

Faculty	Health and Behavioural Sciences
School	School of Health and Rehabilitation Sciences
Activity	Flipped Classroom using simulation and collaborative group work
Lead	Dr Andrew Claus
Course	PHTY2101 and PHTY7815 Foundations of Physiotherapy
Average no. of students	170 (combined)

### The course

- These courses provide fundamental knowledge and understanding to assess and manage patient conditions involving musculoskeletal pathology, injury and pain. The courses cover a diverse range of topics from tissue pathology to mobility aids to patient examination.

### Flexible and Active elements

Over the last six years the adoption of active learning has taken a variety of forms including:

- Socratic questioning and dialogue with the cohort in lectures
- 10 x 1 hr practical classes which simulate clinical situations
- A “lecture by the people” where students prepare revision content and present it prior to exams
- Group-learning exercises

### Learning outcomes

- These course changes have seen a 5% increase in student performance, which has been maintained consistently over the past 3 years.

### When should you flip your class?

A “flipped classroom,” where students actively gather, distill and apply knowledge, can take many forms. If used in a carefully planned way, a flipped classroom approach can improve student engagement and depth of learning. This article offers considerations for strategic timing and aims for a flipped model.

A key learning outcome for the second year physiotherapy course is to conduct skilled interviews with clients, to understand the individual person’s complex network of problems. Preparation for this involves a phase of rote learning a large volume of questions, terminology and processes. This learning must then be applied in a flexible, client-centred manner, to develop a deep understanding of the client’s concerns and how they inter-relate, to form a management strategy.

Some common and easily implemented methods to flip student learning can include:

- Socratic questioning (engaging students to respond with their critical thinking) in lectures and tutorials, to draw on the collective knowledge and thoughts;
- Tutorials using problem-based learning, where the students work in groups to practice workplace skills and apply newly acquired knowledge.

On the following page are two uncommon examples of a flipped learning model, and the rational for use.

### Begin the first lecture by practicing an end of semester task

If you're looking for a way to emphasise skills that students already have such as interpersonal interaction, you could try flipped learning in the first class.

In this example, I began the first class by having students turn to the person next to them and conduct a seven minute interview. Using this process allowed for observation of students' spontaneous communication abilities, and enabled the immediate reinforcement that these skills (interpersonal communication) need to be retained for their end of semester performance. Throughout the course, learning material progressed to add new questions, new terminology as well as processes to consider when interviewing. In conjunction with this, students were continually prompted to interact in the same personable and flexible manner as demonstrated in the first lecture. The end result was clarity and confidence in the client communication process.

### End the semester with students teaching each other

If you're looking for a way to ensure your students engage in deep learning you may consider utilising case study presentation.



In this example, I allocated a lecture for students to share their case-study presentations in groups of four. By the end of the semester, students had gained a great volume of knowledge to use in their interviews and had also gained experience through an assignment, to explore the complex problems and needs of an individual client. Their frame of reference was centred around their individual client, but by flipping the classroom, each student presented their case to peers, for questions and answers. The aim was for students to vicariously gain a deep understanding of three clients whom their peers had interviewed. A secondary benefit was to improve the quality of interpretation and communication in each individual's assignment.

An extension of the end of semester exercise gathered four students whose clients exemplified key processes to interpret from the interview. In the second hour of the lecture, those four students presented their individual clients to the whole class, with questions and answers. This extended the understanding of the whole cohort beyond their individual client, to fill gaps in their learning experiences and to distill some of the most valuable peer experiences.

If you haven't considered flipping a class before the students have learned anything new, or flipping the class again just before final assignment submission, I hope these two examples might offer some new ideas. The beginning and end phases could present valuable opportunities for students to reinforce pre-existing skills, or to reflect, consolidate and share the depth of their learning.



### “ What the students say

2015 & 2016 SECaT feedback, referring to a flipped classroom exercise at the end of semester:

“...Not only did it give us the opportunity to learn from each other and in a condensed fashion, but also aimed at improving our public speaking skills and deliberation with colleagues. This was a very useful tool and should be used in many more courses throughout the university.”

“...He didn't 'baby' us and deliver all the content straight to us, instead he designed assessment pieces and new ways of learning which encouraged us to become more independent with our learning and I think brought us together as a cohort a bit more.”

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