Flipped classrooms—what makes a good assignment?

Below we present some advice that can help in designing assignments for flipped classrooms.

Numerous studies conclude that students learn more when they actively grapple with material instead of attending traditional lectures (Bloom 1984; Hake 1997; Budd et al. 2010; Freeman et al. 2014). In fact, the evidence is so overwhelming that some authors argue that it is unethical to continue with traditional lecturing (Waldrop 2015). This “active grappling” is what we refer to as student-active learning. The main feature of the flipped classroom is that it moves away from traditional lecturing to student-active learning. In the flipped classroom the students are introduced to content outside of the classroom through readings, videos etc., and actively work with the content in the classroom.

The literature suggests (e.g. Biggs and Tang 2011) that two of the most effective aspects of student-active learning are:

1. Students working together, learning from each other, discussing, building on each other’s knowledge and experiences, exploring multiple viewpoints (social learning, peer teaching)
2. Students getting feedback on how they are doing, and on how to improve, while they are working (formative feedback)

So apart from dividing students into groups and giving constructive feedback, what’s the teacher’s role in the flipped classroom? One of the most important tasks is to choose the assignments. It’s helpful to choose assignments that deal with central topics in the course, that engage the students, and that can be solved in different ways or don’t have a given answer (this gives the students some control over the assignment and tends to enhance motivation). Most importantly though, the assignment should guide the students towards the intended learning goals (Wiske 1998). If these learning goals go beyond lower order thinking such as memorizing and describing (as university teaching mostly do), the students need assignments that let them practice higher order thinking, such as applying concepts, analysing, synthesizing, hypothesizing and drawing conclusions. Therefore, aim to:

3. Give students assignments that trigger higher order thinking. Avoid “cookbook exercises” where students don’t need to understand the material to complete the assignment. Include tasks that require the students to explain, discuss, apply and reflect (surface vs. deep approach to learning).

When presented with such tasks, the students will inevitably run into obstacles. Therefore, another important task for the teacher is to:

4. Provide students with scaffolding (support) that enables them to overcome learning obstacles. This can include addressing a difficult concept, how to approach a problem, or how to work in groups.

The strength of the flipped classroom is that while the students work they have access to their fellow students and group members, and the teacher can provide continuous feedback and scaffolding. A good assignment for a flipped classroom takes advantage of these strengths. A less efficient assignment could for example be one that the student might as well do alone at home, or one where the student isn’t prompted to engage in higher order thinking.

The actual assignments you device can take almost any form. With some tweaks many traditional exercises can make good assignments, as can real-world problems. A final piece of advice from the literature is to explain carefully to the students what’s expected of them in your flipped classroom. Some may already be experienced “flippers”, to others it may be a completely new and confusing learning situation. Read more on flipped classroom (in Norwegian): Esterhazy and Hermansen (2018).

Good luck with the flipping! /Mattias
References


