# **TEACHING-AS RESEARCH (TAR) PLAN**

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## TAR PROJECT/LESSON TITLE: REVIEW SHEET BEFORE CLASS

#### I. TAR PROJECT CONCEPT:

Learning that incorporates active engagement in higher education have shown to improve student performance compared to traditional teaching practices (Michael, 2006). However, incorporating active learning can results in time constraints for the lecturer to effectively cover all material. Preclass activities such as quizzes can be used to prompt thinking about the new material in the upcoming lecture and have shown to improve performance (Simkins et al, 2004). But this method is costly for lecturers to implement when the class material is dense and there is limited time and reward for such initiatives.

An easier alternative could involve providing students with the lecture slides or assign readings before coming to class. Although this should help students arrive more prepared in class, in practice students rarely complete these tasks before the lecture. Furthermore, instructors have expressed concerns that this may encourage absenteeism and classroom passivity while some studies have also shown that students do worse in exams when provided with slides before lectures (Worthington et al, 2015).

Notwithstanding the learnings from these studies, they are conducted in a context where students are meant to learn new materials. But how about the recitation sessions where students are meant to review the new materials they learned and spend a larger part of the time applying those learnings? Teaching assistants in this case face a trade-off in the amount of time they can spend reviewing the material and the time they can spend solving practice problems. This may also prevent them from employing more active learning methods during class.

The class I teach are recitation sessions that are intended to review the materials learned during the lecture in that week. The class is divided into smaller sections of about 25 students and attendance is not mandatory. Majority of the students should have attended the lecture and be familiar with the content. However, they may not remember the concepts well before coming to the recitation session. I would like to see if providing students with a brief and concise review of the lecture material help them follow the material better and allow more time to be spent on the practice problem. I chose to provide a concise summary of the lecture instead of asking them to read the lecture slides before class as that can increase the probability of the student's willingness to read it before coming to class.

## II. STATE YOUR RESEARCH QUESTION:

Does providing students with a summary about the material that will be reviewed in class help them follow the material better and improve their subsequent performance?

## III. WHAT WOULD BE YOUR STRATEGY TO TEST YOUR RESEARCH QUESTION?

The day before the recitation session I will randomly email a brief and concise summary of the lecture slides on the topic to half of the class. The email will also contain a sentence encouraging student to read the summary before the class and how it will benefit them during their session.

I will send the review sheet to the rest of the class after the recitation session.

## IV. STATE YOUR HYPOTHESIS:

A quick review of the main concepts on the topic before coming to class will help remind the students what they learned in lecture and the familiarity with the content will help students better follow the class and improve performance in exam.

# V. WHAT INFORMATION (E.G., SURVEY, ASSESSMENT QUESTION RESPONSE, ANONYMOUS POLL DATA, ETC.) WOULD YOU COLLECT TO PROVIDE EVIDENCE OF IMPROVED LEARNING AND/OR EVIDENCE FOR OR AGAINST YOUR HYPOTHESIS?

To test my hypothesis, I will be taking a short quiz and a survey at the end of the class to test if the students who received the review sheet did better on the quiz and if they thought they were able to follow the lecture clearly.

I will also test if the impact of these sheets only has immediate impact or if the impact is persistent by comparing if the students who received the review sheets before the lecture compared to after the lecture did better on their quizzes in one-week time.

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