At the start of the semester we had to recognize a problem that we wanted to go through the design process with. Teachers face a variety of problems every single day but I immediately was able to think of one that impacts my entire school site. In addition to being a teacher in the classroom I am also a technology coach on my school site. Being a technology coach means I am readily available to help my fellow colleagues with technology and how they can incorporate it into their classes. Along with being there for support throughout the week, I also host technology workshops after school on Thursdays and I also have to lead Professional Development on the topic of educational technology with a primary focus on Google Classroom. Before I could actually define what my actual Problem of Practice was, I had to go through the design process steps.

The first step to design thinking is to empathize with your audience. This step is to learn about your audience and where they are coming from on your specific problem. The main problem I was facing was that my colleagues were not willing to learn about technology and using it in the classroom, at least this is what I thought the problem was before I completed this empathize step. For my empathize step, I decided to use the empathy map. In order for me to actually make my empathy map, I decided to use Google Drawing. Even as I was setting up my empathy map through Google Drawing I quickly started to realize how frustrating this would be to someone who has never used Google Drawing because it is even frustrating to me sometimes and I have used this application many times before.

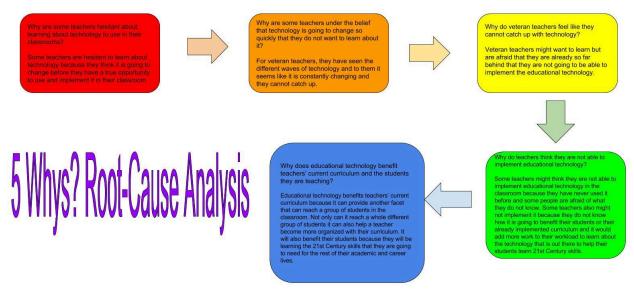
Say Did not know how to login with their Google email It is great to learn about technology but we need to be given time to actually mess Did not want to sit by a computer and actually try the around with it and work with it on our own. Can we learn more than just about the Some fell behind because they could not logon to Google Drive suite? How can this be used in our classes? Frustration at the computer for it not working the Why would I use technology in my way it is expected to. Some are excited to learn the new things. Does using technology make my job Some are way ahead of the rest of the group because they already know how to do the process I How do I get all of my materials I currently use into a digital format? Some sit there and do nothing because they When will I actually use this? do not want to learn about this. (They do not see how it applies to their class.) **Empathy Map: Technology Professional** Think **Development** Why do I need to incorporate Confused because this is something technology into my curriculum? they have never used before. This is just another thing I need to learn Frustrated because they have never and by the time I learn it there is going used it before/being forced to learn to something to replace it. about technology I do not have enough time to learn Angry because they are forced to learn about how I am going to use technology in my classroom. Lost because they did not grow up with this technology. I am retiring soon, so I do not need this. Annoyed because they do not see why My ways work, why change? This tells me that my users need to be they have to learn about this. given a good enough reason to learn Excited to learn about how to incorporate technology. about how they can use technology in the classroom, without it being forced Not enough time to incorporate it. Do not see the point in learning about

From my empathy map (shown above), I learned that my colleagues might not be showing up to the weekly technology information sessions because they are nervous about using technology that they do not fully know how they would use it themselves, nevermind in the classroom. My colleagues need to be provided with the confidence that they are able to learn about this new technology that is out there and that it is not hard to use with just a little bit of time put in to learn about it. Additionally, I learned that my colleagues need to have buy-in about how educational technology will actually improve their classes from the way they normally teach. By getting buy-in from my colleagues about how they can actually use a variety of educational technology in their classes then I would have more of them show active interest at Professional Development and the weekly Thursday sessions. Finally, I realized that teaching people how to use technology in the classroom should not be forced upon people because when it is forced then people are even more reluctant to learn about it and try to apply it in their classes.

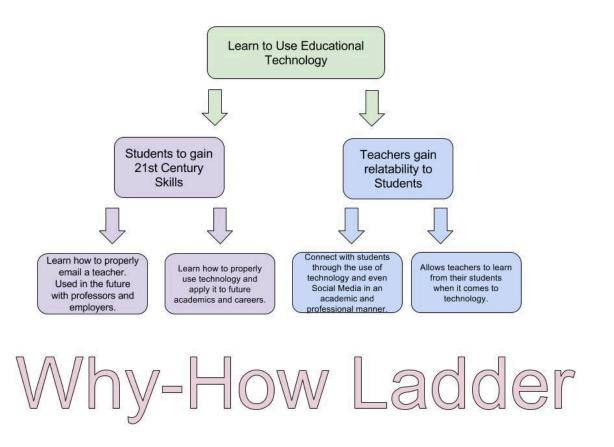
Through this step, I learned that it is not the fact that my colleagues do not want to show up to my weekly technology information sessions because they are not interested in using technology but because of their feelings of being forced to learn about technology and not being provided with an understanding of how technology can positively help their current curriculum in their classes. Through the step of empathize I was able to truly understand where my

colleagues are coming from on the idea of educational technology and having to learn about it, which would help me with actually defining my problem of practice.

Before I could actually truly define my problem of practice, I had to use three different techniques to get to the definition of my problem. The first brainstorming method I used was the 5 Whys? Rooth Analysis. With the 5 Whys? Root Analysis, I started with one why question that I had about my problem of practice and then answered that question. From that answer, I then came up with another why question and this process continues until I had five why questions. This was actually a pretty challenging brainstorming process to me because it was difficult to develop a well thought out why question from the previous answer that would actually provide an even deeper answer. To see my 5 Whys? Root Analysis in more detail please click here.



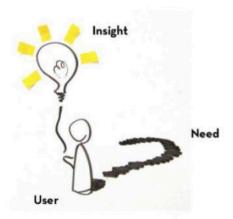
The second brainstorming method I used is the Why-How Ladder. The Why-How Ladder is an exercise to help someone get deeper insights and underlying issues of a given challenge or in my case my problem of practice. The way I set-up my Why-How Ladder was to have one side that focused on the student side, so what will they gain from the use of technology in the classroom and then the other side I focused on the teacher's side and how it will increase relatability with their students by using educational technology. To see my Why-How Ladder in more detail please click here.



The last brainstorming method I used is the Point-of-View Madlib. Through this Madlib I was able to gain an understanding of the problem from the point of view of my students, which in this case are the colleagues on my campus. Below is the image of my Point-of-View Madlib and to see it in more detail please click <a href="https://example.com/hete-students-needed-

Teachers need to learn to use educational technology because it would allow teacher to connect to their students on a different level.

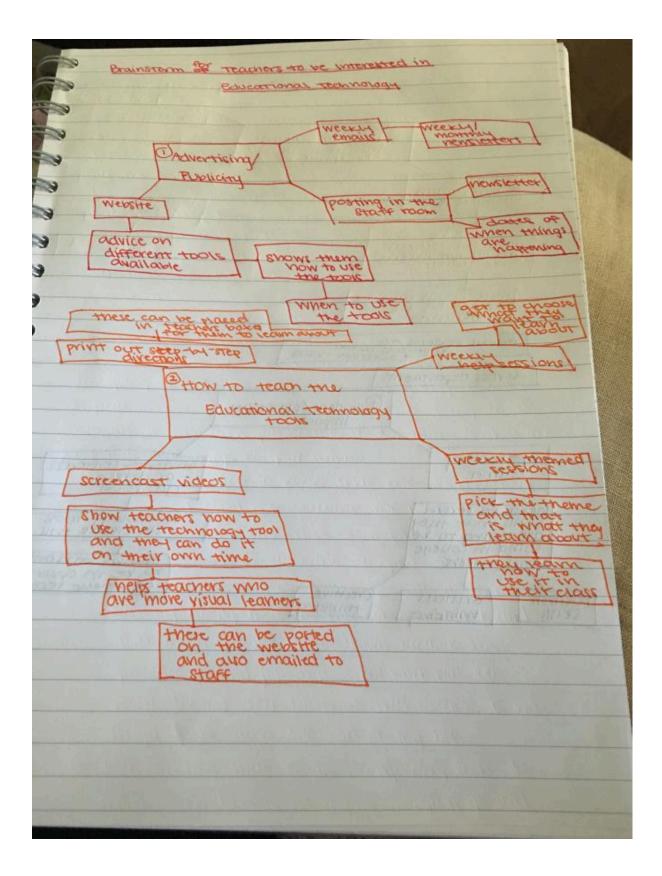
Veteran teachers need to learn to use educational technology because it would allow them to add a new tool to their already solid box of tricks.

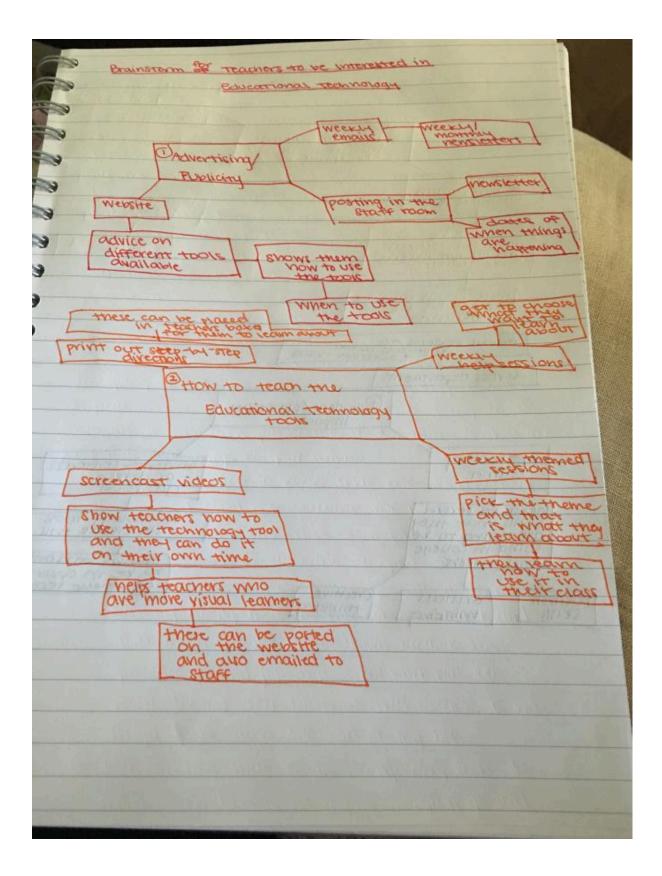


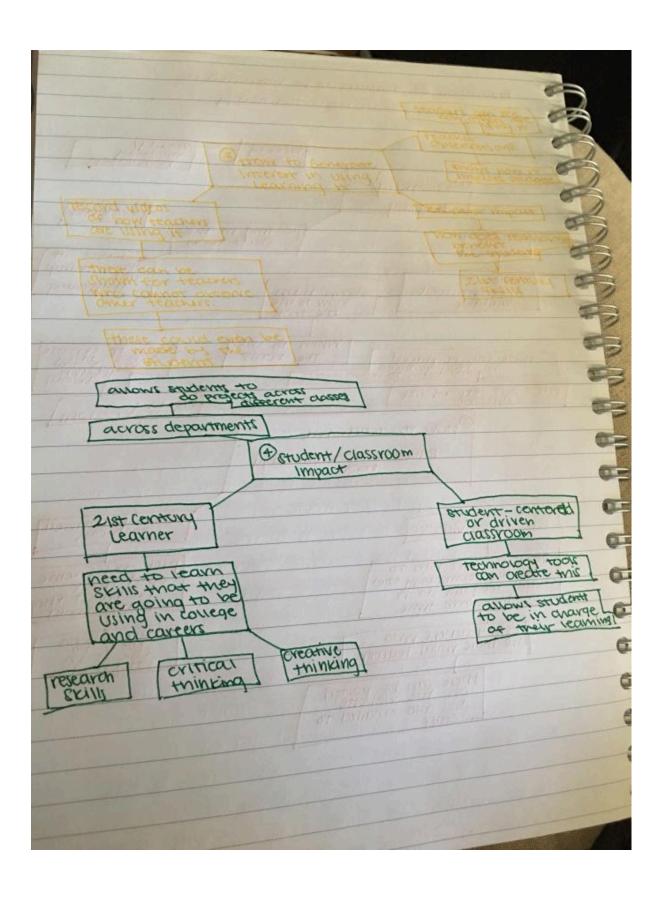
Teachers need to learn to use educational technology because it would allow their students to teach them something new and create an equal community in the classroom.

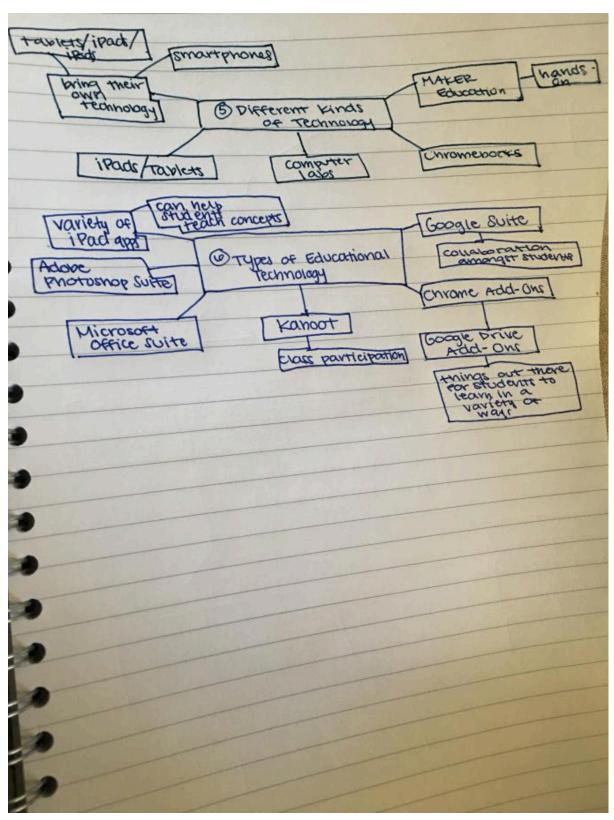
From these three different brainstorming techniques I was able to come up with a problem of practice focus question. The question that I chose to focus on is the following: Why should teachers continue to learn and develop their skills about educational technology and introduce it into their curriculum? Through this brainstorming process I was really able to refine what my problem of practice is going to be. Also from this define and brainstorming process, I realized that my problem of practice was going to take a slightly different turn from making sure the focus was on educating my fellow colleagues about how using a variety of technologies in the classroom can benefit our students and prepare them for their future lives outside of high school into their future academics and careers. Now that I have a clear direction for my problem of practice, I was then able to move onto the ideate phase.

For the ideate phase, I had to take my time brainstorming through the use of an incubation journal. The first step was to actually brainstorm about different ways I could solve my problem of practice and what it would take. The images below show how I methodically brainstormed solutions to my problem.





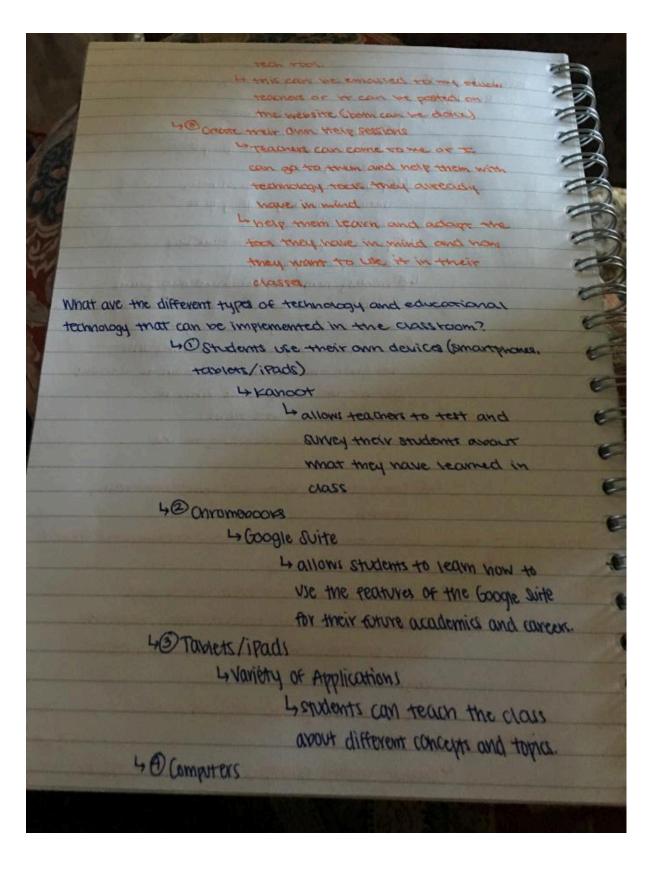


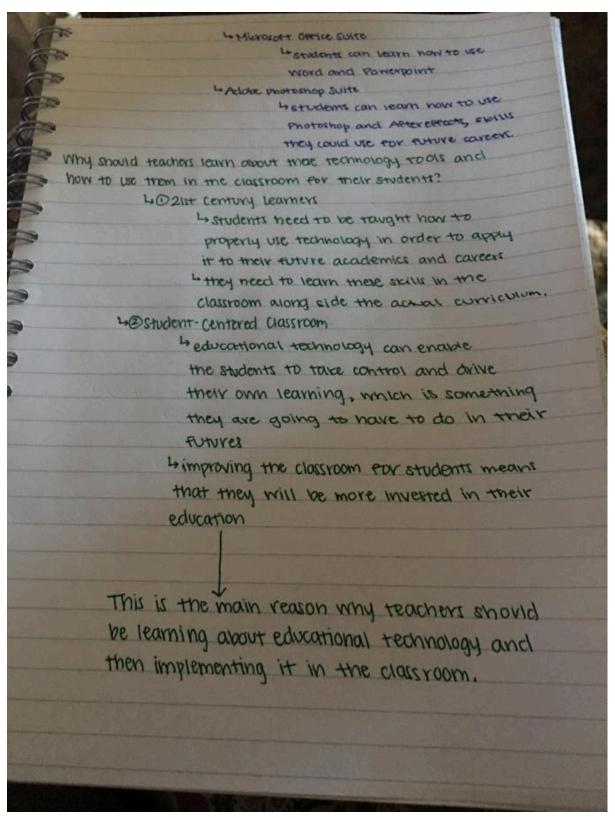


Once I was finished brainstorming, then I took a couple of hours and went on a drive to clear my mind because this is when I usually come up with the best solutions. When I went back

to my brainstorm, I was then able to come up with a list of questions in reference to my solutions and then came up with even better solutions that I could eventually use for my prototype phase. Below are the flushed out solutions I came up with after my incubation drive time.

How do I get other teachers to snow-up to things about educations technology? L. Through the use or variety or advertisaments. Li Demails to the staff with a wife description of what they are going to he learning about Li porter in the staff room about when, where and must tricy are going to be learning 43 print-out placed in each stake box about upcoming events 4 @ morthly newsletter cemated and placed in stace boxes) about what he voer touth and what is going to be taught 1.6 make some they know that they will be given time within the session to actually use the tool and practice with it. La Varying locations of mneve it's held Day room, when needing to use CHYOMENDOURS 40 computer laws that ove more contrally Located HOW do I teach about these educational technology took? LISTED MY-STEP HOW-TO Guide 1+ creating quides that have mords and Ecreenshots to hely reachers muo want to learn on their own and need more of a physical copy. is these can be primed and emailed out 40 Streencost Video showing teachers through a video on how to use a





Once I had time to reflect on my brainstorm and incubation journal about the solutions I had come up with, I was now ready to design and create actual prototypes.

For the prototype phase, I was able to come up create and implement three different prototypes that all went hand in hand with one another. The very first step of my prototype was to re-introduce myself on campus as the technology coach and what exactly that meant to my colleagues through our first Google Classroom Professional Development of the year. I decided to introduce myself through the use of a very brief Google Slide Deck which you can view by clicking here. Leading up to this Professional Development, I sent out a Google Form that allowed my colleagues to self select what level they were at whether it be beginner or intermediate/advanced. You can see the Google Form that I sent out to my colleagues by clicking here. Teachers were then supposed to split according to the guidelines that are mentioned in the Google Slide Deck and it was also mentioned in an email that I had sent to all of my colleagues about where they should go for Professional Development. Naturally more teachers decided to stay in the beginners group simply because it was in the same location where I gave my introduction presentation. This meant that the groups were very unbalanced because my colleagues did not split accordingly.

From this experience I went back to the prototyping drawing board. I thought in order to have more teachers involved from different departments in Professional Development then a teacher from each department would host a workshop about an educational technology tool that they use. This would mean that teachers would have to sign up ahead of time for the workshop they are most interested in instead of just being forced to learn about Google Classroom.

The second prototype I wanted to create and update a WordPress website for my fellow teachers about a variety of educational technology tools that are available. I would update this website once a week or every other week. Once I have updated this website then I would email it out to all of the teachers. To see this website please click here.

The last prototype I developed was to create a small half sheet with information about educational technology and placing it in each of the teachers' boxes so they are not just receiving emails about technology but also physical copies because I know from my own experiences I need a physical copy of some things.

Overall, from the process of prototyping I have learned that not all prototypes are going to be successful in their final form presented to an audience but even this itself can be prototype in itself. I have learned ways I would change the way I educate my fellow colleagues and also how to further engage them about educational technology and for them to implement it in the ways that they see fit to their classes.

Once you have your prototypes designed and ready then it is time to go through the process of testing them. To explain how I used the testing process for my problem of practice please click here to watch the short video that I have made about how I applied it. Through this video, I use my problem of practice to demonstrate how the testing process is implemented. I actually used the prototypes I mentioned above in my testing process and to learn about how my testing process went, read my test report that can be found by clicking here.

From my problem of practice and having to implement design thinking, I have learned that you really need to trust the process and do it by the steps in order. If you try and skip ahead then it is going to ruin the whole process. I also learned that the more thought you put into each step then the better outcome you will have with the overall process. It is true when people say that what you put into it is what you are going to get out of it. I have learned that I have always been more of a design thinker, I just never realized that I actually do this exact process on a daily basis with my lesson plans and with the interactions I have with my students. I actually enjoyed the design process so much that next year I would like to recreate my classes so that my students are using the design thinking process for the culminating projects at the end of each unit.