Introduction

This portfolio is a record of my experience in the Teagle Collegium and in my first year of teaching as an assistant instructor at Indiana University. It’s a way for me to reflect on the things I’ve learned in the past year so that I can maintain perspective on the teaching challenges to come. As my AI experiences accumulate, I plan to update this portfolio so that it will continually reflect who I am as a teacher. The format will also change with time – whereas it is now primarily a resource for my own use, I will eventually edit this portfolio so that it can represent my teaching to potential employers when I enter the job market.

Lost Tribes and Sunken Continents – AIing for COLL E104

In the spring of 2010 I was an assistant instructor for Dr. Anne Pyburn’s course, “Lost Tribes and Sunken Continents: An Introduction to the Scientific Method.” A lot of students are drawn in by the title and then get confused about the methods and goals of the class. One of the primary goals of the class is to make students better critical thinkers by teaching them how to analyze sources of information. In doing so, Dr. Pyburn hopes that students will begin to question many of the things they encounter in their everyday lives – things they hear on the news, read in magazines, see in museums, and so on. The class uses multiple mini fieldtrips (six altogether) to teach some of these lessons and to introduce students to different types of resources on campus. The topics of the class are hugely diverse – from Atlantis to women in Yemen to DNA – but the themes underlying all of them are tied into the main goal of the class. Unfortunately, when the class is finished some students still can’t find these underlying themes, and they complain that the course wasn’t about what they think it’s supposed to be about.

The class size is large – about 120 students when I was an AI. It is composed of two lectures each week and discussion sections that meet once a week. I and one other AI each led three discussion sections every week and took students on the field trips later in the semester. We were allowed relative freedom in our discussion sections. The only requirement was that we discuss the required readings and tied these into the lectures and general themes of the course.

The main limitation on my teaching was time. The course was only eight weeks long. Of the eight discussion sections, two were used for the midterm and final. This gave me a very limited amount of time to get to know my students, design a teaching innovation, and implement it. As a first-time AI for this course, I was also new to the material and to the professor’s methods and expectations. Given these limitations, I started out small with my teaching innovations.
Teagle Innovation #1 – The “Learner-Centered” Approach

Theory

My first teaching innovation was inspired by chapter 6 of How People Learn. The theory of the learner-centered approach proposes that students learn better when teachers are conscious of where the students are coming from and take these factors into consideration when designing lesson plans. Teachers should consider questions such as, “What skills do my students have?”, “What type of cultural or socio-economic background do they come from?”, and “What are their current beliefs?” Teachers who ask these questions first are less likely to make false assumptions about who their students are or what they should expect from their students. Hopefully, this will also allow teachers to make more effective lesson plans.

Plan

My plan for implementing this teaching theory was relatively simple. The background information I had on my students consisted of the index cards I had collected at the beginning of the semester which gave me their names, their year in school, their area of study, and whatever other interests they chose to list. Using this information, I created small groups based on the students’ disciplines or areas of interest. I kept students with similar backgrounds together, so that the groups were roughly arranged around subject areas such as the humanities, hard sciences, business, and so on. These groups were posed the question, “What is intelligence?” Each group was tasked with coming up with their own definition of intelligence.

Objective

My goal for this teaching innovation was to have more students participate in class discussion. With the help of my undergraduate teaching intern, I kept track of who spoke during class and how many times – once during a class period without the teaching innovation and once during the class period with the teaching innovation. My hope was that by grouping students by discipline for the teaching innovation, groups would come up with distinctly different definitions of intelligence, which in turn would spur more discussion.

Outcome

The following chart displays the numbers from two different discussion sections, including numbers of discussants both with and without the teaching innovation.

<table>
<thead>
<tr>
<th>Section</th>
<th>Week 2 (without teaching innovation)</th>
<th>Week 4 (with teaching innovation)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of Talkers</td>
<td>% of Talkers</td>
</tr>
<tr>
<td>Thurs 4-5:15</td>
<td>8/14</td>
<td>~57%</td>
</tr>
<tr>
<td>Thurs 5:45-7</td>
<td>8/19</td>
<td>~42%</td>
</tr>
</tbody>
</table>

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While my 5:45 class showed a significant increase in the number of discussants, my 4:00 class had a slight decrease. I do not think, however, that these numbers are an accurate reflection of the success or failure of my teaching innovation. When I take into account all the other factors in this experiment – class dynamics, topic of the discussion, the week (fourth week versus second week), and so on – I cannot assume that the change in numbers was due to the way I grouped the students. If nothing else, my 5:45 class was continually more talkative than my 4:00 class, which probably accounts for most of the difference in numbers.

Reflection

Although this innovation was largely unsuccessful, it gave me some insights for implementing the learner-centered educational approach. The first and foremost of these is that the index cards which students turn in on the first day of class are not sufficient for getting to know your students. A better way to draw out my students’ individual perspectives might have been to have them bring in an article or some other “artifact” (as Katie Kearns suggested to me) that they find interesting and which related to the topic of discussion. I also think that measuring the success of my innovation by counting the number of discussants is not the most effective method. Some students feel uncomfortable speaking up in class, but express themselves well in written assignments or group work. Measuring the success of an innovation should take into account these different forms of communication.

Teagle Innovation #2 – Learning and Transfer

Theory

My second teaching innovation was based on chapter 3 of *How People Learn*\(^2\). This chapter describes the diverse factors that affect how well a student is able to transfer concepts they have learned in the classroom to new problems. Students’ ability to transfer skills to new situations depends on their initial learning of the material, their ability to understand material versus memorizing material, the amount of time they are given to learn the material, their motivation, the context in which they learn the material, their ability to conceptualize the material in an abstract way, and whether they learned the material in an active role or a passive role – just to name a few.

Plan

This theory seemed especially appropriate for the final weeks of the class. The goals of the class up to this point were the following:

1. Evaluating sources of information and critiquing arguments
2. Collecting information or data
3. Interpreting information and forming an argument

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\(^2\) Ibid.
These goals represent the material which should have been learned by this point in the class. The final assignment of the class was a series of debates to be performed in front of the entire lecture hall. These debates would be the transfer situation, in which students would hopefully be able to apply the skills and concepts they had learned so far to a new problem (the debate topic) in a new context (the debate format).

In order to work the learning and transfer theories into the last few discussion sections, I put together a lesson plan that highlighted six of the concepts from the chapter. To test for initial learning I would spend time reviewing some of the earlier material, such as the logical fallacies they had learned. In order to simulate the conditions of the final debate, I would play a video clip for them to analyze, which would force them to listen to their opponents’ arguments given aloud. Another concept of the learning/transfer theory is that in order to be motivated, students need tasks at the appropriate level. To fulfill this requirement, I would have them read an editorial written in the student newspaper. Next, to test for understanding rather than just memorizing, I would have them identify weaknesses in the editorial’s argument and explain why they were weaknesses. Finally, in order to provide them with effective time to learn, I would videotape a mini debate they performed and play it back for them, which would allow them to engage in deliberate practice, monitor their attempts, and receive feedback on their performance.

**Objective**

By implementing these changes in the lesson plan, I hoped that their performance in the final debates would demonstrate their understanding of the underlying themes of the class. References to materials discussed in class would be taken as evidence of this understanding. I also hoped that they would use some of the skills they had learned for critiquing arguments – either by pointing out logical fallacies their opponents used, identifying their opponents biases, and so on.

**Outcome**

As you might have guessed, my plan for the final sections of the class was far too ambitious to implement. Because the students had only two discussion sections to prepare for the final debates, the professor wanted them to spend as much of the class period as possible engaging directly with the debate material – not jumping through the hoops of educational theory. So as not to abandon educational theory entirely, I kept my focus on the principles of feedback and the ability of students to monitor their attempts by giving each class the option to exchange notes with the opposing team. Teams that chose to do so had the advantage of seeing their opponents’ arguments ahead of time, but also were able to identify the weaknesses in their own arguments. Not all teams chose to do this, but those that did fared slightly better in the final debates.

**Reflection**

After talking with Dr. Pyburn, I realized that my plans for developing the students’ transfer skills would have been more effective if they had been enacted from day one of the class, instead of in the final two sections. At this point, the students needed the time to prepare for the debates, and using these different learning and transfer mini-lessons would only distract
them from the final goal. That is not to say that the lesson plan I developed wouldn’t work, but I think the students would have benefited most if I used the innovations sparingly and gave them time to absorb the material in between. If I am assigned to “Lost Tribes” as an AI in the future, I will definitely implement some of these strategies in my lesson plans from early on. I also think that giving the students more control in the last two sections increased their motivation, as did the sense of competition. In the last few classes, my students were more engaged than in any of the previous classes, which leads me to think there can be some danger in over-planning a lesson. Sometimes the teacher needs to step out of the way and let the students do what they need to do.

Conclusion

The Teagle Collegium has really opened my eyes to the way we teaching students, both intentionally and unintentionally. This semester I focused on doing everything I can to teach intentionally – stepping back and critiquing what I’m doing, why, and what I hope to accomplish by doing it in that particular way. I think this type of reflection is necessary and helpful, but I also learned that it can be taken to an extreme. The problem with being so intentional all the time is that it can result in over-planning and lesson plans that reign in the students instead of allowing them the space to learn. One reason Dr. Pyburn thinks students in this class were resistant to the material is that we did not allow them to struggle through it on their own enough. If students are given more space to work through the themes and concepts of the class on their own terms, they perform quite well and actually even enjoy themselves a little.

I’m not saying that I intend to throw theory out the window in my teaching. It’s important to have a purpose in what you do and to try to understand why some things work and others don’t. But this semester I learned that I need to find the happy medium in my teaching, and to realize and work with the limitations that I have to deal with – whether these are time constraints, the material I am given to teach, or the professor’s expectations for the class. While these types of limitations might prevent me from making monumental changes (like I was envisioning for my second innovation), they still allow me to make small changes. Knowing a little theory and taking the time to be reflective about my teaching will continue to make a difference in the way I teach, even if the changes are gradual.

References