



## Adapting the Flipped-Class Model in a Laboratory Course

### What is this Research About?

Creating an active learning environment is important for educators in order to engage students during class time. The flipped classroom, as an active learning strategy, places traditional lecture notes outside the classroom. Students can use class time to complete group work, discussion, and problem-solving activities related to the course content. In this study, researchers converted a traditional instructor-led food science lab into the flipped classroom setting. Researchers assessed students' perceptions of this new learning experience.

### What did the Researchers Do?

Fifty undergraduate students enrolled in a Sensory Evaluation of Foods course participated in a flipped classroom setting. In the flipped classroom setting, students had online lectures and in-class discussions directly related to the laboratory activities before the lab. During the lab time, the learning objectives guided students to complete activities which then led students to design sensory tests by themselves. The teaching assistants were encouraged to act as "guides on the side." After the course, confidential online surveys were used to assess students' perceptions of the flipped classroom.

### What did the Researchers Find?

Most students reported that they were satisfied with the flipped classroom design. Most students indicated that the material covered in the lab was closely connected with the lecture material. Students recognized that the flipped classroom helped to create active engagement with the course material. Students also indicated that they finished at least 60% of the projects during lab and lecture time, supporting some of the goals of the course. The instructor indicated that developing the lab manual was challenging but completing these resources early on helped free up time later in the semester.

# SoTL

## Snapshot

A synopsis of a scholarship of teaching and learning journal article

### → How to Implement this Research in Your Classroom

The flipped classroom is a way of engaging students with active learning. By adopting this strategy, instructors should have discussed all lab-related topics during the lectures in advance. Then, in the lab, students will be encouraged to design, conduct, and analyze the lab work (e.g., sensory test) by themselves with a general framework and guidance from the lab manual. The teaching assistant should only "guide on the side" without providing too much help. The instructor should be aware that developing a new lab manual can be time-consuming before the semester begins.

### → Citation

Donovan, J., & Lee, S. (2015). How we flipped: student and instructor reflections of a flipped-class model in a sensory evaluation laboratory course. *NACTA Journal*, 59(4), 335-342. Retrieved January 22, 2021, from <https://www.jstor.org/stable/nactajournal.59.4.335>

### → Keywords

Flipped Classroom  
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