
Accessed on May 27, 2014: http://chronicle.com/blognetwork/castingoutnines/2013/10/07/the-biggest-lesson-from-the-flipped-classroom-may-not-be-about-math/?cid=at&utm_source=at&utm_medium=en

"How 'flipping the classroom' can improve the traditional lecture," *Chronicle of Higher Education*, February 19, 2012
Accessed on May 27, 2014: http://chronicle.com/article/How-Flipping-the-Classroom/130857/

Faculty highlights: University of Colorado at Boulder biology professor Andrew Martin, Michigan University calculus professor Karen Rhea, and Harvard University physicist Eric Mazur.

"Inside the flipped classroom," *Chronicle of Higher Education*, September 30, 2013
Accessed on May 27, 2014: http://chronicle.com/article/Inside-the-Flipped-Classroom/141891/

"Three things I learned through teaching a flipped class," *Chronicle of Higher Education*, December 4, 2012
Accessed on May 27, 2014: http://chronicle.com/blognetwork/castingoutnines/2012/12/04/three-things-i-learned-through-teaching-a-flipped-class/

"The inverted classroom as a platform," *Chronicle of Higher Education*, March 8, 2013.
Accessed on May 27, 2014: http://chronicle.com/blognetwork/castingoutnines/2013/03/08/the-inverted-classroom-as-platform/

Herreid, C. F., & Schiller, N. A. (2013). Case studies and the flipped classroom. *Journal of College Science Teaching*, *42*(5), 62-66.
Accessed on May 27, 2014: http://capone.mtsu.edu/vjm/Univ_Service/CRWG_Home/References/CRWG-SPEE-REF-01.pdf

Examples:

The Physics Education Research Group, *University of Illinois at Urbana-Champagne* produced web-based, animated pre-lectures for large physics classes - http://research.physics.illinois.edu/per/

Flipped Learning Network: http://flippedlearning.org/Page/1 - research, resources, free webinars

Research on Flipped Learning by George Mason University: http://www.flippedlearning.org/research

"I flipped my class: What did my students and I learn in the process?" Roundtable discussion facilitated by Gabriele Bauer, Villanova Institute for Teaching and Learning (VITAL), Villanova University, Villanova, PA 19085 at Lilly Conference on College and University Teaching, Bethesda, MD, May 29-June 1, 2014. gabriele.bauer@villanova.edu

(Based on course design principles outlined by D. Fink, 2013, *Creating Significant Learning Experiences)*

"Students do the hardest work on their own (out-of-class) where typically no guidance from faculty and / or peers is available. Students need to work with the course materials under faculty guidance to make the material their own."
B. Walvoord on "use of class time," 2000.

What are your learning goals?
What would you like the students to be able to know, do, value as a result of the course?

∗ What learning goals may lend themselves best to being achieved out-of-class and out-of-class?
∗ How will these learning goals build on each other? (e.g., foundational knowledge, practice, application)
∗ What content areas lend themselves to students' out-of-class work in preparation for in-class work?
∗ What kind of and how much of the learning do you move outside the class?
∗ What kind of structured support do you offer for our students' out-of-class learning?
∗ How do you create a need to know for students? How / why is this content relevant?
∗ How does the out-of-class work prepare students for in-class activities?
∗ What format might be appropriate for out-of-class content delivery (e.g., readings, podcast, recorded lectures, simulations)? Do students have access to the requisite technology?

How do you know if the students achieved these learning goals?
How will you assess students' learning both in- and out-of-class?

∗ Integrate both, opportunities for assessment **for** learning (formative, improvement-based) and assessment **of** learning (performance-based; e.g., exams, papers, projects).
∗ How will you provide feedback?
∗ How will students be involved in self-assessment and peer review?

What kinds of teaching and learning activities will you use to achieve set learning goals?
What will the students do, in-class, out-of-class? What will you do, in-class, to support students' learning out-of-class?

∗ What is the best use of your face-to-face instructional time?
∗ How will you sequence in- and out-of-class activities?
∗ How do in-class and out-of-class activities align, build on, and support each other?
∗ How will you prepare students for out-of-class work?

How will students engage with the material in- and out-of-class?

∗ What is the level of students' out-of-class engagement with the material?
∗ How do you help them think about what they have learned?
∗ How will students demonstrate their knowledge in preparation for class (e.g., guiding questions for readings, complete online quiz after viewing of short video, students post responses / questions about the recorded lecture on blog/ discussion board)?
∗ How much will the preparatory activities count? (e.g., small percentage of overall grade, formative).

Contextual questions: Doyle, T. (2008). *Helping students learn in a learner-centered environment*. Sterling, VA: Stylus.

∗ How will the course re-design frame your role?
∗ What competencies might you need to develop?
∗ What resources might you need to draw on?
∗ How will you know how the course is going?

∗ How will you orient students to this active learning framework?
∗ What competencies might your students need to develop?
∗ What resources might you provide for the students?
∗ How might you adjust the course on an ongoing basis?