21st Century Technology for High School Teachers

Eamonn Kelly

Sherri Booker

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*21st Century Technology for High School Teachers* started out as way to not only fulfill the capstone requirements, but to work with Moody’s administration and show what other qualities the candidate brings to the table outside of teaching. This project was created to give the faculty at Moody High School a better understanding of the technology tools available to them for the benefit of student achievement and engagement. At the beginning of the 2014/15 school year the candidate distributed surveys, created with Google Docs, through email to Moody’s faculty. The purpose of these surveys was to learn who the faculty was, what technology they used (if any), and how often they used it. The answers were not shocking once the data had been analyzed. Out of a staff of around 40, 31 teach content area subjects or elective courses at Moody High School. Below you will find the results of the survey conducted prior to professional development. You can find a copy of the original survey labeled appendix A in the appendices.

Technology Survey responses:

Out of the 31 Faculty members at Moody High School 16 responded to the survey.

***How many times a week do you use technology in your lessons?***

None- 50%

1-2 times a week- 50%

3-4 times a week- 0%

Everyday- 0%

***What are the chances of you applying learned concepts from PD?***

No chance- 13%

Fair- 63%

Good- 17%

Excellent- 6%

***Do you feel that you are proficient in 21st century technology tools?***

Yes- 6%

No- 94%

***Please check your years of experience.***

0-3 years 0%

4-6 years 19%

7-10 years 13%

11-15 years 31%

16-20 years 25%

20 plus years 13%

***Content area taught?***

Math- 13%

Science- 25%

Social Studies- 19%

English- 25%

PE- 6%

Art- 6%

Computer Sciences- 6%

***List of technology mentioned teachers were comfortable with.***

Internet- 50%

Blogs- 19%

Quizlet- 19%

Website- 31%

Power Point- 19%

Kahoot- 6%

Remind 101- 6%

The surveys taught a great deal about the teachers at Moody High School and the experiences they had with websites and blogs but not with other teaching tools that could benefit them in the classroom. All of the teachers who responded to the survey are experienced for the most part in the profession. Results showed that a large majority of respondents did not use technology or used it very little in their classrooms. The technologies that they were using were very basic and not really beneficial to student learning. Technologies teachers used often and were comfortable with were internet, PowerPoint, school website, and a blog for the most part.

 With these types of responses to the survey, professional development was the answer to Moody’s technological shortfall. Moody High School was lacking the tools for students to be successful in the 21st century. This information helped guide the candidate’s institution of professional development sessions for Moody High School faculty. With the help of the administration at Moody High School the candidate was given one development session a month for as long as needed to complete the capstone. The administration had already implemented professional development once a week on Wednesday mornings two years earlier, so this project fit right into the goals of educating the faculty. Once time was given, professional development was broke down into six sessions with the availability of a seventh if needed. The topics that were covered with the faculty at Moody High School included: C2C Schools for coaches, Screencast and Podcast in the classroom, My Big Campus online learning platform, Web 2.0 tools for the instructor, Google Docs and how to use. The sixth session that was presented was My Big Campus and its uses for the county social studies meeting at the beginning of January.

 In the first session on Wednesday August 27, 2014 was titled *C2C schools for coaches*. C2C is a platform online that has created a stir in the state of Alabama over the last year. This system is used to maintain sport schedules/scheduling, and athlete eligibility. This system was purchased by the state and schools forced to comply or be penalized. The candidate was given the task to learn how to use it and then help moderate its use to other coaches. This was all new which gave me a great avenue to teach others how to use it effectively. The goal was teach coaches how to create log-ins to the site, then show them how to schedule games/matches so that they could then begin adding athletes to their rosters. This was the most difficult part because C2C links directly to our grade system called INOW. INOW is where students were marked as athletes to be added in C2C. After teaching coaches to properly use this site a page was created to go back to for further help. Feedback about this session received from coaches was positive and beneficial to them complying properly with the state athletic association. Even after this session, coaches would still come to me with questions individually about certain task within the site.

 The second professional development session took place on September 24, 2014. The session was for the whole faculty and titled *Screencast and Podcast in the Classroom*. The goal of this session was to instruct the faculty on these tools because of the added benefit that these tools can give teachers to instruct away from the classroom and access for students who may have been absent and need to catch up. The first tool presented to teachers was a free tool named Screencast-o-Matic. This site allows anyone to use their software to capture the movements of the user on the computer screen. By capturing the movements and using the computers microphone teachers can give detailed instructions to students about certain assignments and tasks given by the teacher. Teachers were also shown how to upload screencasts to YouTube so they could be added to current blogs and websites. Most teachers felt that they liked the ability to do this but it was time consuming. In the same session the tool Audacity was modeled and how it could be used to create podcasts for their classrooms. Teachers were fortunate to be able to use this software without having to download it to the school provided computers. The laptops that were purchased for the school last year had it already downloaded. During this part of the session teachers were shown the functions of Audacity and how to save it so that it would be an mpeg file. This was needed so teachers could post them on their existing blogs or websites. Being able to record lectures, give detailed instructions, and allow students to catch up on missed assignments, all away from the classroom gives teachers a huge advantage in the actual classrooms. This was the hardest tool to show because of all the steps to saving and uploading.

 The third session took place on October 29, 2014. This session was titled *My Big Campus Online LearningPlatform.*  During this session, which was a lengthy one, the candidate guided teachers on the uses of My Big Campus which is an online learning platform that our system purchased in the spring of the previous school year. This platform is a one stop shop to adding 21st century learning to the classroom. My Big Campus allows teachers to create school work and assignments, create discussions for student collaboration, and create/give assessments. Included with the above abilities My Big Campus serves as a network for teachers to share ideas and work as well. The candidate was able to give teachers examples of how My Big Campus was used in the current classroom and how it created a blended learning environment. The presentation also showed other teacher examples of how they use the platform from the resources located on the platform itself. Teachers were again skeptical about this type of technology because of the amount of time, but also interested about how they could use in their settings. Teachers were also interested in the discussion forum of My Big Campus. Getting students to collaborate with one another appropriately is a large part of our goals at Moody High School. This allows students to think critically as well as creatively about content and responses of other students.

 In the fourth session the presentation centered on the use of My Big Campus applications called schoolwork and its applications. This session took place on November 19, 2014 and was titled *Web 2.0 tools for the instructor.* In this professional development session the candidate worked to model the use of Weebly, Questgarden, and Glogster tools for student engagement and achievement. Giving students new avenues to learn is part of Moody High Schools continuous improvement plan. These few tools can help teachers work towards new avenues of teaching and engaging students in their classrooms. The first tool that was presented was Weebly, which is a site where teachers can create blogs, portfolios, or even websites. Teachers were shown how to use Weebly as a web quest. Using web quest is a great way to get students to work towards discovery and a more student centered classroom. Weebly is very user friendly and gives teachers multiple avenues to create new learning. To show teachers what a web quest is, the candidate introduced them to Questgarden and showed examples of WebQuest that were already created. Questgarden is a database of web quest that have already been created by multiple types of people. Teachers were warned that students can create their own WebQuest through the site, so they would have to be aware of who the quest was made by. This site was beneficial in giving teachers examples as well as ideas about how to engage their students about content. The last part of the session presenter to teachers was a site called Glogster. This site was demonstrated because of the uses in creating a clean and interactive final product. The candidate felt that this tool worked really well with Weebly and WebQuest because when you create this WebQuest there needs to be a final product created. This formative assessment can serve as data whether the standards were learned. Most teachers that were spoken with after the presentation enjoyed this session but were concerned with using Glogster because you can only use it once for free. After the initial free use it becomes a paid site. Weebly and Questgarden were big hits with the administration because of the large scale move to project based learning for students.

 In the fifth session on December 17, 2014, titled *Google Docs and how to use,* teachers were showed how to use Google to their advantages. The candidate explained that with an online learning platform teachers need to have a way for students to turn in work and projects away from the classroom and email. The candidate modeled how to effectively use Google Docs to share work and assignments with students and receive work created by students. Teachers were also shown how Google Docs can be a substitute for Microsoft Office products. Google Docs gives students the ability to use products similar to Office products to complete assignments and projects away from school. Google Docs gives students access to a word processor, presentation creator, a drawing application and other applications. Teachers were really impressed with the ability to have students turn in work away from class and it not be through your email. Included in this session was a great communication tool that is different than traditional email of phone calls. It is called Remind 101, and most teachers had heard of it, but did not know how easy it was to set up and use. Once teachers were shown how easy it was to use, over half of the attendants had created one for their classes before we had left. Feedback from teachers about Remind 101 was all positive. Most teachers were excited about not having to give out personal phone numbers and email addresses to communicate with students and parents. With Remind 101 it was easy to send a one way message about whatever was needed to communicate in a mass group and not receive anything back.

 The last session took place on February 16, 2015. This was a special session that the administration and head of History department asked me to do for the county social studies department professional development. In St. Clair County there are county professional development days that are mandatory for county teachers to attend. The candidate was lucky that it was my school’s turn to host this session for five of the county’s social studies department. In this session the candidate was given more time to show how to utilize My Big Campus effectively in the classroom. This topic was chosen by Moody’s department head and county technology integration specialist. St. Clair County purchased this system and they want teachers to use it. For teachers to use the tool they need to be comfortable with the tools applications.. The session went more in depth with how to use the platform to its fullest. The best part of this session came when attendants were shown how teachers use it in their classroom. Teachers where shown how to use other tools in conjunction with My Big Campus. Parts of the previous sessions were put together to show how other tools can be used to engage students in the classroom as well as work to make project based learning part of the learning routine. The candidate was not surprised that only a couple of the social studies teachers are using My Big Campus to their advantage. Most of the teachers felt that this takes too much time to put together. This is why the candidate had to show them how easy it was to take knowledge they already have and adapt it to the learning platform. Most of the teachers are older tenure teachers who stay in their groove and do not want to change how they have been doing it for years.

 For the most part these sessions ran smoothly. Each session was limited to an hour and half with time at the end to answer individual questions separately. Time was set aside for teachers to come during the candidates planning period to come and ask additional questions or see additional tools in person. Permission by the administration was given to open up the candidate’s classroom for teachers to see me put the tools into motion. Only two teachers wanted to come and view this in action, but key board members have visited twice to see these tools in action. Both times that board members have visited, they praised the use of technology. After the last session a post survey was distributed over Google Docs for all those who attended the professional development sessions. Below you will find how the attendees responded. Out of 31 faculty members 22 responded to the post survey. You can find a copy of the original survey under Appendix B in the Appendices.

Post Survey responses:

Twenty-Two faculty members responded to the post survey out of a possible 31 faculty members.

***On a scale of 1-4, how well was the information presented?***

1-Poor 0%

2- Fair 0%

3- Good 59%

4- Excellent 41%

***On a scale of 1-4, how relevant do you think the information presented was?***

1-Not relevant 0%

2- Very little 0%

3- Somewhat relevant 55%

4- Very relevant 45%

***How likely, on a scale of 1-4, are you to implement something you learned?***

1-Not likely 9%

2- Somewhat likely 23%

3- Likely 36%

4-Very likely 32%

***Instructor showed thorough knowledge of the content being displayed. (Scale of 1-5)***

Poor- 1 2 3 4 5- Very Well

 0% 0% 0% 9% 91%

***The Instructor made themselves available after PD sessions were over?***

Never- 1 2 3 4 5- Always

 0% 0% 0% 27% 73%

***Instructor gave useful tips about troubleshooting problems with technology in the classroom.***

Never- 1 2 3 4 5- Always

 0% 4% 23% 23% 50%

***Free Response questions:***

***Please state in your own words what was most useful from the professional development sessions?***

*“The use of Google Docs”*

*“How I can effectively implement technology in the classroom”*

*“Liked the communication ideas”*

***Please state in your own words what was least useful from the professional development sessions?***

*“Web 2.0 Tools”*

*“Remind 101, not for me”*

***Please offer any suggestions or how I can make these professional development sessions better.***

*“Offer more one on one sessions”*

*“Not sure the network can support this much technology”*

***Please write in your favorite 21st century technology tool from the PD.***

*“Google Docs!”*

*“Weebly and Questgarden”*

*“Weebly and webquest”*

 After distributing the post-survey and analyzing the data that was received from it, There was a large percent of the attendees felt that the information beneficial to them and their classrooms. There were multiple teachers who sought further time with the candidate after the sessions and were hungry for more applications that are used in the everyday classroom. This was the most rewarding part of the professional development, teachers asking for more. The number of responses to the post- survey were greater than that of the pre-survey. Faculty for the most part felt that the presenter was knowledgeable about the tools and applications that were presenting. Over sixty percent of the teachers that responded said that they were likely/very likely to implement one of the tools from the professional development sessions. The questions on the survey were satisfying because it reached a large portion of the faculty and they understood its importance to the student’s future. While sixty percent is not as large as one hundred percent, but this was a good step in the right direction for Moody High School and its staff. The Web 2.0 tools and Google Docs seemed to be the biggest hit from the sessions. Teachers showed how easy these tools were to implement and could see results quickly.

 In the months that have passed since completing the professional development, There are still questions from teachers about how to use certain tools and if there were others that could be mentioned but did not present on. Technology is catching on at Moody High School and students seem to be enjoying it. Along with regular observations at the high school, I was privy to a special visit by a curriculum team and the superintendent to observe how I was using technology in my classroom. They were very impressed and commended the use of technology in the classroom. My principal has been great and wants to continue educating our faculty about 21st century technology and its positive effect on the school. The number of professional development sessions may not be as many, but she has already expressed to me that she wants me to do another session during the next school year. This has been a great experience and has helped me mature as a future technology coach.

The capstone project was a lengthy process and took numerous hours to complete. Throughout the proposal and project the facilitation of the actual proposal showed many difficulties because of the amount of time needed to fulfill the requirements. Being at Moody High School, where professional development is done weekly, opportunities were available to fulfill the proposal of professional development for staff. Working with Moody High School’s principal to figure out times to present were part of the process that was difficult. Moody’s principal was easy to work with but sometimes other things take precedent (weather, testing, and school functions). Throughout this experience new relationships were gained with key people in the system and school to make this happen. After the initial meetings and selection of dates, the physical aspects of the presentations were interesting and fun. Each session brought new meaning to be a leader in the technology field. From the very beginning the staff was engaged with new technology and applications to make their classrooms more effective learning environments. All core staff attended professional development sessions, but were less attentive to responding to pre and post surveys. This is something that was tough to get over, not all teachers are willing and wanting to help complete certain task. A good number of teachers responded but there is always a group who fights change and will continue to do things their way. From the first session to the last the lessons learned were numerous. One lesson learned dealt with the presentation of the material. It must be easy to understand for others who may not have been in contact with the tools and applications being examined. Presentations must have clear examples as well. With the help of the post survey and side sessions there were a number of teachers who felt these sessions would benefit them in their classrooms on a daily basis. The learning that took place was beneficial and helped to guide the continuation of project. Each time the session got better and showed the maturation of the candidate.

Knowledge was used to create the presentations to explore the 21st century tools during the professional development sessions. With these presentations effective digital age learning environments were introduced to teachers and deepen their professional knowledge. As the Facilitator communication, implementation, and development was shared with fellow staff members to help create a shared vision for technology at Moody High School. While the continued professional development at Moody High School was beneficial the task was taxing on the candidate. Continually learning how to make the next session better than the last helped the candidate grow professionally into an effective technology leader. Skills needed to complete the project were greatly increased and enhanced from the experience of troubleshooting and evaluating the effectiveness of the sessions. With all technology comes the existence of problems that may arise because of the fickleness 21st century technology. With this information all the tools had to be tested multiple times so that the quality of the development was not taken away because of technical issues. After completing the capstone process, the dispositions needed to be a technology leader were revealed. Most of the dispositions of a technology leader were already present, but there were a few that had to be learned throughout this process. Organization is a key disposition needed to be a technology leader. Without organization there is no way that the task could have been completed. Along with organization technology coaches must be good teachers. Being able to deliver material to a group of people is key to becoming an effective leader. Along with teaching, design and development dispositions are needed to conduct sessions of such importance.

The best of piece of advice that could be given to an instructional technology candidate would be to lean on others around you. Connect yourself with someone who may have been through this before and have been successful. Choosing your mentor is key as well. You will want to pick someone who is in the technology field to help with all of those unanswered questions. Surrounding yourself with positive and insightful people will help to make your experience a beneficial and enlightening one. Another recommendation would be to continually look and try new technologies. As a technology leader you will have to be up to date with 21st century technology and it is continually changing and being updated. You will also want to test all these tools and applications more than once. Murphy’s Law will always exist in your classroom especially when dealing with technology. Use your administration to the best of your abilities. This group will be a great asset to gaining information and data needed to be successful in your course work. The best piece of advice would be to make friends in your cohort. You have to be interactive with them for two years, so might as well collaborate and help one another out. Your colleagues can be a great resource for you during your time in the program. Visibility is the last piece of advice that can be given to any new candidate. Letting those you are working with know that you are available and able to help will go a long way. Being visible to your administration will also show that you are serious about becoming a technology leader in your school. These things coupled with your desires to do well will make any candidate an effective future technology coach.

References:

Knight, Jim. (2007). *Instructional Coaching- A Partnership Approach to Improving Instruction.*

 Thousand Oaks: Corwin Press

Richardson, W. (2010). *Blogs, wikis, podcasts, and other powerful web tools for classrooms.*

(3rd ed.). Thousand Oaks, California: Corwin Press

Appendix A:

**21st century Tech interest survey**

Top of Form

**How many times a week do you use technology in your lessons?**

* +  None
	+  1-2 times a week
	+  3-4 times a week
	+  Every Day
	+  Other: 

**What are the chances of you applying learned concepts from PD**

* +  No Chance
	+  Fair
	+  Good
	+  Excellent

**Do feel that you are proficient in 21st century technology tools?**

* +  Yes
	+  No

**Please Check your years of experience**

* +  0-3 years
	+  4-6 years
	+  7-10 years
	+  11-15 years
	+  16-20 years
	+  20 plus years

**Content area taught?**

* +  Math
	+  Science
	+  Social Studies
	+  English
	+  Foreign Language
	+  Computer Sciences
	+  Physical Education
	+  Art/ Home Economics

**Please list technology tools that you feel you are proficient in and use regularly.**

please be specific answering this



Appendix B:

21st Century Tech Post Survey

Top of Form

**On a scale of 1-4, how well was the information presented**

* +  1- Poor
	+  2- Fair
	+  3- Good
	+  4- Excellent

**On a scale of 1-4, How relevant do you think the information presented was?**

* +  1- Not relevant
	+  2- Very little
	+  3- Somewhat relevant
	+  4- Very Relevant

**How likely, on a scale of 1-4, are you to implement something you learned?**

* +  1- Not likely
	+  2- Somewhat likely
	+  3- Likely
	+  4- Very likely

**Instructor showed thorough knowledge of the content being displayed.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |  |
| Poorly |  |  |  |  |  | Very Well |

**The Instructor made themselves available after PD sessions were over.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |  |
| Never |  |  |  |  |  | Always |

**Instructor gave useful tips about troubleshooting problems with technology in the classroom.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |  |
| Never |  |  |  |  |  | Always |

**Please state in your own words what was most useful from the Professional Development sessions?**



**Please state in your own words what was least useful from the Professional Development sessions?**



**Please write your favorite 21st century technology tool from PD**



**Please offer any suggestions of how I can make these Professional Development sessions better.**

