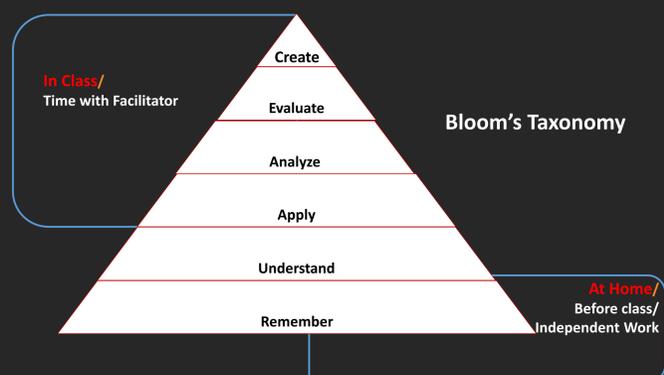


What is a Flipped Learning?

The Flipped approach is a framework that inverts the traditional classroom model by introducing course concepts before class, allowing educators to use class time to guide each student through active, practical, innovative applications of the course principles.

Academy of Active Learning Arts and Sciences, 2018

The Flipped Classroom



The Challenge

Studies show that students attribute their learning to what is being taught to them by their professor and take little ownership of their ability to learn on their own (Nilson, 2013).



Students lack knowledge & skills to be self-regulated learners (Nilson, 2013).

- More problematic in flipped classrooms as students are more responsible for learning content outside of the classroom
- A flipped classroom supports the development of self-regulated learning skills and behaviors. However, this may not occur spontaneously (Talbert, 2017).
- Hence the need to intentionally design the flipped course to include strategies that will enhance self-regulation

Self-Regulated Learning (SRL)

- SRL is the conscious planning, monitoring, and evaluation of one's learning in order to increase it. (Nilson, 2013)
- In self-regulated learning, learning is viewed as an activity that students do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching (Zimmerman, 2002).

- SRL Strategy Example - Learner Logs

Learner Logs (Welmer, 2013)

Reflective (meta-cognitive) writing strategy that helps students develop learning skills & self-awareness of their learning

- Approx. 400 - 600 words
- 15 - 20 minute time commitment
- Once per week
- Completion Grade

Sample Learner Log Prompts

Different Course Format



As you know already, the format of this course is quite different from what you may be used to. A rough way to describe this class is that the classwork occurs at home and the homework occurs in class. What advantages & disadvantages to having the teacher and your fellow students available during the time devoted to more advanced concepts, problems, & applications? In what ways will this class be better than a more traditional course? Why do you think a teacher might design a course in this format?

(See Handout)

Implementation of Learner Logs

	Implementation	Findings
Course	ECON2100 Introduction to Economics 16-week semester	- 92% completion rate
Number of Learner Logs	14 Learner Logs	- Students Attitude/ Perception change
Spacing	~ 1 per week	- Students learning new strategies for -
Submission	LMS	- Studying - Test-taking - Time management - Note-taking
Grading	10% Completion points	- Problem-solving - Working with peers

Our Study ...

Objective:

To assess benefit of using learner logs in the flipped classroom to enhance self-regulated learning skills & increase students' responsibility for their learning

Hypothesis:

Do Learner Logs increase metacognition in the flipped classroom?

If students regularly write reflective learner logs and are provided periodic feedback from faculty, then they will become more aware of how they learn and become better learners.

Faculty will be more effective in their teaching



Procedure:

Beginning of Semester

- Complete Motivated Strategies for Learning Questionnaire – MSLQ (Pintrich, et al., 1991) regarding how students learn & the different strategies they use while learning
- MSLQ (Self-report questionnaire)
- Obtain a baseline of their level of self-regulation coming into course.

During Semester

- Complete 14 learner log assignments designed to promote learning & self-awareness of one's learning

End of Semester

- Complete same MSLQ

Motivated Strategies for Learning Questionnaire (MSLQ)

Pintrich, et al. 1991

81 items: 1 ("not at all true of me") to 7 ("very true of me") rating; 15 subscales

6 Motivation Scales:

- **Value:** Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Value
- **Expectancy:** Control of Learning Beliefs, Self-Efficacy for Learning and Performance
- **Affect:** Test Anxiety

9 Learning Strategies Scales:

- **Cognition and Metacognition:** Rehearsal, Elaboration, Organization, Critical Thinking, Metacognitive Self-Regulation
- **Resource Management:** Time and Study Environment, Effort Regulation, Peer Learning, Help Seeking

(See Handout)

Lessons Learned

- **Preparation:** ...is key to success in a flipped classroom
- **Peers :** ... play a big role in their success
- **Practice:** ...increased in-class participation and group activity.
- **Professor:** ...change in perception and appreciation of the professor's role
- **Presence:** ... in class is critical to success

- **Next Steps:** Repeat study with Control Group; Further Data Analysis with larger sample size