Activity **100** 

## Reflecting in Support of Personal Transformation

Educator: Linda Vanasupa, Professor, Materials Engineering, Founding Co-Director for the Center for Sustainability in Engineering Context: Out of class; First-year introduction to sustainability Keywords: first-year experience, motivation Student Activity Time: 1-2 hours outside of class

Students participated in an outside of class, for-research, reflections on their learning motivations and classroom engagement.

## Introducing the Reflection Activity

I n an introduction to sustainability course, first year engineering students were given the opportunity to reflect on their learning motivations and classroom engagement. The course itself was designed to facilitate a personal transformational process by having students enact experiments in personal change. As part of this personal transformation process, students were invited to participate in reflection on their learning, motivation, and engagement in the course. The purpose of this reflection served as punctuating moments for students to see into their own change process.

As part of an external research project, the educator invited students to volunteer to participate in reflections that were externally managed from the class and part of a research project. Students, who chose to participate in the research study, were sent a survey every two weeks in which they responded to a series of questions related to their learning, motivation, and engagement in the preceding two weeks with particular reference to the course.

In terms of outcomes, it is possible that students who participated in reflecting on their learning better understood their learning, made connections between course content, and realized gaps in their knowledge. As well, students who reflected on their motivation may better understand their reasons for pursing engineering, and therefore persisted in engineering. Through students participating in these reflection activities, there was the potential for this model of inquiry to contribute to an ongoing state of inquiry and questioning structure.

 Description

 1
 Invite students to participate in the reflection activity.

 2
 External researchers coded the survey responses.

 3
 External researchers provided the educator with a summary of the research results.

 4
 The educator shared extracted pieces of the results with students.

**Recreating the Reflection Activity** 

Center for Engineering Learning & Teaching. (2015). *California Polytechnic State University, San Luis Obispo Campus Reflection Field Guide – Reflective Techniques to Encourage Student Learning: Background and Examples.* (1<sup>st</sup>. ed.). Seattle, WA.

## In the Words of the Educator: Tips and Inspiration

*Engender transformative learning in your teaching.* While the process of supporting reflection can be an important component, the critical component is the dynamic in the classroom environment that the teacher initiates.

What was the inspiration for the reflection activity? I decided to invite students to participate in this reflection activity for two reasons—(1) to help out a colleague and (2) I recognized the value and important role reflection can play in students' lives. When students participate in reflection activities, I hope that they are profoundly changed, particularly that their brains and hearts are changed. I hope that in the future when they have to make decisions that they will be more compassionate, caring, and authentic. I see the potential for the reflection activity to help the students transcend their current state of being, to a state that includes a broader perspective (even more holistic) and in doing this there is potential for their identity and boundaries to broaden.

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