St. Cloud State University
theRepository at St. Cloud State

Culminating Projects in Information Media | Department of Information Media

5-2018

Online Professional Development Communities and School Technology Integration

Brenda Brusegard
brbr0403@stcloudstate.edu

Follow this and additional works at: https://repository.stcloudstate.edu/im_etds

Recommended Citation
Brusegard, Brenda, "Online Professional Development Communities and School Technology Integration" (2018). *Culminating Projects in Information Media*. 22.
https://repository.stcloudstate.edu/im_etds/22

This Plan C Paper is brought to you for free and open access by the Department of Information Media at theRepository at St. Cloud State. It has been accepted for inclusion in Culminating Projects in Information Media by an authorized administrator of theRepository at St. Cloud State. For more information, please contact rswexelbaum@stcloudstate.edu.

Online Professional Development Communities and School Technology Integration

by

Brenda J. Brusegard

A Portfolio

Submitted to the Graduate Faculty of

Saint Cloud State University

in Partial Fulfillment of the Requirements

for the degree of

Master of Science

in Information Media

May, 2018

Portfolio Committee:
Jane Gottfried, Chairperson
Kristen Carlson
Bradley Kaffar

Table of Contents

Chapter Page

Chapter I: Introduction

In the education field, staff development is important in order for schools to make sure that teachers are staying current with new initiatives, trends, and updates. The use of technology in schools is increasing, and teachers need professional development in order to effectively integrate technology into the classroom. There are different levels of technology integration according to the SAMR model (substitution, augmentation, modification, and redefinition), see Appendix A (Puentedura, 2014). Below is an example of transforming a lesson from the subsitution level to the redifinition level.

Assignment: Write a research paper and turn it in.

Substitution: Write a research paper using Google Docs and print it out.

Augmentation: Write a research paper using Google Docs and share it with the teacher.

Modification: Write a research paper using Google Docs and share it with classmates to get feedback and suggestions before sharing it with the teacher.

Redefinition: Write a research paper using Google Docs, share it with classmates to get feedback, share the paper with the teacher, and put it in an online portfolio where people around the world can see your work.

The SAMR model (Puentedura, 2014) was chosen because of how it addresses using technology in new ways. Teachers need to understand how they can transform their lessons so that they can use the technology in a meaningful way. If transformative technology integration is not happening, there could be an argument made by officials to take the technology away because it is not being used in a new and inventive manner.

The goal of using the SAMR model as a way of teaching technology integration is that as teachers are able to obtain new skills in technology, they are able to more effectively integrate technology by transforming the lesson instead of substituting one technology for another. This portfolio will begin with research on how to effectively implement professional development through the use of online communities and the projects will include the framework that will be used to organize the online community as well as some professional development trainings about integrating technology.

Purpose

As educators in the 21st century, teachers must be able to assist students in learning skills that they will use in the future. The International Society for Technology Education (ISTE) has created standards by which teachers can help students develop technology related skills (ISTE, 2017). The standards are:

1. Learner

Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators:

a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.
b. Pursue professional interests by creating and actively participating in local and global learning networks.
c. Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.

2. Leader

Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning.

Educators:

a. Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders.
b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.
c. Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.

3. Citizen

Educators inspire students to positively contribute to and responsibly participate in the digital world. Educators:

a. Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationships and community.
b. Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.
c. Mentor students in the safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.
d. Model and promote management of personal data and digital identity and protect student data privacy.

4. Collaborator

Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators:

a. Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.
b. Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.
c. Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.
d. Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.

5. Designer

Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators:

a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.
c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

6. Facilitator

Educators facilitate learning with technology to support student achievement of the 2016 ISTE Standards for Students. Educators:

a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.
c. Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.
d. Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.

7. Analyst

Educators understand and use data to drive their instruction and support students in achieving their learning goals. Educators:

a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.
b. Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.
c. Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.

According to Duran, Brunvand, Ellsword, and Şendağ (2012), Professional development "that is sustained, student-centered, participatory, and supported by adequate resources has a significant impact on teacher learning and practice about specific technologies." The professional development activities in this portfolio will follow best practices as established today in order for the practices to be the most effective. Technology is constantly changing which means that professional development in the area of technology must be continuous and ongoing.

My school is a 1:1 school which means that every student has access to an electronic device. The building I work in has about two hundred kindergarten to third grade students that each have an iPad. In the high school section, there are about three hundred fifty students in ninth to twelvth grade that each have MacBook laptops. The middle school grades are housed in a different building so they have a separate program. In order for the 1:1 program to be successful, the forty teachers at the school need to have training about how to successfully intergrate technology into their classrooms. If the teachers are not prepared, they will mostly use the devices at a substitute for paper and pencil which is not the goal of the technology program.

Context and Background

As a science teacher, I understand the importance of integrating technology in my lessons. Because of my interest in technology, I took on the role of a technology integration specialist at school for the past year. This position has been specially created to fulfill the needs of the 1:1 program by providing training and support. I have seen a wide variety of skill sets and mind sets among the faculty in regards to technology and technology integration. I understand the importance of professional development, and I want the work I do in my school to be

meaningful for teachers participating so that the students are equipped with the tools they need to thrive in a world of technology.

As technology use becomes more prominent, it is even more important to make sure that teachers are adequately trained. District budgets do not always allow for the amount of professional development that is needed. Many schools are looking to online professional development to fill gaps in knowledge. Online professional development can be an asset in allowing professional development money to be used more effectively, the time required from the teachers can be used more effectively, and it can provide more time for reflection and implementation over time versus a single day training.

Definition of Terms

21st Century Skills: Skills needed in the century in order to be successful. These skills are critical thinking, collaboration, communication, and creativity (Partnership for 21st Cenutry Learning, 2011).

Augmentation: Technology acts as a direct tool substitute, with functional improvement (Puentedura, 2014). Ex. Creating a presentation on Google Slides and collaborating in real time with classmates compared to just creating a Word document without collaborating.

Modification:Technology allows for significant task redesign (Puentedura, 2014). Ex. Creating a Google Slides presentation with other students and embedding audio and video clips into the presentation compared to just using the basic features (like text) on the Google Slides.

Online community: A group of people who regularly interact with each other online, especially to share information and opinions on a common interest; (with the) users of the Internet considered collectively (Stevenson, 2010).

Redefinition: Technology allows for the creation of new tasks, previously inconceivable (Puentedura, 2014). Ex. Creating a Google Docs presentation with video and audio clips and recording the presentation so it can be posted to the class website where students can rewatch the presentation if needed, and students around the world have access to watch it as well.

Substitution: Technology acts as a direct tool substitute, with no functional change (Puentedura, 2014). Ex. Creating a group presentation with Powerpoint instead of creating a poster on paper.

Technology integration: Refers to computer technology being used throughout lessons being taught.

Summary

As technology continues to advance and become more integrated into our daily lives, it is important for teachers to learn how to effectively integrate technology into their classrooms. As the technology changes, it is important for teachers to stay up to date with the current trends and uses of technology. Having a place for online professional development will help teachers stay engaged in learning about how to integrate technology into their lessons. This portfolio will examine what it means to have sucessful online professional development and include some of the trainings that will be given to teachers to help them integrate technology more effectively in their classrooms.

Chapter II: Literature Review

Introduction

For professional development to have an impact on student outcomes, it must first have an impact on teachers (Martin et al., 2010). Technology can be thought of as a tool that supports learning for both teachers and students. A tool alone does not function until it is used properly, and in order for proper use to occur, teachers must receive professional development (Keengwe & Onchwari, 2009). In order for an online professional development community (OLPD) to be successful for a group of teachers, it must be relevant to them, differentiated, rich with learning and reflection, cost effective, and contain 21st century skills (Brooks-Young, 2007; Duncan-Howell, 2010; Ertmer, 2005; Keown, 2009).

Methodology for Literature Review

The studies included in this literature review were chosen from a wide range of articles. Studies on professional development, online professional development communities, and technology integration were all used. The studies come from a variety of places across the world to paint a clear picture of best practices in online professional development communities and school technology integration. For the purposes of this review, EBSCOhost was used to find the articles. The search terms included teacher professional development, online professional development, and technology use in professional development. The studies included teachers in prekindergarten through twelfth grade educational settings.

Review of Literature

Upon reviewing the studies, numerous criteria for successful teacher professional development in schools become apparent. Professional development must be relevant to

teachers with a clear purpose in mind, differentiated in terms of technology level and content area, and continuous (Desimone, Porter, Garet, Yoon, & Birman, 2002; Duncan-Howell, 2010). District budgets are often focused on saving money so professional development must be perceived as worth the cost to those who control the budget. Teachers are looking for professional development that is effective, organized, and valued. Professional development can be costly in both money and time, but when it is done well, it is valuable (Keown, 2009).

Professional development as a whole requires many elements. These include: coherence between professional activities and student outcomes, acknowledgement of current teacher beliefs and practices, active engagement and collaboration among teachers, sustained attention over a period of time, support from administration, and quality of professional learning (Chen, 2011; Smith & Sivo, 2012).

Findings of the Review

Relevant to teachers. Teachers must believe that there is value in the professional development first and then see a positive effect on student learning after they have implemented the new practices (Ertmer, 2005). Teachers will not continue with professional development if they cannot use what is being learned. Teachers are often prepared to spend additional time on professional development activities if there is an immediate benefit for their teaching (Bolam, McMahaon, Stoll, Thomas, & Wallace, 2005). Online professional development designers should make the connection between the learning and the usefulness in the classroom. One suggestion by Smith and Sivo (2012) is to integrate video demonstrations into online professional development courses. Video demonstrations can help teachers see what it is they

should be doing in the classroom. The video demonstrations can also be used as discussion topics within the online community.

The needs of teachers are most important in regards to professional development and should drive the implementation of it (Ertmer, 2005). This may not necessarily be what school administrators use as criteria for professional development that is offered to the teachers. Administrators often create professional development days in which all teachers are required to attend certain sessions (Duncan-Howell, 2010). These selected trainings may not relate to all of the teachers present in the session, but it is more convenient in terms of budget and planning for administrators to select a one size fits all model. The content in the professional development needs to be authentic and directly related to teachers' concerns (Duncan-Howell, 2010).

Differentiated. Just as learning in the classroom needs to be differentiated for students in terms of content, process, and product, so too does professional development learning. Teaching all teachers in the same way does not make sense, just as it does not make sense to teach all students the same way (Chen, 2011). Teachers represent a wide range of confidence, skills, and teaching beliefs which need to be addressed (Ertmer, 2005). According to Keown (2009), teacher groups need to be an appropriate size for the learning goals with a diverse set of participants. Groups that are too large with more than 15 people can leave teachers feeling overwhelmed while groups that are too small with fewer than 5 people may not have enough discussion talking points to learn from each other. Leaders must plan professional development that scaffolds the instruction of new skills (DeSantis, 2012). Leaders must make sure they are taking all teachers into account when planning professional development so that it can be valuable for everyone.

An example of differentiated professional development would have technology proficient teachers in schools as mentors to other teachers that do not feel as comfortable with technology in their classrooms (DeSantis, 2012). A peer mentor can be an onsite go-to person. Mentors can also offer support during different stages as necessary throughout the online professional development (Holmes, 2013). At times, more support may be needed, while at other times, the mentor can back off. Criteria would need to be set for mentors to follow. Teachers that are excited about technology and willing to learn can also be designated as peer mentors or coaches (Keengwe & Onchwari, 2009). Ongoing and well-planned professional development must be designed with evaluation and sustained by support (Desimone et al., 2002). Desimone et al. (2002) further suggested that this is necessary if teachers are to use technology appropriately and use it in the classroom.

Learning and reflection. Professional development is most effective when there is time for reflection (Duncan-Howell, 2010). When professional development does not have adequate time for teachers to process the information, the new information is often lost. Once teachers are able to think about how to implement the new learning, implement it, and then finally reflect about it, the gains are tremendous (Keown, 2009). Creating an online community helps to facilitate discussion and reflection about professional development that teachers can interact in their own time when it is convenient for them (Holmes, 2013). In an online environment, the teachers in the group have something in common because they have all learned about the same topic. Each teacher can go back to his or her own classroom to implement the learning, and finally they can share their experience with the group online. Group members can then further

discuss the learning and how to improve the implementation for next time as well as gain many new ideas on a continuous basis.

Professional Development in technology is most often learned through trial and error (DeSantis, 2012). Learning about technology and applying the technology in the classroom are two very separate processes that need to happen in order for future implementation to occur. It is important for teachers to be comfortable with some mishaps. When using technology, there is no guarantee that it will work the way it is intended to work. The level of knowledge and skills from teachers is inconsistent and creating online professional development training about different topics can help to level the playing field.

Collaboration. Collaboration among participants in professional development typically occurs when there are incentives (Musanti & Pence, 2010). For example, when teachers are able to upload and share their lessons online to their community, it promotes deeper learning by being able to view and offer suggestions to others (Hou, Chang, & Sung, 2009). Teachers can view the lessons and comments from others and take away their own learning. Helping others to develop creative ideas is a necessary component in an online professional development community (Hou et al., 2009). Collaboration in an online professional development community encourages new ideas and practices as well as deeper reflection (Duncan-Howell, 2010). The online communities are more tailored to the groups needs in terms of content so each participant becomes a stakeholder.

Time. In order to create professional development that is successfully implemented in the classroom, there needs to be adequate time for implementation reflection. According to Keown (2009), a time frame for professional development and implementation to be successful

is around 14 weeks. This includes six weeks up front for teachers to acquire new knowledge and ideas followed by a second six-week block in which the new ideas are implemented (Keown, 2009). Keown further suggested that in between the six-week blocks there is a two-week break which helps to create flexibility for teachers to play catch up or create their new ideas.

Online professional development networks may not be as restricted by time, which allows members to have some flexibility when working through tasks (Duncan-Howell, 2010). Teachers can fit in the online training when it is convenient for them and may experience times of high and low activity based on their schedule (Duncan-Howell, 2010). This makes online professional development more convenient than face to face training.

In order for online professional development communities to be successful, it is suggested that there are interaction rules that encourage teachers to stay on topic (Hou et al., 2009). It can be easy for online discussions to become side tracked when collaboration is occurring. Staying on topic is necessary so that time is not wasted and so that teachers continue to feel like the community interaction is a place of value. When face to face professional development gets off topic teachers can become frustrated and tune out what is going on.

Costs. Sending teachers to professional development trainings is costly for school districts in terms of money. Professional development trainings are also costly for teachers because it takes time away from them when they can be in the classroom. Creating substitute plans and losing a day of instruction is costly for both teachers and students. Online teacher professional development is gaining popularity because it can lead to a reduction in these costs (Keown, 2009). Online professional development can take the place of some meetings that

normally happen during the school day, and instead of having training as a whole group on a professional development day, teachers could work on their individualized modules online.

21st Century skills. The use of digital media allows teachers to design more engaging activities and assessments, which help students build 21st century skills (Brooks-Young, 2007). Online resources support new visualizations, and modeling tools like simulations through pHET are more affordable and interactive than textbooks (Walker et al., 2012). They can be shared and adapted among learners, and carry more up to date information (Walker et al., 2012). Online resources are also an asset to inquiry or problem based learning activities because teachers can get up to date information (Gurell, Kuo, & Walker, 2010).

Limitations of online professional development. There are some limitations in regards to online professional development. Discussion can be dominated by a small number of people (Duncan-Howell, 2010). This can be a problem because teachers may not feel comfortable contributing to the discussion prompts. According to Duncan-Howell (2010), time management is another potential negative of online professional development. For example, if all of the teachers in an online community wait until the last day to contribute to a discussion post, there is not enough time for teachers to get replies to their post to deepen the discussion. Also, if teachers are not motivated to participate, it can have a snowball effect on the group. If only a couple of people are actively participating, the group members may start to lose their drive.

Gaps in Research

Most of the studies that were included in this review discuss the need for more research on professional development for teachers and the effect on student learning outcomes. What kind of gains can be expected in student learning through online professional development? Test

scores are important to school administrators, and if there is a direct correlation between teacher professional development and student academic gains, it might encourage administration to invest more in providing professional development to teachers.

Summary

The research included in this literature review shows that online professional development communities must be relevant to teachers, differentiated, rich with learning and reflection, cost effective, and contain 21st century skills. Without these components, the studies included in this review show that the OLPD will likely fail. In my portfolio of projects, all of these areas will be addressed. Online teacher development training is becoming more widespread, so it is a relatively new area in which most of the studies suggest topics for further research to be done.

Chapter III: Project Proposals

Introduction

The projects contained in this portfolio are centered around creating an online professional development community to deliver information about technology integration. Once the community is created, presentations using different modes of communication will be uploaded onto the community website. Teachers will be able to download and view the presentations at their convenience, and they will have time for reflection and discussion in order to make a deeper connection with the content. These are best practices that were found during the literature review of this portfolio.

Target Audience

The audience for this project will be the teachers at my current school which is the FAIR School-Downtown in Minneapolis. The school is a fine arts school with a strong focus on technology. This school has instructors which teach grades K-3 and 9-12. There is another school building in a suburb that houses Grades 4-8. The professional development will be made available separately to the two groups because they will be using the software in different ways and using different software depending on their audience. There are nine classroom teachers in grades K-3, 15 high school subject area teachers, and nine fine arts teachers. The age of the teachers varies from 23- to 65-years-old.

Needs Analysis

Each student has access to an electronic device issued by the school. Students in grade K-3 each have an iPad that stays in his/her classroom, and students in Grades 9-12 each have a MacBook laptop that they use at school and take home. The teachers at the school have a wide

range of experience with technology based in part on the fact that some teachers have been in a 1:1 program for many years while others are new to the program and to the school. Because technology is constantly changing, the teachers need a place where they can take part in trainings to learn how to effectively implement the electronic devices into their classrooms. An online community is a good place for the trainings to take place so that teachers can be grouped based on levels of technology experience and teaching content areas. These trainings can be updated, and it makes sense to have technology training online because the course can be used as a model for creating their own online community with their classes of students. Currently, the teachers only participate in technology trainings every other month during professional development days. These trainings usually have a limited amount of time and are not all-day trainings. There is also no time for implementation of best practices or reflection which are important parts of creating effective trainings.

Goal Analysis

The goal for this portfolio is to provide teachers with access to trainings on a 24-hour basis. They can complete the trainings on their own schedule that gives adequate time for processing and reflection. Each teacher is required to be at school 1 hour before classes start and a half an hour after classes end. Teachers can decide when they want to complete the trainings based on those times, or if those times do not work they can complete them outside of the available school time. The trainings will be delivered using best practices with the knowledge gained from the research studies included in Chapter II of this portfolio.

Project 1: Creating an Online Professional Development Community Using Schoology

Goals and objectives.

1. The instructors in the high school and the primary school will be able to interact with the community through downloading and uploading documents for discussion.
2. The instructors will interact with the community at least twice per week.

Media used. Schoology is an online learning management system used by The FAIR School Downtown. A course will be created for all of the teachers to join in which there will also be two subsets of groups. Teachers in grades K-3 will be in one group, and teachers in Grades 9-12 will be in another group. Teachers will be able to log into their school account through their school e-mail account which utilizes Google Apps.

Methodology for analysis and evaluation. Viewing the statistics of the course will serve as basis for evaluation. The number of downloads, uploads, and discussion area comments will all be taken into consideration. Teachers must interact twice a week and upload one work. If 90% of the teachers are meeting the minimum requirements the project is a success. If the instructors are not interacting as much as planned, additional communication will be sent to the teachers about expectations such as length of posts and the number of posts per week.

Project 2: Using SMART Notebook Tutorial

Goals and objectives.

1. The instructors will be able to turn on and operate the pens and the eraser of a SMART Board.

2. The instructors will be able to create a 5 slide presentation which has objects uploaded into it that have been sized and layered.
3. The instructors will be able to create a five-slide presentation that has objects that have been grouped and that use a pull tab.
4. The instructors will be able to create a five-slide presentation that has active links and has a web browser embedded in it.

Each objective will be listed before the training begins. During the training, buttons needed to complete an action will be highlighted by using a red circle. If the red circle does not stand out enough because of the background, diming other portions and highlighting the area of focus will be used. The instructors will be interacting with the learning tool so that they step through by clicking on the buttons they need in order to learn the skill. Once the instructor has completed the task, there will be a success message that pops up at the end that indicates they have completed that section of the training.

Media used. The product will be a visual presentation for teachers to assist them in using SMART Notebook in their classroom. PowerPoint will be used to create the tutorial. Each slide in the PowerPoint presentation will have audio files attached to walk the teachers through specifics on how to use SMART Notebook. The presentation will be posted on the Schoology learning management system for teachers to download and view at their convenience within a specified time window so that all teachers have completed the training by a certain date.

Methodology for analysis and evaluation. Observing the instructor give his or her presentation in the classroom with students present will assess the goal. Instructors will also post their SMART Notebook presentations in the online community along with a reflection about the

process of creating their presentation as well as a reflection about how the lesson went with the students. Other instructors in the online professional development community will be able to download the presentations to use and give feedback if necessary. The project is considered successful if 90% of the teachers complete all of the elements of the task.

Project 3: SAMR Model Training

Goals and objectives.

1. Instructors will be able to explain what the SAMR model is, and how it relates to their teaching.
2. Instructors will be able to reflect about their teaching with technology, and discuss ideas about how they can transform their current lessons to be at a deeper level of technology integration.

Media used. Nearpod is an interactive presentation website. Nearpod was chosen as the media because it provides an example of technology integration and how technology can be used in transformative ways.

First, a PowerPoint presentation will be created about the SAMR model. Then, it will be uploaded to Nearpod in which teachers will be able to view the presentation when it is convenient for them. The Nearpod will contain polls, and open-ended questions about technology use in their own classrooms in which the teachers will be asked to respond during in the presentation. The results will be compiled and shared out through the Schoology learning management system.

Methodology for analysis and evaluation. The teachers will post in the discussion area of Schoology a lesson they teach and where they think the lesson falls into the SAMR model.

They will then discuss how they can transform the lesson deeper with technology integration. An observation of the lesson in the classroom will be used to determine the level of technology integration. If 90% of the teachers can create a lesson in the transformation area of the SAMR model the training is a success. Additional feedback will be given to teachers that have a hard time coming up with lessons that are redefining.

Chapter IV: Results

Project 1: Creating an Online Professional Development Community Using Schoology

An online community was created using Schoology for the teachers to interact and learn about different topics. Project: See screenshots in Appendix B.

Project 2: Using SMART Notebook Tutorial

The SMART Notebook tutorial was created and uploaded to Schoology for the teachers to complete the training. Project: See Appendix C.

Project 3: SAMR Model Training

The SAMR model training was posted on Schoology for the teachers to complete at their convenience within a specified time. Project Link: https://share.nearpod.com/vsph/rQCRgLgFfA

Chapter V: Conclusions

Introduction

The overall goal for this portfolio was to create an online professional development community where teachers had access to technology trainings on a 24-hour basis. The teachers were able to complete the trainings on their own schedule that gave adequate time for processing and reflection. The trainings were delivered using best practices with the knowledge gained from the research studies included in Chapter II of this portfolio which include the following: the training must be relevant to the teachers, differentiated, rich with learning and reflection, cost effective, and contain 21st century skills (Brooks-Young, 2007; Duncan-Howell, 2010; Ertmer, 2005; Keown, 2009).

The projects were implemented at two schools. At the FAIR School in downtown Minneapolis, Project 3 was given as a live training. The teachers were from a wide range of grade levels from K-12. The teachers were able to interact in real time with the Nearpod presentation. Nearpod can be used asynchronously, and the training could be posted in an online professional development community in the future.

The other two projects in this portfolio (Creating an Online Professional Development Community and the SMART Notebook Tutorial) were implemented with a pilot group of teachers at The American School of Quito in Quito, Ecuador. The teachers included in the pilot were from nursery through high school.

Project 1: Creating an Online Professional Development Community Using Schoology

The first project was to create an online professional development community using Schoology. The community was created using Google Classroom instead of Schoology because

The American School of Quito is currently using Google Classroom. Technology trends change, and it is important to stay flexible.

The community was created, but the support from administration was not there. According to Chen (2011) and Smith and Sivo (2012), it is necessary to have the support of the administrators. Unfortunately, the administration did not require the teachers to participate in the online community. Because of this lack of support, the community did not interact as much as had been planned. Many of the teachers did not want to do extra work that was not required.

In the future, I would make sure that administration was on board with the online professional development community first. The administrators would need to make participation in the course a requirement for teachers. It could even be worked into the schedule as compensation time. For example, if there is normally a staff meeting every Wednesday after school, one meeting a month could be cancelled in order to give some extra time for working on the course.

I ran a pilot course with seven volunteer teachers, and out of the original volunteers, five completed the trainings that I posted in the timeframe designated (one week). The teachers that did participate gave good feedback about the course. The important piece missing in this small pilot was the sense of community with the other teachers in the group. In Chapter II, the best practices for online professional development are stated as the training must be relevant to the teacher, differentiated, rich with learning and reflection, cost effective, and contain 21st century skills (Brooks-Young, 2007; Duncan-Howell, 2010; Ertmer, 2005; Keown, 2009). In this pilot, the training was relevant, cost effective, and contained 21st century skills. It could be improved with differentiation and reflection time.

All of the trainings that were posted in the Google Classroom were given in person, first. This could make the online community space optional, but over time it would work towards being mandatory.

In the future, more follow up and additional training will be needed. Many of the teachers need time to process all of the features, and they also need to create many of their own lessons to use in order to convince them that using this new software is worth their time. This would provide the reflection time necessary to process the content. Additionally, teachers would be in differentiated groups based on content area and skill ability in order to make sure that the skills being taught are at an appropriate level.

Project 2: Using SMART Notebook Tutorial

For the second project, a SMART Notebook training was given. SMART Notebook was chosen because many of the teachers use their SMART Boards as a projector only, and they do not utilize the other features of the interactive whiteboard.

While I created the trainings, I made sure to keep in mind multimedia design principles. I used Mayer's (2001) 12 principles of multimedia learning. Four of the principles helped to guide the design. These principles include:

2. Signaling Principle: I highlighted the areas of focus by adding red circles.
3. Redundancy Principle: I did not include on-screen text, and graphics and narration only were included.
6. Segmenting Principle: I created different segments which include hardware, beginner, and advanced sections.
11. Voice Principle: The presentation was narrated by me and not a computer.

By using these principles, I was able to make a user-friendly tutorial. In the future for other trainings, I will continue to use these multimedia principles.

The teachers that did take the training were able to turn on and operate the pens and eraser of the SMART board. They also created short presentations using the SMART Notebook software that included layered objects, grouped objects, and active links. I was able to view a couple of the presentations created. The biggest take away from talking to the teachers that completed the training was that they did not realize the SMART Notebook software had so many features that made the SMART Board more interactive when comparing it to using other presentation software like PowerPoint.

In Chapter II of this paper, it was stated that in order for a training to be successful for a group of teachers, it must be relevant to them, differentiated, rich with learning and reflection, cost effective, and contain 21st century skills (Brooks-Young, 2007; Duncan-Howell, 2010; Ertmer, 2005; Keown, 2009). The SMART Notebook training was relevant, cost effective, differentiated, and contained 21st century skills. It would be useful in the future for teachers to share out their SMART Notebook lessons for others to see, use, and give feedback about. This would increase the learning and reflection time. The SMART Notebook training would continue with more advanced features, and those teachers already using SMART Notebook would be able to learn new information.

Project 3: SAMR Model Training

The SAMR model training was given to teachers using the Nearpod platform. Nearpod allows the participants to be more active throughout the presentation. Teachers can respond to questions in the presentation, and the platform keeps track of all the responses. These responses

can be anonymous or include a name. Before the training, most of the teachers were unaware of the SAMR model. After the training, the teachers were able to reflect about the use of technology in their own classrooms.

This presentation was given after school in which all of the teachers did attend. In this face-to-face meeting, they were able to discuss with those at their table about the use of technology in their classrooms. Using the knowledge gained from Chapter II, this training was relevant, cost effective, provided time for learning and reflection, and contained 21st century skills. The training was not differentiated, but most teachers has not heard of the SAMR model so they were starting from the same level of knowledge.

Conclusion

Overall, the projects that were created for this portfolio were useful. Teachers at my school were able to learn new information through an online learning management system as well as in person trainings. They were able to learn when it was convenient for them, and they were able to interact with teachers in our school in a new way through the online discussion posts. In the future, I plan to continue creating online professional development as a way of giving new and pertinent information to teachers.

The online learning management system, Google Classroom, was a great resource to use to implement an online professional development program. One area of necessity when setting up an online course is to have training for teachers that are not as comfortable with technology. This training would be best held in a computer lab where the teachers could follow along with you to register and also view the features of the LMS.

In order to support continued motivation from teachers, the community needs to be active, the facilitator needs to give feedback, and the administration needs to require the teachers to use the platform. If any part of these three pieces is missing, the community will not have active users. In order to get the community active, the teachers should be placed in groups of 6-10 teachers that have similar jobs either by department or grade level. The teachers are able to discuss topics that they can relate to their classes. It is also helpful to have deadlines for the training sessions as well as discussion posts. To get an online discussion facilitated, all group members need to post regularly and not intermittently or wait until the end of the course. The facilitator of the group also must be active in giving feedback to fuel discussions and ask thought provoking questions. It is also imperative to have the support of the administration. Without their support, online professional development will not work because many of the teachers will have no motivation to get it completed if it is not a requirement. At the end, teachers would receive a certificate accounting for professional development hours if the requirements laid out by the administration and facilitator are met.

References

Bolam, R., McMahaon. A., Stoll, L. Thomas, S., & Wallace, M. (2005). *Creating and sustaining effective professional learning communities*. London: Institute of Education. Retrieved from http://dera.ioe.ac.uk/5622/1/RR637.pdf

Brooks-Young, S. (2007). *Digital-age literacy for teachers: Applying technology standards in everyday practic*e. Arlington, VA: International Society for Technology in Education

Chen, C. (2011). Transforming online professional development: The design and implementation of the project-based learning management system (PBLMs) for in-service teachers. *British Journal of Educational Technology, 42*(1), E5-E8. doi:10.1111/j.1467-8535.2010.01143.x

DeSantis, J. (2012). Getting the most from your interactive whiteboard investment: Three guiding principles for designing effective professional development. *Clearing House, 85*(2), 51-55. doi:10.1080/00098655.2011.607867

Desimone, L., Porter, A., Garet, M., Yoon, K., & Birman, B. (2002). Effects of professional development on teachers' instruction: Results from a three-year longitudinal study. *Education Evaluation and Policy Analysis, 24*(2), 81-112.

Duncan-Howell, J. (2010). Teachers making connections: Online communities as a source of professional learning. *British Journal of Educational Technology, 41*(2), 324-340. doi:10.1111/j.1467-8535.2009.00953.x

Duran, M., Brunvand, S., Ellsworth, J., & Şendağ, S. (2012). Impact of research-based professional development: Investigation of inservice teacher learning and practice in wiki integration. *Journal of Research on Technology in Education, 44*(4), 313-334.

Ertmer, P. (2005) Teacher pedagogical beliefs: The final frontier in our quest for technology integration?. *Educational Technology Research and Development, 53,* 2-39.

Gurell, S., Kuo, Y.-C., & Walker, A. (2010). The pedagogical enhancement of open education: An examination of problem-based learning. *The International Review of Review of Research in Open and Distance Learning, 11*(3), 95-105.

Holmes, B. (2013). School teachers' continuous professional development in an online learning community: Lessons from a case study of an etwinning learning event. *European Journal of Education, 48*(1), 97-112. doi:10.1111/ejed.12015

Hou, H-T., Chang, K-E., & Sung, Y-T. (2009). Using blogs as a professional development tool for teachers: Analysis of interaction behavioral patterns. *Interactive Learning Environments, 17*(4), 325-340. doi:10.1080/10494820903195215

ISTE. (2017). *ISTE standards: Educators*. (n.d.). Retrieved from http://www.iste.org/standards/standards/standards-for-teachers

Keengwe, J., & Onchwari, G. (2009). Technology and early childhood education: A technology integration professional development model for practicing teachers. *Early Childhood Education Journal, 37*(3), 209-218. doi:10.1007/s10643-009-0341-0

Keown, P. (2009). The tale of two virtual teacher professional development modules. *International Research in Geographical & Environmental Education, 18*(4), 295-303. doi:10.1080/10382040903251166

Martin, W., Strother, S., Beglau, M., Bates, L., Reitzes, T., & Culp, K. (2010). Connecting instructional technology professional development to teacher and student outcomes. *Journal of Research on Technology in Education (International Society For Technology In Education), 43*(1), 53-74.

Mayer, R. (2001). *Multimedia learning*. Cambridge: Cambridge University Press.

Musanti, S. I., & Pence, L. (2010). *Collaboration and teacher development: Unpacking resistance, constructing knowledge, and navigating identities*. Retrieved from https://files.eric.ed.gov/fulltext/EJ872650.pdf

Partnership for 21st Century Learning. (2011). *Framework for 21st century learning*. Washington, DC: Author.

Puentedura, R. (2014). *Ruben r. puentedura's weblog*. Retrieved from http://www.hippasus.com/rrpweblog/

Smith, J., & Sivo, S. A. (2012). Predicting continued use of online teacher professional development and the influence of social presence and sociability. *British Journal of Educational Technology, 43*(6), 871-882. doi:10.1111/j.1467-8535.2011.01223.x

Stevenson, A. (2010). Online community. *Oxford dictionary of English* (3rd ed.). New York, NY: Oxford University Press. doi:10.1093/acref/9780199571123.001.0001

Walker, A., Recker, M., Ye, L., Robertshaw, M. M., Sellers, L., & Leary, H. (2012). Comparing technology-related teacher professional development designs: A multilevel study of teacher and student impacts. *Educational Technology Research & Development, 60*(3), 421-444. doi:10.1007/s11423-012-9243-8

Appendices

Appendix A: IRB Training

Institutional Review Board Approval

I have completed the IRB training, and I have submitted the copy of my completion.

Application of Products

The products in this portfolio will be used at The FAIR School Downtown. Teachers are able to access the online community and the trainings.

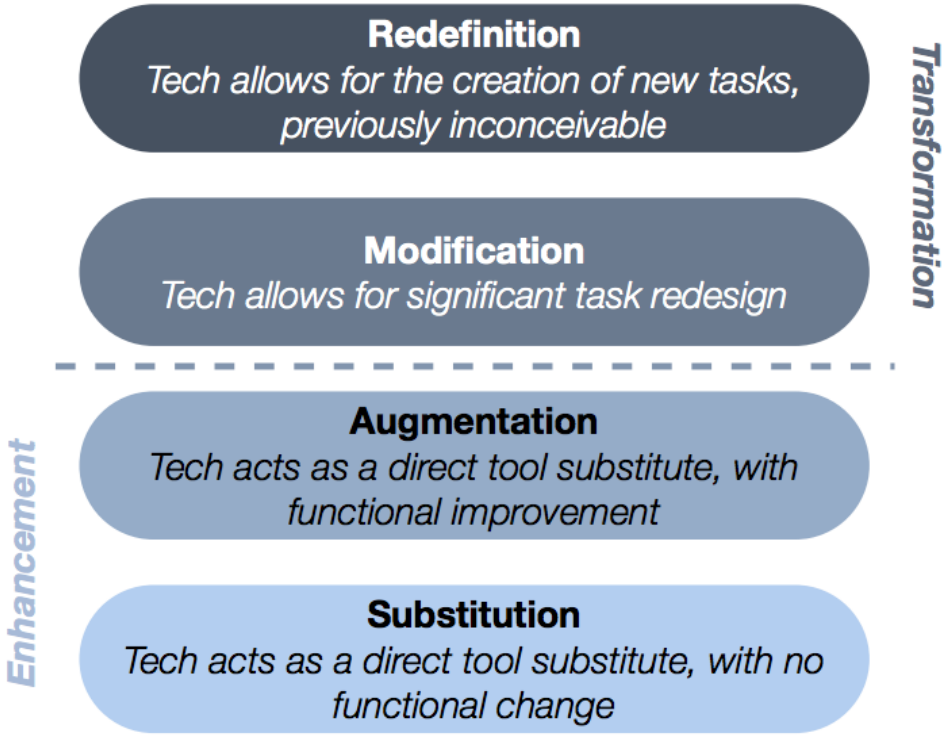
Timeline

All products and evaluation will be completed by the end of May 2018. A graduate committee will be formed and this proposal will be presented to them for approval by February 2017. The portfolio will be completed by the March 1, 2018.

Summary

Professional development is a necessary component for teachers in order for them to stay current with technology and other changes in the educational environment. The research included in this literature review shows that online professional development gives teachers the flexibility they need to fit in professional development to their schedules as well as the need for connecting and discussing strategies. Creating a community of learners helps the teachers to stay connected and allows for deeper reflection.

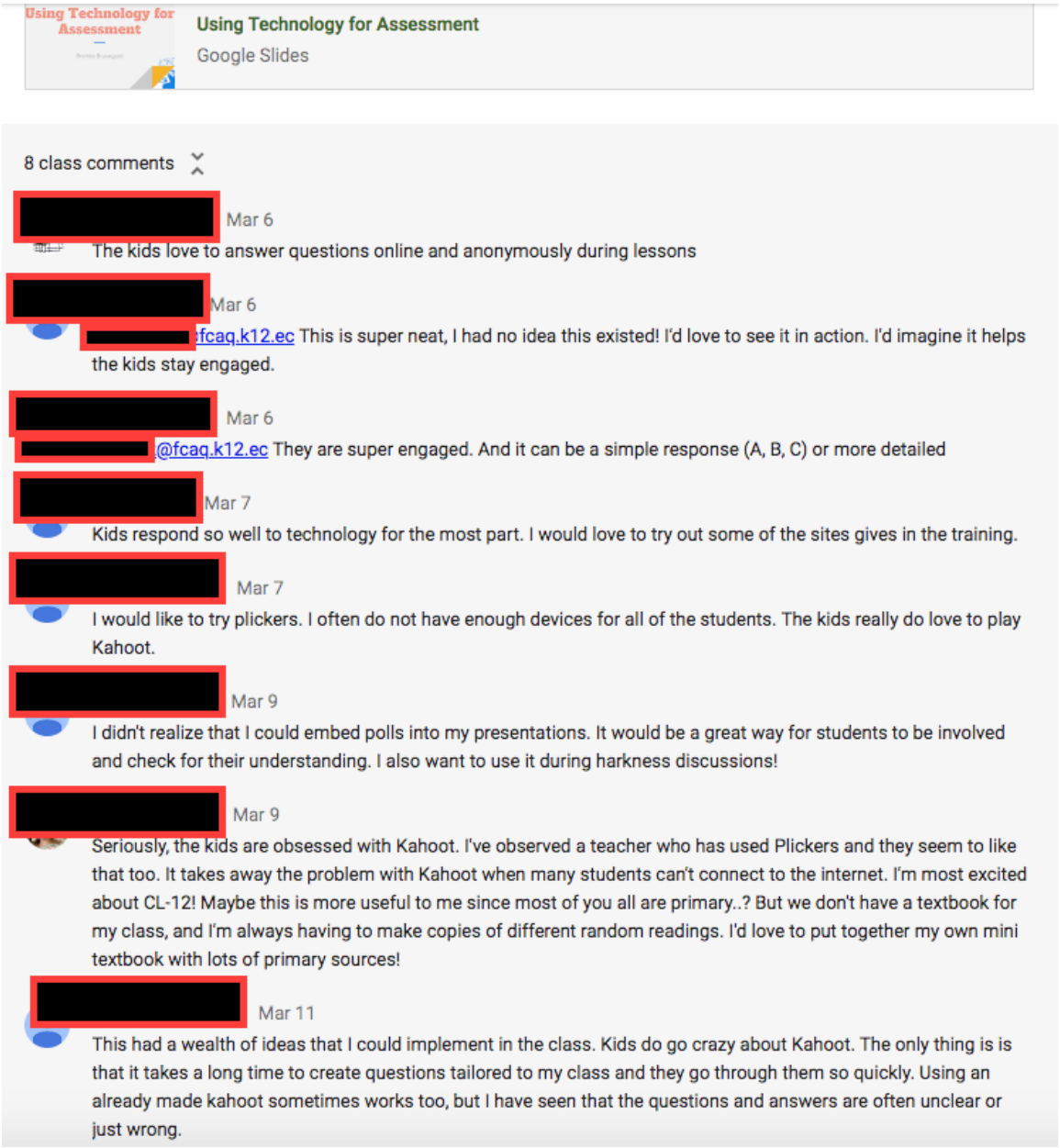
Appendix B: SAMR Model



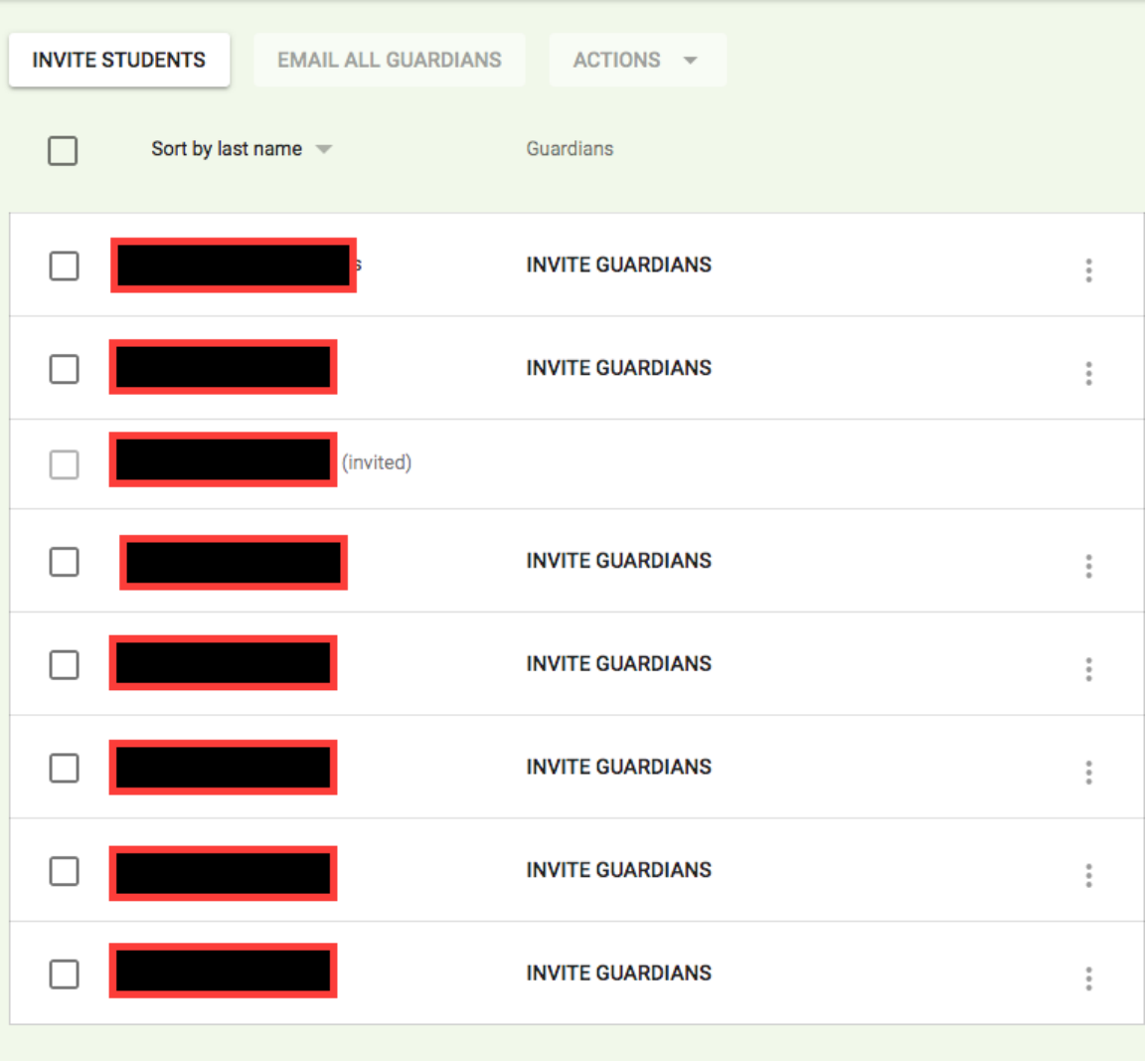
(Puentedura, 2014)

Appendix C: Screenshots of Google Classroom

In this screenshot, a training was posted, and the teachers made comments about it.

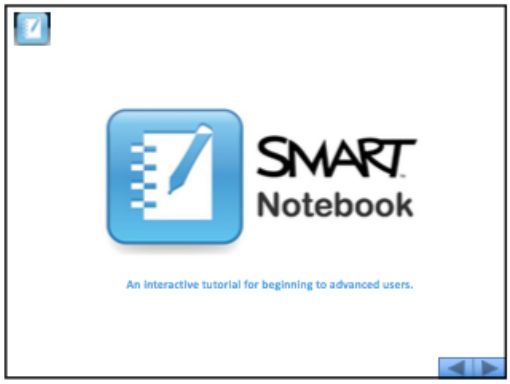


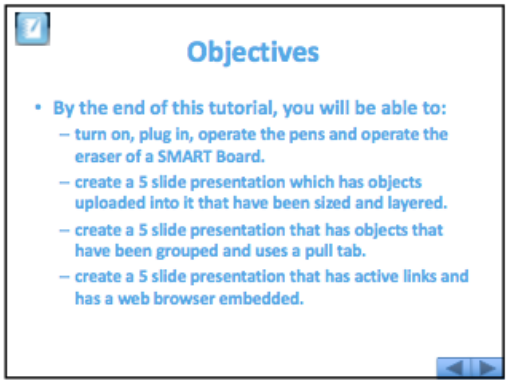
In this screenshot, I can see the list of students enrolled in the course, and there is one student that has not accepted the invite or logged into the Google Classroom site.

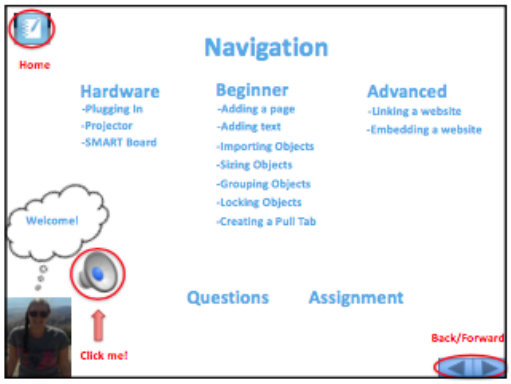


Appendix D: Screenshots of the SMART Notebook Presentation

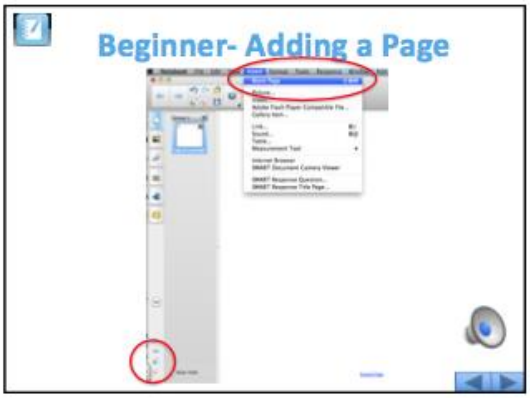
These are screenshots of the introduction and hardware sections of the presentation.

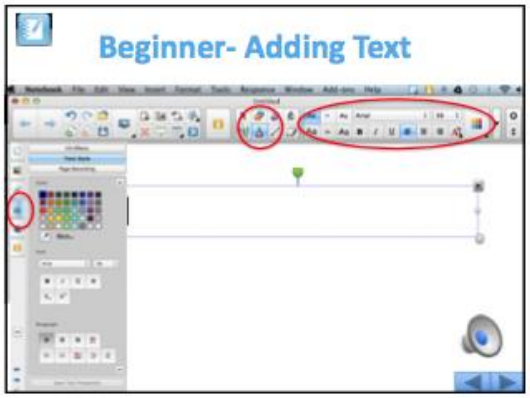


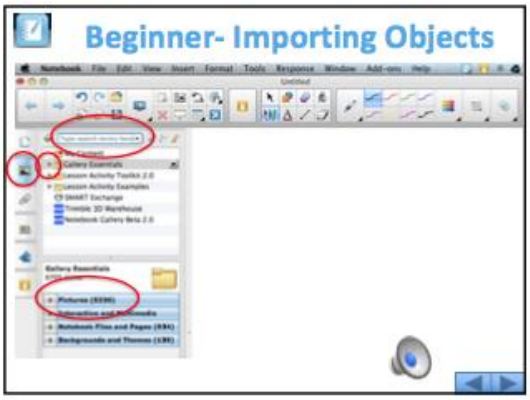




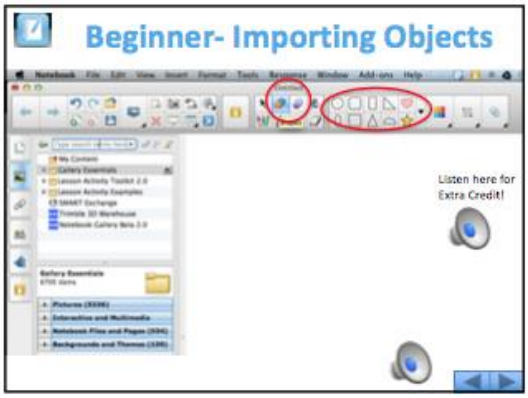
These are screenshots of the beginner section of the presentation.

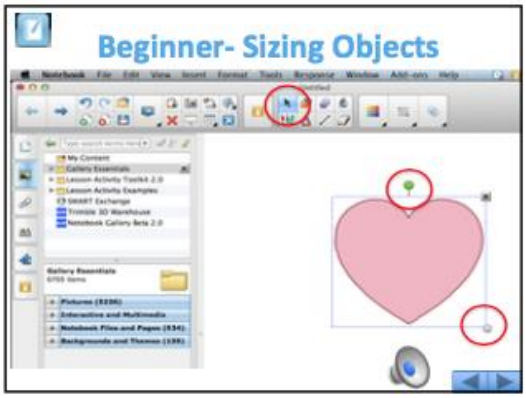


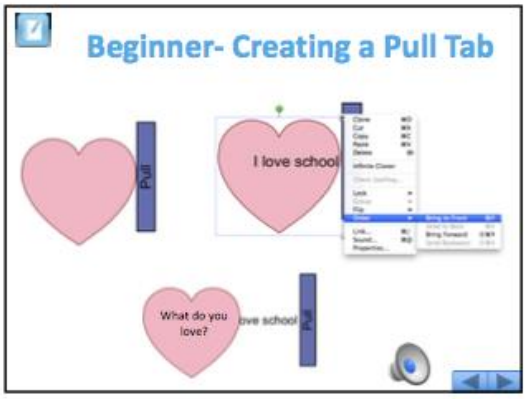




These are screenshots of the beginner section of the presentation.







These are screenshots of the advanced section of the presentation.