

Electronic Team Journals

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Context: Out of class; Engineering 104 – Introduction to Design

Keywords: teams, project reflections, peer evaluation

Student Activity Time: 10-15 minutes per activity

In a series of design projects, students maintained a team journal to reflect on their project and process at the end of the term.

Introducing the Reflection Activity

Many introductory level engineering classes have a full-term project and final report, but oftentimes, students do not monitor the details of their process throughout the term. For the team project in Introduction to Design, an educator required students to maintain an electronic journal to document their progress throughout the design project and incorporate their journal information into the final project presentation, which was recorded. The purpose of these two activities was to support student reflection throughout the design process and prepare students to improve their technical and presentation skills in the future.

At the beginning of the term, this educator introduced the group project for the term, and explained all of the guidelines for the hands-on activity. Two components of the project were reflective in nature: the electronic team journal and the recorded final presentations. Throughout the term, each team was required to maintain an electronic team journal that included meeting minutes, action items, and outcomes. The educator allowed students to use any platform that they wished to maintain their journal, which meant a variety of platforms were used (Facebook groups, Google Docs, etc.). The educator also required that the students submit their journals at the midterm for a review and grade.

After completing the reflection activity, students were prepared to reflect on their process, and use those experiences in their next group or design activity. The recording of their presentation helped students to reflect upon and improve their public speaking and presentation skills along with their technical skills.

Recreating the Reflection Activity

Description	
1	Assign the group design project at the beginning of the term.
2	Explain and distribute team journal requirements.
3	Collect and grade team journals at the project mid-point.
4	Record student presentations during the presentation period.
5	Grade student final projects.

In the words of the Educator: Tips and Inspiration

Use the journal to help students see the big picture. My goal is to help students get the big picture, and this activity helps them to see that. Keeping the journal throughout helps them to see that each part of the project; homework, the tests and what we do in class are all related. Many times, students just view the project as something separate without realizing that everything we do is very connected.

Carefully select the topic for the project. Picking an interesting project topic helps to ensure that students remain engaged in the process. Many of the students like instances where there is a competition part of the project. If they compete on items like a trebuchet that can throw an object the farthest, the students are more meticulous about their process and documenting every time they test. I also share the videos of past project presentations of students in the same class. They want to present better than previous classes. When we have bigger competitions off campus, they tend to do better with their presentations because the bar is already set fairly high.

What was the inspiration for the reflection activity? Green River faculty participated in the NSF TIDEE grant a few years ago. The engineering department has incorporated journaling and communication skills for presenting as part of our curriculum ever since. As technology has evolved, we incorporated videos on YouTube. Each year, the students get to see past video clips and improve their presentations based on former students' work. The journal is very freeform, but we always thought it was necessary for them to document their process. Some groups use Facebook or Google Docs to create their team journal so that everyone can write together, and then later on they edited and created the final submission. For the final grade, I make sure that they have completed enough entries to support their final project.