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Faculty Learning Community
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Introduction

This document reflects my year-long experience with the Rochester Institute of

Technology Faculty Learning Community (FLC). I was a "late recruit" into the

community and joined the group with two roles -- as a participant and a facilitator.

I was invited to join the group to assist Susan Donovan with the facilitation of the

FLC, but I also felt it was important for me to experience the FLC as a participant. I

attended all the meetings, the Lilly Conference, and completed a project. These

experiences are documented in this portfolio.

This portfolio contains the following:

- My philosophy of teaching
- My metaphor of teaching
- A description of my FLC project
- Reflections on the FLC experience

Philosophy of Teaching

My first philosophy involves *how* I teach. Since my first formal teaching job in 1985,

one of my primary goals has been to provide a comfortable and friendly learning

environment. I have always felt that this type of environment fosters "good" feelings

about everything related to learning – the teacher, student peers, the overall environment,

and perhaps most importantly, the student. Feeling comfortable to ask questions and

relaxed (and even having fun!) helps to build confidence and boost intrinsic motivation.

I'm not alone; this idea is also strongly supported in the literature (Hidi & Harackiewicz, 2000, Deci, Koestner, & Ryan, 1999); Pintrich, 2003; Plaks, Grant & Dweck, 2005).

Another important philosophy involves *what* I teach. Teaching Computer Science (CS) is like trying to hit a moving target – things change all the time. Change is good and necessary, and is what keeps the discipline so incredibly exciting. However it also means that CS faculty must constantly be reworking the course content and materials. I try to look at this as an opportunity and not a challenge. Technology will continue to change and improve. How can I better use it in my classroom?

Another factor in this educational equation is that our students are changing all the time. One doesn't have to look too far to read about declining high school performance, and low math and reading scores. And it's not only the educational preparation that is changing – students' attitudes, culture and priorities are changing too. On top of that, add the stress of daily life – finances, safety, developmental maturity. Wow!

RIT's Student Learning Community project is a step in the right direction. As an instructor in this program, I can attest to the value of relationship building, collaborative and cooperative learning, and comfort involved in a learning community. It represents everything I believe in – creating a comfortable and supportive learning environment, and quality course delivery.

As an educator, I am always looking for ways to ease student challenges and pressures. Being flexible and accommodating is necessary, and so is keeping our strict educational standards. It's not always easy to satisfy both.

Metaphor of Teaching

I have read a lot of work by Ryan, Deci and Pintrich including some interesting papers on interest and intrinsic motivation (Ryan & Deci, 2000; Pintrich, 2003). All educators try to keep students interested and motivated in the class, but sometimes students fail anyway. When I first started teaching, I really took student failure personally. What could or should I have done differently? What else could or should I have done to help this student? Unsuccessful students will always be disheartening, but I have come to accept the fact that not all students will succeed, regardless of what I do (but I do try to do everything I can!). On the other hand, some students don't need or want extra help and are quite capable on their own.

This reminds me of gardening, where some seeds flourish and grow in most any location, but in the same garden, other seeds never seem to start, regardless of the amount of fertilizer, water and sunshine provided. As the seeds start to grow, the gardener can pull the weeds around the young plants and protect them from the frost. The gardener can control the amount of fertilizer and water, but not the amount of sunshine.

This is similar to learning. A teacher can plant the seed and encourage students to grow, but the teacher can't provide everything necessary for success. Some things must come from sources internal to the student such as interest and intrinsic motivation – that passion or "fire in the belly." This gardening scenario is my metaphor of teaching.

My FLC Project – Clickers in the Classroom

In winter quarter, we were asked to decide on a FLC project. At that time, I was teaching a course that was almost evenly split between students who were repeating the course from the previous year, and first-year students in the accelerated track of the

program. In other words, two extremes: weak students and very capable and motivated students.

My department had relatively little experience with student response systems, commonly called *Clickers*. Using Clickers, the instructor prepares a Powerpoint-like set of multiple choice or true/false questions where students can respond with their answers using a hand-held device. For readers unfamiliar with these systems, this is the idea behind the "ask the audience" questions on the popular game show *Who Wants to Be a Millionaire.*

I thought that Clickers might be a good way to level the playing field in this class because student responses could be anonymous; weaker students could indicate that they did not understand something without having to single themselves out by asking questions in class. I was also hoping the Clickers would help to keep the more advanced students engaged in the class since many were complaining they already knew the material.

I prepared a short Clickers presentation and used it as a review activity before the first exam. After a few technological issues, everything was up and running and students worked through the review. I asked the class for written feedback on what they thought of the Clickers. The class was almost exactly split 50/50 between students who enjoyed the interaction and use of technology, and those who bluntly stated it was a waste of time. In spite of the disappointing reaction, I continued to use the Clickers from time-to-time, mostly for review exercises. To get a different perspective from different classes, I extended my experimented to spring quarter and used them with my Women in

Computing Learning Community freshmen and also in an upper division Operating Systems class. The spring quarter results were a bit more positive.

From my perspective, the Clickers were difficult to use for many reasons. First, the licensing required an Internet connection which created a technology limitation (the classroom needed an Internet connection or wireless). I like to ask questions where students must synthesize the material, so creating multiple choice or true/false questions was the most difficult problem, especially in the Operating Systems course. I felt that in addition to the required books, expecting students to also purchase a Clicker would be too much of a financial burden. Instead, I distributed department-owned Clickers to students then collected them at the end of class. This consumed precious class time I could not afford.

The positive outcome was that it forced me to "think outside the box" to come up with a strategy for true/false questions that could be used with higher-level thinking and collaborative exercises. For example, in the Operating Systems class, one question posed was:

> *A poorly performing Operating System is reporting a 95% utilization of its swap space manager but a 20% utilization of the CPU. Adding a faster processor would improve the performance of this system. True or false?*

In this question, students must synthesize what they know about CPU utilization, swap space and processor speeds to determine the impact of adding a faster processor. I purposely did not indicate if the 95% swap and 20% CPU utilizations were good or bad – students had to decide if the system was in good or bad shape to start with. This type of question led to valuable discussions and got away from rote memorization questions typical with multiple choice and true/false questions.

Reflections on the FLC Experience

Being a member of a FLC is a unique experience. It provided me the chance to meet with peers from across the Institute who share my passion for teaching. The travel to the Lilly Conference was a wonderful way to get to know each other and learn in a very unique "out of the classroom" experience.

The FLC also provided the opportunity to meet other RIT professors whose work is centered in pedagogy and the Scholarship of Teaching and Learning. RIT has always been known for its quality teaching, and the FLC and similar efforts must remain the backbone of RIT's commitment to quality teaching.

As the year closes, I remove my *FLC Participant* hat and proudly don my *FLC Facilitator* hat. I feel quite honored to be able to continue working with Susan Donovan and look forward to next year's experiences.

Thank you, Susan!

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