

My High School's College Students

By Tawni Deike

Do I see myself as a college professor one day? Maybe, but an intermediate goal for me would be to teach a dual-enrolled college calculus class to a group of high school seniors. Because of that, I chose to observe and interview the teacher who is currently teaching the dual-enrolled college calculus class at the high school where I currently teach. This particular course is taught by an adjunct professor from our local community college. The students complete the equivalent of one trimester of college level calculus over the course of one school year. After observing one class session and interviewing the teacher, I had much to process. I would like to take this learning process and relate it to my thoughts on teaching as informed by the observation, interview, and reading in this course.

First, I will give an overview of the observation itself so as to describe the classroom setting, presentation, expectations, etc. This class was presented in a very traditional lecture style. It began with a review of the previous day's content. Then, it moved directly into a homework help session in which the teacher did specific problems on the board at the request of individual students. Following the homework help, the teacher then roamed the room and took a quick glance at each student's homework. Next, a worksheet with quiz practice problems was distributed and done together as a class. During this time the teacher did good wandering and had the last five problems done independently followed by students showing their work and answers on the board. Lastly, the class culminated with a preview of the next concept through a sneak peak of a difficult problem that they can now do much easier as a result of their new learning. This particular lesson seemed to follow a very basic structure for a traditional lecture style. While I don't know that I would consider this the most effective method for teaching, it commonly utilized.

A few days after the observation, I met with the teacher for an informal interview and discussion of his teaching philosophy. I began the interview by obtaining some background information about his overall career path and how he came to teach calculus at our school. I was intrigued by his resume. He graduated high school and joined the United States Army. He attended Westpoint focusing on physics and nukes. He then taught physics and Cornell and Westpoint before working on bombs for the B-61 in Washington DC. I continued the interview by sharing with him the Teaching Perspectives Inventory that I completed as a part of my coursework. I provided him with a short description of each of the five perspectives of this inventory and asked which one he thought best described his teaching. This particular question was not directly answered but through discussion I believe that the transmission perspective best describes his teaching. The reason for this thinking is that he shared that a critical element in student learning and success in his classroom is the “way they study.” Specifically, in his opinion, the biggest transition from high school to college is the expectation to study outside of class. He described that for most of these accelerated students, the only necessity for success in previous high school classes was to attend. Very few of them had homework and many of them were in “standby mode” once they got on the bus to go home. Also, when asked how learning occurs, he was very quick to respond, “through practice problems.” This is yet another element of the transmission perspective in that it is the learner’s responsibility to learn the content in its authorized or legitimate forms. As for the teaching perspective that least described his teaching, he believed it was social reform. This was also my lowest teaching perspective. I wonder, does this have something to do with the content of mathematics? As I review the specifics of this teaching perspective, the overall idea that effective teaching seeks to change society in substantive way does not seem unreasonable. It’s more the ideas of awakening students to values and ideologies that are embedded in texts and common practices within the discipline that doesn’t seem to fit the content of mathematics. As a mathematician, there just aren’t any values or ideologies within the context. Now, with that said, the teacher and I actually believe that

in our particular school district the necessity of social reform is very high. However, this social reform encompasses their “limited point of view” and exposing them to the options that abound for them. In the interview process we deeply discussed how many of our students, who hail from a very rural and economically depressed area, are unable to see themselves living “beyond the shop or farm and seeing that there are more than just in state schools” for post-secondary education. So, while social reform in terms of content is low, the idea of giving students power to take social action to improve their own lives and the lives of others is high in priority to both the teacher and me.

This concept relates to the writings of Bell Hooks and her ideas of teaching and learning without limits. Just like Bell speaks of her childhood limits of fear, I think these students have similar limits. They are afraid to go beyond their limited small town experiences. She continues to say that the primary element that allows for possible change in our limits of fear is critical thinking, regardless of one’s social standing. Thus, engaged pedagogy is essential to their development because the heart of this approach is critical thinking. It is also important to build a learning community within the classroom where there is mutual participation between teacher and student. This in turn generates excitement in the classroom that enables both students and teachers to feel the joy of learning. She continues by sharing that students do not always enjoy this style and method of teaching and often find these courses challenging and that the rewards of engaged pedagogy may be seen during the course, but rather through the choices they make and their habits of being. Engaged pedagogy gives professors the power to change the direction of students’ lives. This is the type of teaching I try to focus on in my classroom and feel gives the students a deeper understanding of the why and how behind the content.

So, after observing and interviewing the teacher who is currently teaching the dual-enrolled college calculus class at the high school where I currently teach, I believe that his primary teaching perspective is transmission based on his overall mastery of the content and belief that a teachers

responsibility is to represent the content accurately and efficiently. While social reform initially seems low on his (and most mathematicians) teaching perspective, for our rural and economically depressed area giving students the power to change their lives is critical. According to Bell, one way to do this is to teach with an engaged pedagogy and give them the power to change the direction of their lives. So, do I see myself as a college professor one day? Maybe, and after observing the dual-enrolled college calculus class consisting of seniors at my high school my thoughts on teaching as informed by the observation, interview, and reading in this course are that social reform in terms of improving their own lives and engaged pedagogy is critical in teaching.