

PROJECT MANAGEMENT DOCUMENT FOR YOUR THESIS

Goal: To learn if there is any advantage to using clickers over flash cards to implement Peer Instruction

Objectives: (what specific activities must you undertake and complete to realize your goal)

- Find a student population to study
- Decide how to divide population into test and control groups
- Acquire clickers and flash cards
- Find an assessment tool and decide how to implement it
- Use assessment tool in both control and test groups
- Compile results of assessment
- Use statistical analysis to analyze normalized gain
- Draw conclusions on the magnitude of the effect.

Timeline: (What time order will your objectives be completed) Items are done in order listed, except that finding an assessment tool can be done while identifying

Technical Requirements (What must you do specifically to accomplish each objective)

Description of your proposed research sample (type of students, rough numbers)

The students are at a 4 year canadian college. They come from a middle class socioeconomic class. The sections studied are taught by myself. There are 10 other sections of similar size that are taught by instructors not using PI. They will act as a control group.

Description of your research procedure (how will you accomplish your research. Be specific as possible)

Both sections will be taught using PI. One section will use flashcards for responses and the other will use clickers. Clickers and flashcards will be provided to the students. The students will take FCI as a pretest at beginning of semester and a posttest at the end of the semester. Students will be told it is not for credit but is only to assess some research.

Description of your assessment instrument (do NOT reinvent the wheel. Use a tested instrument, and find out how it has been tested)

We will use FCI as a pretest and posttest. The other sections will also administer the FCI. The FCI has been extensively tested. Details are in the literature search. The pretest/posttest method will be used once.

Risk management

Lists of possible problems you may encounter. Each problem should be ranked as minor, important, critical.

Lists of contingency plans for each problem.

storage of pretest/posttest results: (critical) will have backups to CD and to Files to Geaux

other sections not participating (minor) drop that section from the study.

no other sections participating (important) If all dropped we lose a control group to study PI vs. non-PI. Can still study clicker influence with reduced statistics.

students not taking both pretest/posttest: (important) they will not be used in study

clickers not working or flashcards missing (critical) have spares available.

software unavailable for analysis (minor) get replacement or do by hand.

Background Material (AKA Literature review)

Compilation of the literature on your problem. It should include all significant past work, including some of the work showing that your assessment device has been shown to be valid. Contrast the past work with what you plan to do: different technique, different research sample population, etc