

## **Final Reflection Paper**

When being accepted into this program, I came in with an open-mind, no explicit expectations, and a lot of curiosity. My hopes for the year were to better myself as an educator, gain confidence in the areas of STEM, and learn some great ideas to bring back into my classroom. I remember being on the bus on the way home from the first day of class, and my mind was on overload. I was filled with excitement, so many questions, and feeling so appreciative to be a part of this program. In one day, my expectations had been shattered and I completely reconfigured what I thought I was going to gain from this year.

When simultaneously reflecting back and looking ahead, one word stands out to me, discovery. In just two short weeks, we have learned an enormous amount of information, all of which can be categorized using the TPACK model. However, looking deeper, I have synthesized the information into this program's mantra of, "Explore, Create, and Share."

### **Explore-Looking Back**

In the first two weeks of this program, I really stepped out of my comfort zone and explored spaces of the STEM world that I have never experienced. With my knowledge of STEM being limited, I didn't have to stray too far to be in unfamiliar territory. I am someone who throws myself into experiences to gain confidence and knowledge, and with that being said, I took the challenge with open arms.

I really appreciated the daily elements of the WOW and Tech Tips. This was a time for individuals to see the exploration of others with the element of share. Seeing the WOWs my fellow classmates presented, really opened up my mind to new wonderings while also making connections to personal wonders that I have had about the world around me. I also enjoyed learning new tips in technology that others presented. They ranged from simple tips that sparked

an “ah-ha moment” to others that, with some careful planning, can be very useful in the upcoming school year. We had numerous discussions and it seemed like a pattern formed. Everything leads back to making meaningful connections for our students. These two elements of our class are prime examples of allowing us to connect what we are learning in class and applying it to real world situations and applications.

One of the elements of our class that I personally got a lot out of were the Quick Fires. The minimalistic approach to these activities scared me and intrigued me at the same time. These activities really made me figured it out on my own. I also liked seeing simple academic content being presented in a creative way. The end result was how everyone personally interpreted the assignment and sometimes played to our strengths and other times brought out, but in a way conquered, our insecurities. In the article, “Learning from Creative Teachers,” we learned about incorporating unique teaching approaches that demonstrate us as a creative individual. We discussed in class how it takes risk to teach creativity but the end result outweighs that risk. The creativity that we create from our teaching cultivates an environment for our students that allows real-world learning to be infused into everything that we do.

Being able to conceptualize the teaching and learning that happens in a classroom through the lens of the TPACK model was something that I learned a lot from. I gained a wealth of knowledge from reading the article, “Too cool for school? No way! Using the TPACK framework: You can have your hot tools and teach with them, too” and learning how the three elements of technology, pedagogy and content knowledge work in tandem together to create a learning environment that is well rounded, engaging and meaningful. Through the rich discussion and the exploration of the TPACK game, I now understand the importance of motivating students and making the content more accessible for my students. Knowing your

students and the context of your classroom is an important consideration when implementing this model into your classroom. I will strive to apply this knowledge gained in attaining the, “sweet spot” as much as possible.

Being a part of a professional community through this fellowship was something I was really looking forward to. I enjoyed getting to know the people around me. I had the opportunity through discussions, group work and team activities to understand people’s school environments, their professional expertise, and their learning path as it pertains to this program. It was very beneficial to not only explore schools and colleagues that are vastly different than the context I experience but also to feel a sense of togetherness as we jump into a year full of unknown excitement.

### **Explore- Looking Forward**

As I look forward into the year ahead I would like to mirror as many elements of our two weeks of class that I can with my students. I believe that we as educators have had excellent scaffolding with particular technologies and concepts. I look forward to allowing my students to explore their curiosities with a number of new tools and approaches to their education. If I have learned anything in the first two weeks, it is that these explorations don’t come without many questions, trials and errors and embraces of small successes to propel motivation.

I have pulled two professional text resources that will be invaluable to me this year. With my goal being to implement Science content into other parts of our day and core instruction, I have targeted two areas during my daily schedule to implement science content a part from our blocked science investigation time; morning meeting and my literacy block. These are two elements in my day that happen regardless of the circumstances and therefore I have targeted these to ensure that science is present every day in my classroom. I researched professional texts

that will help support my idea and came across two that I have recently purchased and already used in my preliminary planning. The first is, Doing Science in Morning Meeting by Lara Webb and Margaret Berry Wilson. This text provides great activities to implement into our morning meeting that help connect to science content. The other text is, Picture Perfect Science Lessons by Emily Morgan and Karen Ansberry. This text provides science lessons that can be supported by well-known pictures books. This will be a great resource when integrating science concepts into my literacy block.

A tool that my students and I will explore throughout the year is the use of the app Scorative. This will be a great tool that brings assessment to life in a fun and engaging way. I see this being explored in many different ways from individual work to collaborative work and even in a way of healthy competition. We will have the ability to explore different forms of assessment with multiple choice, visual graphs, timelines, and short answer all while incorporating technology and learning content.

### **Create- Looking Back**

The first two weeks in essence was a huge create-fest. We created projects, vulnerable insecurities, a wealth of questions, and wonderings about all we were learning and how it pertains to us as educators. We created learning paths and visions for what our classroom is going to look like with all this new knowledge. We created a dynamic cohort of educators with the same vision of igniting creation and curiosity for learning in the realm of STEM. And by doing this, we created a valuable resource and support system as we take this journey together this year.

The projects we created through our Quick Fires didn't fall short of blowing my mind. Simple concepts such as creating story problems, which I have had my students do every year

using paper and pencil, were flipped upside down with the simple instructions of using a video camera for instance. The content stays the same but the application and approach for learning has been displayed in such an innovative way that I can't help but think about my students and how excited they are going to be to engage in such activities. As discussed in the, "What Knowledge is of most worth: Teacher knowledge for 21<sup>st</sup> Century Learning" article, this idea that nothing has changed but everything has changed holds true through the intentional activities we engaged in throughout the two weeks. We have opened our minds to the idea of coloring outside of the lines in our teaching and being pleasantly surprised in doing so. We must break the boundaries of traditional learning and transform our classrooms into a space where lines are blurred between subjects and the tools we use to create understanding of content are used with excitement and no hesitation as if it were second nature.

The two days that stood out to me as being pure creativity were both the Second City improv workshop and the Markers Playground. Both days brought to the table an element of surprise and individual outcome. Some people were completely out of their element and gained exposure by putting themselves out there, while others stepped into the spot light and added to their passions of creating in these domains. Wherever you fell on the spectrum you got something out of the experience and that is what creativity does, by simultaneously pulling people strengths and vulnerabilities to create something that is unique. In our discussion about the article, "Rethinking Technology & Creativity in the 21<sup>st</sup> Century," my group debated on the issue of subjective assessment when it comes to what creativity produces. We concluded that the product is unique in itself and up for interpretation based on purpose, therefore allowing our students to make an experience their own and get out of it what they put in for themselves by not restricting their creativity. This idea came full circle for me when I reflected back on the Second

City workshop and Makers Playground. A task was presented, different paths were taken, and end products stood alone in their exceptionality.

### **Create- Looking Forward**

I consider myself a very creative person and that characteristic is not only prevalent in my classroom but spews over into my students. My creative approaches in my teaching yields creative learning with my students. Again, I would like to mimic the element of Quick Fires into the year ahead. I am looking forward to creating tasks that spark my students interest, allows them to explore new technologies, and gives them experiences to create something complete unique to themselves. I see the opportunity for learning from one another as they create projects through Educreations, video recording, paint software, and other technologies that we will implement throughout the year.

Specifically, with my students, we will explore the application of Educreations through the newly purchased iPads we will be receiving this year. This tool will allow my students to take every day problems, content, and explanations and add the element of technology, creation, and display of student thinking. I consider this an exploration and an opportunity to create because I am prepared for there to be heavy scaffolding in the beginning to allow my students to feel comfortable with this tool. Also, together we will explore different ways of incorporating this tool in our daily teaching and learning. I expect it to be a process filled with hiccups and surprising outcomes all year long.

To be able to orchestra a classroom where creativity flows freely, I would like to have a sound understanding of specific tools and activities that will create that. Therefore, I am seeking assistance in fellow colleagues and professional development opportunities that share insight on tools and strategies that can be turned into projects, quick fires, and chances to create. I have a

teacher in my building who has used Educreations in her classroom for the past couple of years. She is going to be a valuable asset in helping me see the potential for the application. I have also registered for a two day Ed-Tech professional development that will discuss the use of technology in the preparation for the PARCC assessments, and workshops of STEM and blended learning. Throughout the year I will be looking for ways to learn as much as I can to help support my goal in this program.

### **Share- Looking Back**

We had ample opportunities to share things about ourselves, our career journey, the context of our school, and our hopes for this program. What was remarkable was the way the sharing occurred. Introducing ourselves through pictures, creating a professional website, and using forums such as Twitter and Facebook, allowed us to share our ideas in unconventional ways. Again, just modeling things we can do in our own classrooms.

I thoroughly enjoyed the Roots of Stem project that we conducted in class. I benefited from experiencing my colleagues' lessons and sharing their best practices. Having the opportunity to discuss teaching strategies and receive feedback is very valuable. I appreciated the article, "Enabling Communities and Collaborative Responses to Teaching Demonstrations," because it gave a great segue into how to interact during the demonstrations. The ideas presented in the article and following discussion, helped scaffold conversation and feedback in a positive light so that the time spent could be optimized. The e-book that has been collectively created is going to be an awesome resource, not only for this cohort, but other educators as well.

Another element to our class that I benefitted from was being able to design a professional development with the intent to bring back all that we have learned and experienced to our colleagues in our schools. One of the things I was most excited about when being accepted

into this program was being able to share the wealth of all my experiences gained through this program. I remember when writing my essay for this program, I spoke about being a catalyst for change within the district when it comes to STEM education. I meant every word, and I have felt that aspiration through this program so far. That is a goal for everyone involved and therefore, allowing us the opportunity to make these ideas into a reality is very empowering.

### **Share- Looking Forward**

From all that we have learned thus far, I am most excited to involve my students. I am excited to share with them our goal of implementing science into everything we do in the classroom. I feel like they will get excited about the DreamIT project through my iImage and Explain It To Me Video that I have prepared for them. I know the element of sharing will be contagious. By creating excitement, my students will want to share their learning with anyone and everyone who will listen.

The sharing does not stop at our classroom door. I want my students' pride in their work and accomplishments to be shared with their families, and the community that surrounds them. I have designed several ways for that to happen. Students will have the opportunity to have "Teacher Time" inside and outside of our classroom. Students will take the role of the teacher by teaching something they are excited about. Whether it be an experience they witnessed, something they learned in class, or something they read on their own, my students will have chance to share their learning with others through forms of technology such as video, blogs, and digital presentations.

Another component of 'share' that I am looking forward to is the professional developments we designed as a group in class. Instead of isolating ourselves into individual schools, we have come up with a plan to combine PD days and share the wealth of knowledge in



several different ways and in several different stages throughout the year. This is going to be a great experience to interact with other schools and share ideas of best practice, new technologies, and strategies to meet the needs of our students. These PD days will be workshops conducted by my fellow colleagues in the fellowship cohort but will not be limited to just our experiences. We are looking to create a space where support and encouragement is an essential component and sharing happens regularly. We will do this with careful planning, finding a common space, and prioritizing in our individual schools components of what works and what our needs are.

Everything about this program has ignited excitement and motivation for me. I cannot wait for this school year to start because I know that by implementing this program's mantra of, "Explore, Create, Share," my students and I are going to have one unforgettable year that will be the foundation for the rest of my career. I appreciate that everything we have done so far in this program has been very intentional in creating self-discovery both professionally and personally. I feel very confident that throughout this year I will not only receive appropriate tools that will enable me to orchestrate wonderful learning in my classroom, but also that I will be welcomed with support to push myself for the betterment of my students.

### **A Continuation on the Path of Reflection (Updated December 10<sup>th</sup>, 2014)**

Looking back on this fall semester, I am pleasantly surprised by how much this program infiltrated my classroom. Historically, professional developments that present new content or strategies have a big hype in the beginning, but then reality of the classroom demands set in and the hopes and dreams of implementation and transformation quickly fizzle. This program has set itself a part, and I attribute that to several reasons.

First, our summer session set us up for success. We were provided realistic strategies to implement daily, and were also given proper support and plan time to make sure our plans

became actions. The strategies I have implemented thus far are the integration of science into my morning meeting, the use of iPads into all core subject areas, and more inquiry-based questioning and exploration. I appreciated the assignments throughout this fall semester, as they allowed us to revisit our plans, adjust based on our students, and challenged us to grow more as educators.

Another reason for success is attributed to the excitement and “coolness” around STEM education. My mind continues to spin, in a good way, every time we are introduced to a new technology or way of teaching. For example, incorporating infographics into student learning, as they are able to summarize a project, reading, or observation. I especially enjoyed the assignment of interviewing an author of a STEM related text. I thoroughly enjoyed the entire process. All these assignments and projects really kept my mind stimulated on how I can better improve my practice and my students’ learning by including STEM initiatives.

Finally, the level of support through this semester was amazing. I appreciated all the feedback from instructors. I also found it very valuable to be taking a research methods course from MSU simultaneously during this semester. The two DreamIT projects complimented each other as I was able to build research around best practices for implementing iPads into the classroom with my CEP 822 course while also having true integration of these devices through my urban STEM fellowship. I frequently referred to Twitter and our Facebook page to see what other fellows were engaged in. Each time I visited, my thoughts were rejuvenated with new ideas and excitement.

What I am most excited about is how this program has set fire to not only my classroom but also other classrooms within my school. It has given a new sense of purpose for collaboration around new and exciting strategies and has really broken our monotonous staff meetings.

Authentic integration of STEM is present every time I walk into my colleagues’ rooms. We are

creating, exploring, and sharing with each other like never before. The DreamIT focus groups and the planned PD session assignment from the summer really helped jumpstart this excitement in my school. This fall alone we have received three technology grants for digital curriculum and devices. There are conversations being had about how we can allocate more of the budget to include STEM initiatives. This program started with educating and igniting twenty-five schoolteachers, but I truly feel like it is creating a movement within our district. I am ecstatic to be a part of the ride!

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