# A Walk across the Bridge: A Reflection on My Experience as an Aspiring Educator at the Illinois Mathematics and Science Academy

*by Kristen A. Feigel*

When I was first asked if I wanted the opportunity to shadow a few teachers at the Illinois Mathematics and Science Academy, I answered "Yes, absolutely!" almost immediately. Little did I know at the time that this opportunity to shadow the summer education of such gifted students would forever change the student that I am and the teacher I will become.

As an English major with a double minor in Theatre and Secondary Education at Wittenberg University, my goal is to be a high school English and Theatre teacher. I just finished my first year of college, and I loved every minute of it. The education classes that I had taken at Wittenberg had allowed me to be fully immersed in the curriculum, which meant completing a certain number of hours of field experience. At the end of my freshman year, I had already taken three education courses and I couldn't be more sure that I want to teach. So, when I was asked by a family friend if I wanted to observe the Excel Program, a bridge program for the incoming students at the Illinois Mathematics and Science Academy (IMSA), I confidently and excitedly accepted the role.

Even though I am going to college in Ohio, I grew up in Illinois and I graduated in the top six percent of my class at Oswego East High School. I competed against students from IMSA with my Speech Team and with my sports teams. I had friends that were IMSA students. That being said, I knew quite a bit already about IMSA before accepting the shadowing internship. Correction: I thought I knew a lot about IMSA.

When I stepped inside the Illinois Mathematics and Science Academy on my first day, everything I thought I knew about IMSA and education in its entirety was turned upside down. Jay Thomas, the family friend who had made this opportunity a possibility for me, gave me the grand tour of the maze-like building; the different wings of the building were rounded and the classroom ceilings were practically nonexistent. The walls were different colors and the tile floors in the science wing were designed to look like DNA strands snaking through the hallways. Different pieces of artwork could be found all around the building, including paintings, sculptures, models, a suit of armor, and a giant kaleidoscope. Needless to say, I was impressed before I even began learning.

Over the course of the week that I had the privilege of observing classes at IMSA, I attended a biology class and two English classes regularly. The courses were extremely different in content area, as one could imagine, but the teaching styles were, surprisingly enough, not all that different. They both incorporated problem-based and inquiry-based learning approaches, and the teachers were very hands-off, as they wanted to allow the students the opportunity to teach themselves and push one another to discover the answers to their own questions.

When Dr. Thomas brought me into one of the labs, he introduced me to Dr. Sanza Kazadi and Dr. Peter Dong, who were working with students involved in IMSA's Student Inquiry and Research (SIR) program. Dr. Kazadi and Dr. Dong were facilitating groups of students who, before nine o'clock on a Monday morning, were analyzing better ways to capture and utilize Earth's energy sources and constructing a satellite tracking system.

From there, I went to a biology classroom that was very hands-on for the students. All of the students sat in hexagon-shaped tables around the room. They were given notes to reference on their group website and a couple of diagrams on the back board to reference as they were to create a poster with a partner regarding cellular respiration and photosynthesis. The students, all incoming sophomores to IMSA, were to work together as the teacher, Dr. Don Dosch, walked around the classroom to look at posters and to answer the questions that arose. It was up to the students to use their notes, explore the internet, and ask questions

when necessary to complete the assignment. The posters they were making were necessary to then study for the quiz they took on Thursday of that week. Additionally, the posters proved vital to the presentations they were required to give on Friday. Everything the students were doing in the classroom was related to and built on what they would learn and do next. The work submitted by these students was astonishing; I had never seen such brilliant work from high school students. Their posters were phenomenal: bright in color and rich in content. Some of the students would become rather shy and humbled when they were praised by Dr. Dosch for their outstanding word. Instead of allowing the students to quietly and humbly accept their praise, I heard him say to one student, "Modesty is ok, but pride is not the opposite of modesty." He encouraged the students to be proud of their work, and rightfully so. The pedagogy in this environment was unlike anything I had ever seen before.

After witnessing such greatness already, I was eager to see what the English classes were like at IMSA, especially since this school's focus was math and science. Even so, I could not be more thankful for the opportunity to sit in on these classes. I observed Ms. Erin Micklo's teaching style in her two English classes, and what I learned in that one week I wouldn't trade for anything. These students are brilliant, there is no doubt, but being in these classes truly verified that fact. The overall environment of the classroom was much like that of the biology class; the students sat in tables of four around the room with an upperclassman tutor at each table. Each day, the students were to have read a short story or two and they needed to be prepared for a quiz as they walked into class; one of the days, Ms. Micklo actually had the students write and answer their own quiz questions, only to discuss them with a partner and then with the whole class, to see who actually read the story and who read the story well enough to create and pass a quiz about it. After a quiz, the students would typically receive a discussion prompt from Ms. Micklo that they were to discuss within their tables. From there, they would formulate an argument regarding the story and create a thesis statement and find textual evidence to support their claims.

Though I usually tried to make my presence scarcely known in the classroom so as not to be a distraction, I was encouraged by Ms. Micklo and by the students to walk around and listen to their discussions closer, to be a part of their discussions; when I would stand near the tables, the students would continue to discuss their ideas, but often would hand me their papers, not in confusion, but in pride, to show me their work thus far. I must say, their arguments were strong even before the full class discussions. The students would ask not for the answers, but for more challenging prompts. These students enjoyed the challenge.

Perhaps one of the most memorable moments of my week observing the classes was when Ms. Micklo bridged the gap between the math and science fields and the humanities fields of study. The students came into one of the classes having read a short story for homework. After a short quiz, they were to work in pairs to formulate a lab report based on the mindset of the protagonist of the story. I was surprised and extremely inspired. Never in a million years would I have thought to incorporate a lab write-up in an English class, but low and behold, Ms. Micklo had a list of requirements starting with a hypothesis and ending with a conclusion statement. What shocked me even more was the complete and total engagement of all of the students; everyone was completely engaged and they all seemed to genuinely enjoy completing the lab report for the short story.

This moment with the English lab report was one that I will remember forever going forward in my education to be an educator. I never would have thought to instruct the students to write a lab report based on a short story; English and science were too different in my mind before this experience. However, it is innovation like this that I will need to implement into my own lessons when I become a teacher. I have learned so much through my liberal arts education at Wittenberg University and through working with these gifted students at the Illinois Mathematics and Science Academy. Undoubtedly, I know now that I need to be innovative and adaptive to every type of student that I will teach. I need to be creative in my lesson plans and teaching approaches because every student is unique and has different learning strengths and weaknesses than every other student in the class. By working with these gifted students, I have learned that to best reach my future students, I will need to bridge the gaps between their interests and strengths to best help them learn; I have learned the importance of valuing the education of the individual in the midst of diversity.

When I was first asked if I wanted the opportunity to shadow a few teachers at the Illinois Mathematics and Science Academy, I couldn't seem to say "Yes!" fast enough. Now, after a week filled with incredible pedagogy, I have learned more about myself as a student, and as a future educator, than I ever could have imagined. I have had a better learning opportunity that I ever thought possible, and I can only wait in great anticipation for my next opportunity to learn in such an incredibly unique and encouraging environment.

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