INSTITUTE FOR TEACHING AND LEARNING

THE UNIVERSITY OF SYDNEY

TEACHING INSIGHTS - 9
FLIPPED CLASSES

A flipped class involves students doing pre-work, such as reading, group work, watching short videos or completing online quizzes, to develop their understanding of new material. Some or all of the face-to-face class time is then spent engaging in interactive group learning (e.g. group problem solving, group presentations, debate).

Abeysekera and Dawson (2014, 3), define the flipped classroom as a set of pedagogical approaches that:

1. move most information-transmission teaching out of class
2. use class time for learning activities that are active and social and
3. require students to complete pre- and/or post-class activities to fully benefit from in-class work.

For a longer discussion about what flipped classes are and are not, please see http://www.uq.edu.au/tediteach/flipped-classroom/what-is-fc.html and http://www.thedailyriff.com/articles/the-flipped-class-conversation-689.php

A flipped approach is considered a good way for students to learn because:
- it encourages students to take more responsibility for their own learning & come to class prepared
- it enables scaffolding of learning more to be done more broadly than the time available in class
- face to face time can be spent grappling with ideas and misconceptions – class time is used for higher order learning outcomes
- online quizzes can be used to provide feedback before students come to class so both students and teachers can assess progress
- it can potentially provide data on engagement and misconceptions to personalise learning and support
- students can re-watch / rewind videos if they wish, or read material several times
- videos can be sub-titled or a transcript provided, to assist students with English as an additional language.

SHOW ME THE EVIDENCE – WHAT'S GOOD ABOUT IT?

Initial research shows improved student learning outcomes, though further research is needed (e.g. Haak et al. 2011; Missildine et al. 2013). Some students prefer a traditional approach as they may find the flipped approach unfamiliar, perceive a higher workload, or experience a lack of cohesion between in-class and out-of-class work. Students may also express resentment at the perceived shift of the work of teaching from the authoritative teacher to texts of various kinds, with which they are expected to engage and respond. These concerns can be addressed by addressing the following design principles.

GETTING STARTED WITH FLIPPED CLASSROOMS

Kim and colleagues (2014) propose some design principles for flipped classrooms. They are adapted here alongside some application guidelines and practice examples. The transition to a flipped classroom does not need to occur all at once. For example, initially you may just choose to produce short videos for students to watch as stimulus material before class. Alternatively, you may choose to replace some lecture-style content with a problem or question to solve in class, which together with live feedback will address the same learning outcome.

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FLIPPED CLASSES CONTINUED

DESIGN PRINCIPLE	APPLICATION GUIDELINES	PRACTICE EXAMPLES
Provide clear connections between in-class and out-of-class activities	Tell students why you are using this learning method (to allow them to own their learning), and how it develops valuable skills.	– Show evidence of impact from previous cohorts. – Use analytics from pre-class activities to inform in-class focus. – Seamlessly integrate pre- and in-class material.
Provide an opportunity for students to gain first exposure to the subject matter prior to class	Determine what students actually need to learn, and use pre-class activities to stimulate interest and provide background understanding.	– Interviews with industry leaders. – 'Home-made' videos explaining concepts that are most suited to re-watching. – Interactive online simulations on class content. – Videos demonstrating essential skills.
Provide an incentive for students to prepare for class and a mechanism to assess students' understanding of pre-class material	Students need to be incentivised to strategically spend their time with pre-class material. Keep it short and to-the-point.	– Nominal pre-class online mastery quizzes. – In-class anonymous quiz via e.g. Socrative to gauge understanding. – Quizzes spliced into videos.
Provide clearly defined and well-structured activities within the flipped classroom, and provide enough time for students to carry out in-class activities	Deeply consider the course content and what are essential and non-essential concepts and competencies. Flipping the classroom often involves reducing content and improving relevance and context.	– Create expectation that online and in-class activities are part of the whole learning experience. – Design a scaffolded problem-based scenario that allows students to construct their own understanding. – Deconstruct an examination question and work through each part through the class.
Provide facilitation for building a learning community	Team work and accountability are powerful motivators. Consider the classroom space can be used to promote collaboration within student groups and with staff.	– Groups discuss a question and offer a response to the class via student response system. – Teams build a concept map summarising key content. – Use online tools (Piazza, wikis, social media) to continue building community outside of class.
Provide resources and technologies that are easy to access and use	Use resources and/or technologies that promote collaboration, give students a voice, and provide a safe learning environment.	– Provide worksheets to engage students through writing out problems. – Use student response systems to collect feedback. – Exploit collaborative learning spaces (e.g. PNR studios) where teams synthesise collective knowledge via e.g. Prezi, Google Docs.
Provide prompt/adaptive feedback on individual or group work	Ensure in-class time is valuable for students. Involve teaching assistants if available.	– Offer immediate feedback on pre-class activities. – Walk around a lecture while students are working on problems in groups. – Continue the conversation after class through additional quizzes or resources.

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FLIPPED CLASSES CONTINUED

FURTHER RESOURCES

The 'OLT: Flipped classroom project' provides a comprehensive set of resources http://www.uq.edu.au/tediteach/flipped-classroom/olt-transforming/index.html
Information on enterprise-supported systems is available at http://sydney.edu.au/elearning/staff/index.shtml and via the eLearning helpdesk on extension 18728.
http://www.itl.usyd.edu.au/getinvolved/sydneyteachingcolloquium/resources.htm
http://flippedclassroom.org/index.php
http://net.educause.edu/ir/library/pdf/eli7081.pdf
http://www.uvm.edu/ctl/?Page=resources-teaching/flipped-classroom/index.php
http://www.c21u.gatech.edu/sites/default/files/Flipped%20Classroom%20Guide_final.pdf
Case studies
http://www.latrobe.edu.au/__data/assets/pdf_file/0009/564147/Exemplar_Herriman.pdf an example of flipping the curriculum in anthropology at La Trobe
Video case studies from a range of disciplines at UQ http://www.uq.edu.au/tediteach/flipped-classroom/case-studies.html
http://chronicle.com/article/Introduction-to-Ancient/140475/ a great practical example of flipping a humanities class

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