

## **Reflection Paper**

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When I signed up for the MUS-WIPRO STEM leadership program my expectations were low, if I'm being completely honest. I have completed several "STEM" programs through the Chicago Public Schools University, none of which taught me anything new or relevant. Nor did any of these programs keep my interest. I was always interested in combining technology and the teaching of mathematics in middle school. However, every professional development or college/university program stifled the use of current technology or moved at a snails pace. So, my expectations might of been low or unknown but my hopes were high when I saw that we would be receiving and learning new technology.

Little did I know what I was getting myself into. Day one was so extremely different than any other experience, I was immediately hyped up in the first 3 hours. I was exhausted when I got home. In fact every night I went home my brain was fried! Fried in a great way!

After every class I wouldn't shut up about what I was learning. I would talk to anyone that listened. I wanted to know what was next, what I could bring back to my classroom and share with other educators. Throughout the two weeks I was excited to get to class and when the ten days were over I was sad, almost like I didn't have a daily purpose anymore. Instead of dwelling in my lack of purpose, I dove right into the upcoming school year. How was I going to use what I've learned to have my students super excited about learning as much as I was during the face to face time?

Day one was all about creating a safe, comfortable environment. With teachers, I thought building camaraderie was a vital part of this program. By having us 'find' our groups and creating a name together formed a bond. We weren't just there for our individual needs, we were in 'it' together. Forming a bond also made us work together so we could all succeed. Trust and communication is very important to education and now-a-days it feels as though it is being slowly taken away. Building that bond during the first meeting made each day directly focused on the objective and not on Chicago Public School drama.

On day one we also discussed the reading about the three pathologies. The three pathologies really made sense. I thought

I was the only one that had these issues with making learning stick for students. I also saw how I have amnesia, fantasia and inertia on student learning. I am only human. The three pathologies will always exist and need to be dealt with every school year and just like the "rainbow sprinkler" youtube video, the three pathologies don't just apply to students. Adults are also guilty of the three pathologies. If we keep that in mind when teaching or even talking with parents we can address immediate misconceptions or misunderstandings with a lighter hand.

One of the main objectives of these face to face meetings was to share and discover new technology and tips on using such technology. But the main concept I took from each day was not to give up or get frustrated with technology, there is always another way! A work around! the best term that came from those ten days.

However on day two and three I was feeling super stupid and overwhelmed. There were many moments I was startled at how much I didn't know about the technology I was using everyday. Started in a good way, but startled none-the-less. It did not make me falter, it made me wonder, made me question. These tactics and fast pace kept me interested. I want that same feeling for my

students. Which means I need fun, engaging, and rigorous lessons and units to teach. Creating these engaging units takes organization and serious planning. Thank goodness we had storify, msurbanstem.org, twitter, and facebook. To organize and plan for this upcoming year I needed to look back to move forward. I have organized what I want to use on a google doc and will be implementing that plan through my created website via weebly and its resource page. I wanted, just like we had, one place that everyone can go to keep themselves motivated, intrigued, and on that level of frustration to keep questioning.

I don't want my website to be only used by students or myself. I want it to be a collaborative site that can be used by other teachers and parents to keep all learning. Making what's happening in the classroom public or transparent can only help students move forward in their own education.

Being interactive, not just within technology, is also very important. When Second City came and guided us through different improve techniques that could be used in every subject I was surprised by how much *could* actually be used in the teaching of mathematics. Many colleagues have said math teachers don't have a sense of humor or seem drab, which may be true because I've met such teachers, but using the improve techniques to teach any

subject makes the learning important and personal enough to stick to ones brain for many years. Having fun always grabs a hold of people and has them asking for more. More fun in math? Yes Please!

The other items that I will use and never forget myself were the "Quick Fires". I loved those "Quick Fires". I love the adrenaline and the success of every little thing in that small amount of time. Yes it was scary! But unforgettable, and that is what will stand out and not get lost in amnesia, fantasia, and inertia. Not getting lost or forgotten or transformed into something false is the whole point.

The main items I see myself using in the next six months which will help me obtain my objective of combining technology and mathematics to have students conceptualize "math disguised as science".

1. **Memes:** If you can't beat them, join them. Students are already using these daily so why not utilize them to learn math skills and concepts.

2. **Vines:** Students have a huge misconceptions that not everyone is good at math. Creating vines of those fears will help students break away from that fear. We will also be creating

vines of main math skills or concepts that will help stifle that amnesia students so often get.

3. **Stop motion pictures:** We will be having "math talks" three to four times a week to help students communicate their thinking and learn from each other. Having students create a stop motion picture of a specific or memorable math talk and publishing it to youtube or schooledbykeiner.com may help those that struggle with a specific math concept without coming to talk with the teacher.

4. **Video story problem with online text survey:** I will be starting the year off doing these myself as exit tickets. Students will watch the video and text their answers before they leave class. This will give me a quick assessment of their thinking without identifying or embarrassing students. But I will stray away from making the actual videos myself by having specific groups of students create a video and survey from the week, for other students to answer. I like to give learning control back to the class, this way that group will have it stick to their brains longer and others can have a chance to collaborate and create.

5. **Google Groups:** I have to learn and research this more in depth, but, I would like to have group discussions in a google group. Such a math discussion can be held during class or as homework depending on accessibility.

6. **Weebly website:** Homework, units, projects, math talks, math tasks, and challenges will be posted on the website so parents and students have access to what is happening day to day. On my website will be a twitter feed that students will have access to, but will also be closely monitored. Parents that do not want their students to be on social media just yet will be able to contact me directly via email, text, or in person. Weekly print outs to those students will also be available.

Before any of these above mentioned items can be implemented I need to develop a respectable technology driven classroom. Respect being the most important vocabulary word taught. If I want students to utilize such technology appropriately I will have to start using, modeling, and identifying capability immediately.

Just like the first day of the face to face time I would start with a technology survey. I would want to find out who has specific access and which skills they already know. They probably have more than I think they do but I still need to access their levels in math and technology.

The other big ticket item I want to achieve this year is to not be the only one using technology to teach a subject. I would love to collaborate with my teammates and have them use similar technology so students can identify what is in one classroom can also happen in other aspects of life.

After having such fantastic communication and safe learning environment in a two weeks course, I am hopeful that my colleagues will embrace such educational techniques and opportunities. I have already talked their ears off about the "awesome" two weeks I had over the summer, and that I have been reinvigorated to teaching. I hope I conveyed my excitement to them as well.

There are so many other items that I want to use such as:

1. **remind.com** - to communicate with parents more effeciently

2. **Vimeo.com** - to upload and access students created videos without all the commercializm.
  
3. **Incredibox.com** - to have students create a rap about what they have learned or want to learn.
  
4. **educreations.com** - to write while not standing at the smartboard every second or to have a student from their desk share their findings.
  
5. **Braingenie.ck12.org, Socrative.com, ScottKim.com** - Just to name a few online practice, assessment, subject specific game sites that I want students to use regularly to keep moving them forward so they don't become complacent.

The amount of resources I walked away with has been astounding. Yes, I want to use them ALL! I know I will not be able to get one hundred percent to every person I come in contact with, but I will try and get the ones I mentioned out because I have had a wonderful, productive, mind-blowing experience with each and everyone. If I am this excited about

going back to my classroom using said materials, I will no doubt have my students just as excited.

## **Reflection Paper Part 2**

**Adrienne Keiner**

**December 6, 2014**

As I implemented my Dream It project I kept feeling overwhelmed. I felt as though I was sitting at my computer a lot more than usual. I spoke with my schools MYP coordinator about my feelings of not being able to keep up with everything that is happening in school or with everything I wanted to teach students. She really listened and stated that maybe I needed to cut back and really focus on three main items I wanted to use this year and then slowly start including other items in upcoming years. I knew I should have started that way but I was really fighting against it, I wanted to spread the excitement I felt about every new program or website. I know in my heart that using everything I learned was unrealistic.

When I led the student focus group and teacher focus group it helped me see that I had to scale back, but I didn't know exactly what to cut. How was I going to make the decision of what stays and what goes to get my, "math is everywhere" message across.

The one item that was always on my mind was, "how will students prove they see math everywhere?" So I have decided to go with the use of Padlet, memes, and google docs/my website:

1. Padlet.com: By students uploading pictures on "Selfie Saturday" and by students commenting on pictures I have uploaded from my everyday life. In both instances students have to explain where the math is and relate it to what they're being taught that week in math class.
2. Memes: Students love sarcasm and love being funny. I have created a paper meme wall outside my classroom that students can add to once the meme has been approved by me. The memes must consist of an appropriate picture, either from real life or from provided outline sources, and a snappy, relatable, and positive quote from any subject in school that also connects to math class. This has helped students be on the look out for math in other subjects.
3. Google Docs & my website (schooledbykeiner.weebly.com): I was utterly surprised at how many students have google accounts AND do not use it. Not using their accounts meant they didn't know

how to use google docs, which is why I am choosing to focus on that as a large part of my project. Plus google docs can be used to communicate using many of its mediums.

The main problem I keep getting stuck on was cameras. Not every student had a camera. I want students to prove their seeing math everywhere by photographing it, sharing it, and explaining what they found. I can't get cameras. I have started a donors chose account and now need points to ask for such a high volume of one item. I have spoken to many people about this and they have given me advice and different avenues to venture into, but this is all new to me and kind of scary. I am not a person that asks for money so it's difficult for me, maybe it's a pride thing but I will soon get over it.

Everytime the cohort has met in person it has immediately sparked my excitement. I shared my concerns and possible solutions and I was flooded with ideas as well as just heard. I wish we had met more often in the past five months. I may not have felt so overwhelmed. This last meeting at MSU was just as uplifting as all the previous meetings. After meeting and speaking with others that had the same feelings, sharing our

ideas, and making the decision to cut back to three main technologies to implement my Dream It project a calm has come over me that has helped me destress, but kept that excitement still flowing.

This time I got more phone numbers and have been texting other MSU Urban STEMers and I still have that calm!