Reflection on the Value of Content and Methodology Courses

How much can one know of a silhouette? That is the best description of my former portrait of the effective mathematics teacher. I had completely reduced the profession down to tasks such as showing a few examples, assigning a nightly problem set, and administering an exam at the end of a chapter. My academic preparation at Manchester College and the time I have experienced in the authentic setting of a real classroom proved otherwise. They have combined to create a new picture characterized by broadly different strokes. To experience is to truly know. One can conjecture on the best practices in education but only field-tested use helps one move from silhouette to actualization. With the support of my content classes and a witnessing of real teachers teaching real students, I am moving towards the ideal end of the continuum.

I was initially reluctant to describe the benefits of the math courses I have taken at Manchester College. The program quickly ventures into math very few middle or high school students will discover. However, I am now realizing the importance of a deep mathematical background as I encounter students’ questions. Almost anybody could feed the students a formula or a general rule and problems that apply the rule. However, what about those students who ask, “Why does this rule work every time?” I believe students are often wondering this crucial math question even if they do not explicitly ask it. With a strong background in the vast discipline that is mathematics, I can demonstrate greater
comfort in answering questions that begin with the dreaded “why” or at least have success in finding an answer. These answers increase students’ confidence in the subject and alleviate some of the mystery that surrounds it. I also believe a strong correlation exists between exposure and appreciation. More encounters with the subject instill a deep respect for the math I will be teaching to my “rookie” students. This admiration leads to enthusiasm that the students need to witness. How can a teacher expect the class to become immersed in a lesson if he or she is not? Despite the quick ascent into higher levels of mathematics, my content courses have contributed to my approaches to both teaching the discipline and teacher-student interactions as they occur in a math class.

In addition to my content courses, my experiences in the real world of teaching assisted my move down the continuum from silhouette to teacher. One thing has become quite clear from my time at Manchester Community Schools and Jefferson Middle School: instructional methods and assessment procedures need to be infused with variety. This is pivotal to meeting a plethora of learning needs and styles and promoting success. In my experience at Jefferson, the teacher used primarily a lecture and time for students’ independent practice. Students who have typically excelled in math handle this instructional format with ease. What about those who find trial and tribulation in math? During a lesson that I taught at Jefferson, I had the students do a short creative writing. It allowed a whole new group of students to shine in demonstrating their mathematical knowledge. This included students who do not necessarily excel in the computational facet of math. Establishing variety in both instruction and assessment allows more students to showcase their abilities. The end result is a more inclusive classroom. My observations and participation in the actual classroom have also demonstrated the value
of promoting reading, writing, and vocabulary instruction in the math class. These areas of study are not customarily associated with a math class, but math has a rather unique vocabulary students are not likely to encounter elsewhere. Reading in math provides opportunities for students’ interactions with problems as they may appear in relevant situations; writing allows students to practice the presentation of solutions as they may be expected to do in a future career. Any further development of these essential skills prepares students for a life beyond school.

In the methods course, the continuum of teacher-centered instruction to student-centered lessons has been discussed. The most significant challenge with respect to this spectrum is finding the appropriate balance. I would love for all students to discover all mathematics on their own terms. However, I must remain realistic; some facts just need to emerge through a deductive fashion. The nature of math almost sets teachers up for failure. It is too easy to become the teacher described in the introduction. Finding the right balance between direct explanation and opportunities for student leadership in the classroom will be a large challenge I hope to overcome.

Another challenge lies in utilizing the theory that has been validated through educational research. Bloom’s taxonomy has proved an invaluable resource for forming just those questions that will inspire the critical thinking skills teachers want to develop. From my observations of licensed teachers and lessons I have taught in the public schools, one thing is clear: low-level questions are easy to form and ask. They are so easy that the questions to which we should be working are almost entirely neglected. This presents two disadvantages. One, the abstract thought students will need for success in the workplace goes unexercised. Like playing the tuba or any fitness program, it needs
to be applied in order to grow. Second, it increases the likelihood that students will become restless or bored. Bored students will find other means of entertainment that do not always gel with the teacher’s ideas of productivity. A teacher needs to develop high-level questions and remind him or herself to use them. Other theories concern classroom management. Teachers want to make any disciplinary issues learning opportunities. Most of my chances to make this happen have been reduced to yelling or threatening with punishment. Educational theory has been presented to teacher candidates for a reason; it has been field-tested and proven to be impacting. The challenge is in remembering to take advantage of it.

How much can one know of a silhouette? My original perception of the best math teacher was only a shadow of the actual idea. I believe this occurred because my only encounters with the profession came in the role of a student. To experience is to truly know. I am moving closer to that teacher as I step into the role of teacher, a role I never knew before this academic year. My transition from silhouette to actualization is not yet complete, but my experiences thus far have provided joys and challenges I cannot wait to overcome.