

## Looking Back

As a teacher I often look at summer as a time to take a break from learning and recharge my batteries. This summer was a bit different as I learned more in the two weeks of the MSU Urban Stem program than I have in any previous summer of my teaching career. The learning was varied from learning about World of Wonder from my fellow teachers to learning how to use a video editing software to make videos of interest for my students. There was not a time during those two weeks that I wasn't learning something new in class. The discussions allowed me to reflect on my teaching and different ways that I can approach teaching in the coming months. The tech tips gave me different ideas daily for how to more easily integrate technology in the classroom. Quickfires helped me to learn under pressure as my students do during a group project and also helped me to see that failure is OK. I learned more from my failures during the Quickfires than I did from the times I was successful. The most important thing that I learned is how to find an appreciation for math again and to see it all around me. I got into teaching because of my love of mathematics and the problem solving that came with it, but somewhere in the last ten years this has gotten away from me. These two weeks and the reflection that has occurred in the time since the face to face meeting has helped me to reshape how I am planning on approaching teaching in the upcoming school year.

I felt as if most parts of my day were spent experiencing something new. The day started with a World of Wonder where I usually had never thought of the wondering and learned something new through the explanation. The articles were all ones that I had not read and through the discussions it helped me to not only gain a better understanding of how teaching is evolving but also allowed for me to share my ideas and experiences with the teachers around me. Quickfires allowed for me to utilize new technologies but in a different way than I would have in the past. Before a Quickfire I would have spent time looking at ways in which other people had utilized the technology or concept that we were presented with before I embarked on my own journey, but with the time restraint I was forced to be creative and utilize tools in a way that I found to be most effective. The failures from the Quickfires allowed me to see how I could improve the next time around. It also taught me that it was OK to fail which is a concept that I need to explore more in my own classroom. My students always seem so afraid to fail, but if we don't try new things and take risks then we will never be able to reach our true potential.

This learning experience has led me to rethink how I approach the classroom for next year. I always am looking for ways to revamp my teaching, but this summer has allowed me to see that I need to make some changes. Often times I do not find time to have students struggle with mathematics and make their own sense of it. Through the ways that I struggled with some of the new technology this year I can see that it is the struggle that is the most important part of learning. My students are often not given as much time to fail and learn from their failures as I would like. This is something that I will change for the upcoming year. Failures are what help us to get to our successes and are just as important as the success. My students are often to

scared to share their answers out of fear that they are wrong, but I want to create a culture in my classroom where wrong answers are celebrated and we use these as stepping stones to get to the correct answer. One of my aha moments happened while reading Skemp's article "Relational Understanding and Instrumental Understanding". He discusses how there are two different types of courses being taught under the name of mathematics. I have always thought that I had to focus my class more on either the relational or instrumental understanding but through the class discussions I have found that I need to make sure that there is a balance in my classroom of the two.

## **Looking Forward**

In the future I believe that the experience from this summer will change the way that I approach the teaching of my classes. I am going to try to work towards my classroom becoming much more student led. I want to make sure that I give my students plenty of opportunities at turning their failures into successes. I want to try to instill a curiosity of mathematics and how it works in them instead of thinking of class as simply being one where they need to learn the material in order to pass a test and after that they can forget everything they have been taught. I am going to try to instill a sense of ownership of the classroom material in my students. I want to connect this learning to their lives as much as possible and allow for them to see how often they truly do use Algebra once they are out of high school. I do not want to hear them asking me when will they ever use what we are learning in real life because I want to make sure that they are constantly applying what we are learning to different scenarios within their lives. Lastly, I want to make sure that I am constantly utilizing the TPACK framework. I have always looked at technology that has been created specifically for classroom use, but now have found different ways I can integrate technology that was not specifically meant for the classroom. The easiest tool that I want to utilize in my classroom next year is Twitter and having my students tweet during classroom activities to use as a jumping off point for our classroom discussions. This will allow students that may not be as willing to vocalize their ideas able to input their ideas through their tweets (Mishra, Punya and Matthew Koehler, 16).

This experience has allowed me to see the importance of collaboration. I do not utilize the other teachers in my school nearly enough. While I know that Algebra is amazing I could be making it so much more meaningful to my students if I were to pair up with one of their other teachers to create a cross curricular project. I am lucky to be teaching a cohort of our incoming freshmen that will be a part of our IB program in the future. These sixty students will have the same teachers for their core subjects. I want to do my best to make sure that the four teachers get together once per semester to work on a project that involves all of our content areas. I want to try to not isolate the mathematics from the rest of the subject areas and am going to try to take advantage of the other cohort teachers in doing this. This experience has also allowed me to see the importance of displaying our passion for the subject that we teach. I always tell my students how much I love Algebra but I do not show them this passion. I want to make sure that when they hear me talk about math they

can see love I have for the subject and it will allow them to see just how important it is. The last thing that this has changed about my thinking about teaching is that I need to make sure that my students see me fail. I have been teaching the same subject for the last five years and have not been pushing myself to change the content or structure the class so that they can struggle with the math. I have instead been trying to make it easier for them to understand the concepts which has not allowed for them to display their struggles. Students need to see that it is OK to fail and learn from your failures but they will not be comfortable failing in front of their peers until they are shown the correct way to fail and use your failures to motivate success.

I am taking a plethora of knowledge away from this experience. I have never taken away so many different types of knowledge from a class before. I now have new technology tips that I can utilize with my students in the fall, I have an idea of how to spark curiosity in my students through implementing my own version of Worlds of Wonder with my students, the articles have given me so many things to think about in the way that I am approaching my teaching for next year. The most important thing that I am taking away from this experience is that there is a community of teachers out there that want nothing more than to help each other become better teachers. The Facebook page and Twitter hashtags has shown me how much we all want to better our own practice and this has led to new ways that I want to better my teaching practices.

#### **Works Cited**

Mishra, Punya and Matthew Koehler. "Too Cool for School? No Way! Using the TPACK Framework: You Can Have Your Hot Tools and Teach with Them, Too." *Learning & Leading with Technology* (2009): 14-18. ISTE (International Society for Technology in Education). May 2009.

Skemp, R. R. (1978). Relational Understanding and Instrumental Understanding. *The Arithmetic Teacher*, Vol. 26, No. 3 (November 1978), pp. 9-15.