Over the last three or four years, the teaching profession has witnessed a shift in how students perceive and process their understanding of the material we cover. We are constantly looking for new ways to engage our students to ensure that they retain what we are teaching in a way that will maximize their comprehension. Teachers, schools, counties and even further on up the chain, look at data on a continuous basis to analyze and determine where we are as educators and how successful our techniques are. In my classroom, I noticed a change these last few years in how my students approached their learning. At first, I assumed it was just a particular set of students one year who came to me with different learning styles that challenged me to change how I taught. However, when the next year started and the new students continued the trends I noticed with the previous set, I began to wonder what could I do to ensure that what I was doing in my classroom was beneficial to my students?

This new school year provided me an opportunity to begin to investigate how I could alter my teaching so that my students were more engaged in their education. To start, I began teaching just social studies again compared to previous years where I was teaching both this and Language Arts. In teaching just the one subject, I was able to focus in on what my students were doing in my classroom when it came down to learning the material. I began the process of collaborating with my grade level social studies department, my teammates and other colleagues who I knew well enough to trust and value their honest opinions about my teaching. We discussed what methods seem to be working and which were not with their students and what trends we were witnessing across the board that needed to be addressed. When all was said and done, we concluded that we are teaching in a day and age where technology is ever present in many of our student’s lives. For me, this realization triggered a need to look into my classroom and at what I could do to improve in order to excite my students and their learning. My research began to take shape: Is the use of technology on formative and summative assessments increasing student learning?

Fortunately, for me, I am enrolled in the New Literacies and Global Learning (NLGL) program at North Carolina State University, which has exposed me to numerous new and innovative technological tools that can easily be accessed by teachers to try to enhance their craft. I decided to use the new tools that I had learned about in my classroom to determine whether my students would become more involved in the learning process. According to the work done by the Miliken Exchange on Education Technology (1998), authors Lemke and Coughlin point out that “new technology can engage students in real life applications of academics and encourage students to be more independent and responsible for their own learning.” (p. 15). I started by using simple tools informally to assess students understanding of basic skills. After seeing the positive response, I began to use technology more and more in my lessons to the point where I was using at least one mode of technology in my classroom every day. Brown, Hinze and Pellegrino, as quoted in Pellegrino and Quellmalz (2010), found that “technologies are well suited to support many of the data-collection, complex analysis, and individualized feedback and scaffolding features needed for the formative use of assessment” (p. 123). By the end of the first quarter, I began to incorporate technology into my assessments and was amazed at the positive attitudes of my students. From just entering my classroom, you could tell there was a significant difference in their overall work ethic, their quality of work and approach to learning. I had successfully tapped in to what they were interested in as each new day presented them with, as Kelly H. (a seventh grader in my fourth period class,) states, “something new and exciting. It could be doing attendance on the Smart Board or creating notes on the Smart Pad, or using the Elmo to shoot a video for our website. We just never knew what he was going to do next and we wanted to find out.”

Now that I had found a way to reach my students and get them excited and motivated to learn, I wanted to dig deeper to see how I could effectively ensure they were mastering the concepts we were covering. I knew, through observation and student surveys and self-reflections that my classes responded very well to the use of technology. They had experience in using technology in the most remedial of tasks, to homework assignments and even unit assessments. It was through those, the use of technology on formative and summative assessments, that I began to take note of how my students were retaining more high-level concepts than what I grew accustomed to. According to Lemke and Coughlin (2010), “technology adds a powerful tool to teachers’ repertoires, enabling them to meet the individual learning needs of their students more effectively” (p. 15). This “a-ha” moment made me curious to research more into just how successful the use of technology in assessment could be on my students and their mastery of the concepts we were covering.

I began my research by conducting a survey with my students on their use and comfort with technology. On a scale ranging from uncomfortable to somewhat comfortable and ultimately extremely comfortable, the results showed that an overwhelming percentage (96%) of my students felt extremely comfortable using technology in the classroom and wished more teachers would use it. I decided then to conduct another survey a couple of days later where I asked the students to enlighten me as to how they would like to use technology in the classroom. I gave them the following options to choose from: class work/notes; homework, projects; tests/quizzes; and extra credit. I then provided a space where they had to elaborate as to why they wanted to use technology in the areas they selected. I was surprised to see that out of the 118 students I teach on a daily basis, 86% (102/118) stated that they would like to use technology more for assessments. Some of the explanations provided showed me that the majority of my students stated they “felt more comfortable and relaxed” when they could use a web tool to show what they have learned. Other comments were based on the idea that they felt they could use more creativity using a web tool to explain their understanding of a concept compared to other forms of assessment.

Throughout the research process I also maintained a research log to record my observations and to take notes on the process of using technology in my classroom. Anytime the students were engaged with technology, I would circulate throughout the classroom to monitor student work in a number of categories. A big issue I was focusing in on was how on-task the students were while working with their assignment. As with most teachers, I was a little apprehensive to use technology so frequently in my lessons knowing what kind of distractions are out there for students. I noted several times in my log (21 times) that students had to be redirected to remain on task with what they were supposed to be working on. While this may seem like a lot, I was quite impressed at the number assuming I would have had a lot more entries that were similar in nature.

I also noted in my log how the students responded to me when I would stop to ask them questions about certain material they were including in their assessments. The rationale the students gave me for the inclusion of a particular picture or music selection was rather intriguing to note as each student interpreted the material in their own unique way. The research log was used throughout the research process and allowed me a way of reflection on the assignment, the use of technology and the track of the assignments from beginning to end.

A third component I used was student self reflections. At the end of each assignment or assessment, I had students complete a self reflection on the work they had completed. I asked them the basic questions such as “was the tool we used easy to use?” and “did you feel this tool was helpful to you and the work you completed?” I then dug a little deeper asking the students questions like “was the tool we used an effective way to help you understand the material we covered, why or why not?”, and “was the tool we used helpful to you to gain a deep understanding of the content?” Students answered these questions openly and honestly and provided me with a great deal of data that I then used to critique future assignments. At the end of each reflection, the students had to summarize the learning objectives they were to have mastered in a way that showed me the use of technology was helpful to them. The direct feedback from the students and the way they interpreted their own work helped them to further understand the concepts and allowed me to target the students who needed additional support. The act of taking ownership for their work and knowing what the high standards of expectations were, fueled the students to achieve high results.

I began this research early into the second quarter of this school year. As mentioned before, I started out by using technology in small assignments to garner an atmosphere of excitement in the students before moving on to larger assessments. The bulk of my research revolved around two key assignments in our study of West Africa.

The first stage of my research was to have the students complete a digital timeline explaining the great empires of early West Africa. The students had learned the material through a presentation my fellow grade level social studies teacher and I put together using the web tool Prezi. In this presentation, the students were exposed to the three main empires and how they came to, and ultimately lost power, and the main people responsible for each. I then taught the students how to use the web tool Dipity which they would be using to create their digital timelines. After explaining the assignment and making sure all of the students were comfortable with the technology, the students began to work. As I noted in my research log on 10/06/11, “students were eager to begin and interested in the material. Most are jumping into the work with little to no distractions.” The students began to research and compile information that they would later put into their timelines right from the onset. We spent three days working on this assignment in class and had no problems that were observed with the research or creation of the timeline. The students submitted their work to me and then were asked to complete a self reflection for the assignment. I asked them three questions: 1.) Did you find this tool and assignment helpful to you and your understanding of the West African empires?; 2.) What problems or difficulties did you have during this assignment?; 3.) What could you have done differently with this assignment that would have made your final product better? I found that 78% (92/118) of the students stated that they liked this tool and learned more about the empires we were covering by using it. A small portion, 8% (10/118) stated that this assignment was not helpful and they would have liked to have used a different tool to demonstrate their understanding of the material, while the remaining 14% (16/118) were indifferent about the assignment.

The remaining questions provided some direction for where I wanted to proceed with future lessons. Nya, an A-B honor roll student, stated for question #2 that she “wishes we had more time to work on this assignment because I felt rushed and like I couldn’t do everything I wanted to do.” Jackson, a student who struggles with turning assignments in on time mentioned that “the assignment was easy and I had no problems. I mean I guess it was kind of hard to find some pictures, but I got it done.” Aside from the time issue, I was happy to see that most students did not encounter too many difficulties in this assignment. It was interesting to see some of the student’s responses to how they would approach this assignment differently though in the future.

For a lot of the students, they made mention of the fact that they would not change anything about their project, but rather add to it. Nick, a strong AG student, stated he would “add music or video clips to help make my project look better.” Jacinda, a bright student who lacks motivation, told me “I would add more detail to my descriptions. I think it would be better if I explained more.” These revelations from the students showed me that they not only were learning the concepts, but also realized their expectations for themselves were greater than they had imagined.

This timeline assignment set up our next topic to be covered which was the West African slave trade. We spent several days discussing this topic from both the impact it had on the culture of Africa, as well as Europe and the Americas. We took notes, read historical firsthand accounts, analyzed drawings and articles and watched a video as a way of teaching about this time in our history. After we had spent some quality time learning about the topic of the West African Slave Trade, I handed out and explained the assignment to the students. They were going to be creating a digital journal from the perspective of a West African villager who was a victim of the slave trade, as well as a European slave trader. They had five prompts which they were to use to guide their writing. The prompts required the students to look at all aspects of the trade from life before, to the raid on the villages, the journey on the boat, life in the new world and the effect on the families involved. The students conducted more research and used what we had previously talked about to guide them in their writing.

I set aside four days in class for the students to work on their projects allowing them ample time to research and begin creating their digital journals. Throughout this process, I monitored the students work and gauged their understanding of the material with informal interviews. I asked John, an average student who struggles mightily to turn in work on time, how he liked this project compared to writing an essay or handwriting the journal? John replied, “Its better. This way I don’t have to worry about spelling and stuff and we can add real pictures in color instead of drawing them and stuff. It’s a lot of work but I wouldn’t have done it if we had to write it I don’t think.” John’s thoughts and feelings towards this assignment were echoed by nine other students out of the 15 I talked to. The overall consensus was that having the ability to look up information and have the luxury of a word processing program to work with made them more relaxed about the writing process which allowed them to focus more on the content of the assignment. Kayla, an A-B honor roll student commented, “it’s easier than writing. This way, I know I can find good information and I am able to learn more about what it is we are talking about then if we had to hand write it. It’s easier for me to concentrate.”

The end results of this project were quite impressive. Out of my 117 students, 113 turned the assignment in on time and had it completely finished. There were three students who had discipline issues and turned the assignment in late due to their punishment taking them out of school, and one student who struggles with technology that complete the assignment in their curriculum assistance class. When I asked this student, Jules, what she thought about the assignment, I was surprised to hear her response. She told me, “It was cool and stuff and I kind of learned a lot. My moms had talked about this stuff and I never really understood why it happened or how it happened so it made me realize some things about it. If I were better on a computer I could’ve done a better job but it’s ok. I think I passed.” Jules’ response was positive and showed me that even some of the students who have not had a lot of access to technology still enjoyed this different perspective to learning even if it was a challenge. In my final survey I gave to the students, I asked them whether or not they felt like the assignment was helpful to them in understanding the slave trade. 97% (114/120) said they preferred what we did for this assignment over a hand written assignment or taking a test. Another question asked the students if they were to take a test on this topic, what grade they anticipated they would receive and why. An overwhelming majority, 89% (104/117) stated they thought they would receive an ‘A’. While this was valuable information, I was more interested in the reasons for why they thought they would be able to receive this grade. Aaron, a struggling student who averaged a ‘D’ for the semester, said he would get an ‘A’ because “I was finally able to do something fun. I like computers and like doing things my way. You teachers have too many rules and stuff and with this, we kind of did our own thing. I learn better when I don’t feel like I am being told what to do.” Cameron, another struggling student, stated that “I don’t know… because with a book and stuff you only get some information. When we were able to search the web, it kind of made it easier to see things that we would not have heard about.” The students’ ability to learn from their research using tools that would probably be forgotten about in the rush to teach our curriculum was my goal behind this assignment. The students felt comfortable searching for their own understanding, with the guidance I provided, after receiving background information on the topic to complete the assignment. The choices they made during this process allowed them to make a connection to the material and interpret it in a fashion that would resonate with them a lot easier.

This research process has taught me a lot about how I view my students but more importantly, how I view what it is I do as their teacher. I always considered myself a decent teacher who had the ability to show students that social studies could be a fun and interesting topic. Most of my students come to me in the beginning of the year hating social studies because of all the names, dates and information they think has no impact on them. I constantly tried to find ways to show them that there was more to it than those preconceived notions. Before conducting this research, I was a one man wrecking crew, exhausting every last available source I could to try to make my teaching better. The research process showed me that I needed to tap into what my students’ interests were and what would garner an interest in their learning. I normally only asked questions like, “how do you like to learn,” or “when do you do your best work?” However, through the research process, I learned to dig deeper and search for answers that would allow me to connect with my students better and in a way that would get them interested in their learning.

My teaching style, as with most teachers, can always be improved. What I discovered though, was that it is not necessary to change, but to adapt. Students come to us from makes and backgrounds, with experiences and habits that are sometimes impossible to change. Instead of trying to change those, I learned to work with them and tap into what they feel the most comfortable doing, and use that as motivation. Technology, at least with this present group I am teaching, was something that nearly all of my students were excited to use and learn from. With this in mind, I did not want to use outdated modes of technology that they have been using since elementary school. The ability to introduce new technologies made my students excited to come to class because they were always wondering what we were going to do next? The lessons and subject matter became more interesting to them because they were going to take the information, whether it is something they already knew or something they were just learning, and present it in a way that was unique to them and in an interesting way that they could illustrate their understanding. The students had an opportunity to show what they had learned their way, not the way that I had created for them to learn it. As Clark and Dede point out, “These tests (paper and pencil tests,) cannot generate a rich range of observations: a student’s forced choice among a few predetermined options is a weak observation on whether they have mastered a sophisticated skill involving advanced knowledge” (p. 2, 2010). I learned just how diverse each student is and how education is constantly evolving. It is amazing to see just how much they are willing and able to show us as educators if we are willing to give them the chance.

Another part of the research that I liked was how I became more involved with my colleagues. I loved the fact that I was able to share so much of what I was doing with them in our meetings and how I could learn so much from them. The research I did this semester could not have been complete alone. The help, guidance, assistance and willingness of the people I work with made this that much easier. I know that each teacher I had to help me along in this process was able to not only contribute to my research, but also to their own teaching practices as well. Not all of them are going to go back to their classroom and do the whole research process as I did, but the ideas we shared and practices we learned from one another can help each of us in our own unique way. Some of the teachers I work with do not use or value the use of technology like I do for my students and my lessons. Knowing that we need to adapt to the ever changing landscapes of education, I am hoping that what I have done through my research may help them see technology the way I do. Lemke and Coughlin seem to agree that “teachers need visions of how technology can enhance and enrich learning opportunities for students in ways that were never before possible on a large scale – and they need time to explore these new approaches” (P. 22, 1998). I am hoping that with my continued research into topics such as this and my ongoing collaboration with these teachers, we can all work together to make the best possible learning environment for all of our students.

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