



INNOVATION ABSTRACTS

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Flipped Classroom: Pre-Class Assignment Process

Imagine a world where your students come to class prepared! Does that sound too good to be true?

For the past several years, my students have been coming to class prepared to start a new topic. According to a survey I conducted, my students appreciate my efforts to encourage them to arrive at class prepared to learn. As an instructor, my precious resource is face-to-face class time, which is used for intermediate and advanced discussions about the material, peer-to-peer instruction, and problem solving. I spend very little time on basic theory, reviewing terms, and explaining simple problems. How was this achieved?

Over the years, I have attended numerous conferences and visited classes at Harvard, the Massachusetts Institute of Technology, and the University of British Columbia. Based on what I have gathered from these experiences, I created a pre-class assignment process that aligns the interests of students with those of the instructor.

A pre-class assignment is an activity in which students are required to participate prior to class in order to be prepared for the new class module. The pre-class assignments help students understand the basic content of the corresponding class topic before the class takes place. The assignment allows me and my students to explore subjects on a deeper level. The pre-class assignment process I have used includes assigned readings, textbook questions, and e-learning problems.

The Student Pre-Class Assignment Process – Steps, Hints, and Observations

1. Begin the Pre-Class Assignment - Require students to come to class prepared to learn eight to ten new topics throughout the term. Therefore, one pre-class assignment is due every one to two weeks.

In my experience, if you ask for more than 10 pre-class assignments, students get overwhelmed or overly burdened by the process and stop doing them. It is important to complete the first assignment in class in order to show students what your expectations are for the remaining assignments.

2. Limit the Workload - The pre-class assignment is designed for students to understand basic terminology and gain an understanding of the importance and relevance of a topic. It is critical to not assign too much work for the pre-class assignment. I recommend limiting pre-class work to an hour of effort.

My favorite pre-class assignments include asking students to write a one-page, typed summary that details three “takeaways” based on the first pages of a textbook chapter and to solve intermediate problems found in the textbook. Students must show how they arrived at their answers. I discuss with students that perfect answers look like they’ve been copied from the web or elsewhere. If their work does not show where they made corrections, I will ask them, “Where are the mistakes?” I then make a small note on the assignment that says, “I also want to see your errors!” I always provide the solutions to assigned problems so students learn from their errors and make corrections accordingly.

3. Motivate by Grades - For the pre-class assignment to be effective, it is critical that the assignments are graded; this is an absolute must! In my experience, students don’t put forth their best efforts if there isn’t a motivating component. I typically assign 0.5 percent of students’ overall grade for each pre-class assignment. These combined assessments usually equate to 5 percent of students’ overall grade.

Several years ago, instructors commonly awarded 10 percent of students’ overall grade to classroom participation. I often observed instructors trying to keep track of this for the first several weeks of a term. Within a month, instructors gave up and awarded most students 8 or 9 percent just to minimize student complaints. I believe we need to evolve from this process and create a more tangible assessment process, like the pre-class assignment.

4. Assess Student Effort - The pre-class assignment is based on students’ efforts, not right versus wrong answers. You are not grading their work for errors, but rather, evaluating their overall effort. Grading based on correct answers is time consuming and exhausting. To conserve your time and energy, evaluate students’ work by the amount of effort applied to the assignment. You can easily assess effort within seconds and award students accordingly.

I have created a grading rubric that rewards students with 100 percent or 0 percent depending on the effort exhibited in the assignment. I suggest that instructors create a grading rubric that allows them to quickly evaluate the effort applied to the pre-class assignment. This grading method shows students the high standards that are expected of their work. I have found that students, especially after the first two pre-class assignments, will meet my expectations.

I also allow students the opportunity to redo their first two pre-class assignments. This helps students meet your expectation level while you still maintain a positive, supportive classroom environment.

Perspectives on the Pre-Class Assignment Process

Student Perspectives

I conducted a brief three-question survey to gauge my students' reactions about the pre-class assignment process. Ninety-seven percent of the students (n=36) who responded to the survey said they were very appreciative of the pre-class assignment process.

Question 1: "Do you believe the graded pre-class reading and problem requirement before the start of a new module benefited your performance (quizzes, assignments) and enhanced your understanding of the module material?"

Below are the students' responses to the first question:

Improved performance

- "Yes, I believe the pre-class assignments improved my performance. By doing the pre-class, I have time to analyze the content at my own pace so I can concentrate on the teacher's interpretation of it in class. By doing the pre-class reading, I gain three perspectives on a subject: the textbook's, the teacher's, and my own."
- "Yes, I found it helped solidify the concepts and topics by allowing us to teach ourselves the basics, and allowing the instructor to go more in depth with the topics and clear up any confusion about the information."

Importance of grades

- "I believe that grading the pre-class assignment is the best way to motivate students to actually get it done."
- "I think that it was important that the pre-class reading and problems were graded. I do not believe that students would have completed the pre-class work if the pre-class assignment had not been graded."

Evaluation method

- "I think because it was not graded as right or wrong, this motivated students to try and complete the assignment and not worry about getting the answers wrong."

Question 2: "Has this process changed your behavior in other courses? For example, in your other courses, are you now reading and practicing problems before the introduction of new material?"

Below are the students' responses to the second question:

Beneficial Change

- "After doing the pre-class assignments for this course, I started doing some of the pre-class readings for other courses. I saw how beneficial it was to do the pre-class readings, so I continued doing it for other

courses during the semester."

- "It has definitely improved my behavior in my other courses. I now spend more time reading key points and doing problems even before we start a new chapter or module. This is so I can have an understanding of the chapters once my instructor starts discussing it in class."

Question 3: "Do you have any improvement ideas for the pre-class preparation requirement process?"

Below are the students' responses to the third question:

Other courses

- "I wish this was implemented in other courses; it would be super helpful! I think for the most part I wouldn't change anything about the pre-class assignment. I might add an additional question instead of only one for more practice. Overall, I thought it was a great addition to my learning."

Class discussion

- "I think we should have an opportunity at the beginning of class to discuss the pre-class question as a class. This would improve learning because it would help students who had trouble understanding the pre-class concept."

A Colleague's Perspective: Teresa Hoffert, Instructor, Accounting, SAIT Polytechnic

The pre-class assignment process allows me as the instructor to quickly move past the menial details and delve deeper into the course materials during class time. Considering I teach a problems-based accounting course, I need students to come to class with a general understanding of the theory so that we have enough time to work on problems. Once in class, I can answer any questions about the assigned reading and jump right into applying the theory by demonstrating problems and using interactive problem solving. In order to encourage students to do the assigned reading before class, students must be compensated by receiving a grade for their efforts. When teaching an intense subject matter where there is limited class time, it is imperative that students spend some time prior to class getting familiar with the material.

Conclusion

Implementing a pre-class assignment process may seem intimidating at first, given the effort required to prepare the assignments (i.e., providing direction), grade the assignments, and inspire students to successfully complete the assignments throughout the term. However, the benefits to students of taking ownership of their learning before beginning a new topic far outweighs this additional effort.

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