The Learning "Podsibilites": Podcasting in the Elementary Classroom

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Abstract

This action research project investigated the topic of podcasting in the elementary classroom. It examined the training and professional development teachers would need to begin podcasting. Finally, it probed into the effectiveness of student-created podcast and what lessons are to be learned when having students create podcasts. One fifth grade ELA teacher had her students create podcast projects. Findings proved that teachers were familiar with podcasting but unfamiliar with how to create them and how to use them in the classroom. The student podcast projects proved that podcasting is a meaningful, different way to assess student learning on any topic and it positively impacts student achievement. Student excitement for podcasting was evident through observations and interviews.

Background/Context

When it comes to selecting a topic for action research, it must be relevant and reflective. It is also important that it points the researcher to more innovative and effective practices. A growing trend in today's schools is to provide today's learners with access to learning anytime and anywhere. As a result, many universities have incorporated the use of "podcasts" in order to supplement traditional lectures and instruction. Podcasts are audio or video files that are shared on the web and made available for subscription. Just as one subscribes to printed publications and receives them periodically, podcasts are files that one can subscribe to and receive whenever there is new content. Podcasting would allow students to access lectures, tutorials, or other instructional material whenever or wherever they want.

In the Educational Technology department, Educational Technology Specialists are responsible for training teachers and collaborating with them for the effective integration of technology in their classrooms. It's important to teachers that they have training on instructional tools that's relevant for their curriculum and engaging for their students. Teachers can use

podcasts to introduce new units, teach complex concepts or record lessons to be used when students are absent or need to hear them again. Students can also create podcasts to demonstrate what they have learned. When students create podcasts they are developing good oral and written communication skills, practicing proper digital citizenship and creating original works of self-expression.

The research question of this study is to explore how podcasting can improve student learning by investigating the following questions:

- What kind of training and resources are needed for teachers to begin podcasting?
- What impact can student-created podcasts have on student achievement?
- What lessons are learned as a result of having students create podcasts?

Originally, the researcher included the question: is podcasting an effective tool to help teachers differentiate instruction? However, no research data was gathered in time so the question was removed. The researcher will be focusing on examining, on one hand, teacher professional development required for podcasts at an elementary campus where the principal has requested Podcasting Training for her staff and student podcast assignments with an English Language Arts and Social Studies teacher at another elementary campus. .

This topic is very meaningful to the researcher because she has observed that podcasting has been underused in this school district. This year the researcher has given several presentations on the topic at local, regional, and state conferences. It is the goal of the researcher to discover and observe some "best practices" for training teachers on podcasting, instructional use of podcasts, and student podcast assignments. This will give the researcher the opportunity to share these strategies with the Educational Technology Department and teachers in this district.

Research on Podcasting in Education

In researching the topic of academic podcasting and mobile learning one of the greatest supporting statements was that, "technology has changed the way students learn and technology has changed the way educators teach" (Luna & Cullen, 2011, p. 41). Because of the constant growth in emerging technologies, we are now living in an age of ubiquitous information where teachers and students alike are used to searching and accessing information quickly. However, when a student needs more information on what the teacher discussed in class, that information can be hard to come by.

The primary reason for this is a lack of teacher technology proficiency and teacher technology professional development. Since technology professional development is directly related to one of the researcher's questions on this topic and the professional role of the researcher this information was very valuable. Luna and Cullen (2011) also stated that teachers may use a technology tool based on its accessibility and familiarity, but "they may not have a clear understanding of how the tool or method supports a particular type of content or instructions" (Luna & Cullen, 2011, p. 41). Prachi Panday mentioned that some educators fear the integration of new technologies into the instruction because of various reasons including, "a lack of knowledge, fear of technology, and extra work, lack of recognition, fear of failure, driven by the trend [and not its educational value]" (Panday, 2009, p. 257). On the other hand, there were some technology professional development courses that were directly related to the content area but the technology tools and the technical support were unavailable or very inaccessible. Finally, the research thoroughly examined teacher attitudes and deficiencies in regard to technology professional development. However, the research was lacking on an approach or

method to prepare quality technology professional development in a way that empowers teachers to effectively integrate technology into the instruction.

Each one of the research references strongly supported the educational merit of podcasting. In fact, podcasting is becoming a common practice for many educators in higher education. The research by Deal (2007) and Luna and Cullen (2011) on the topic was done on college and university campuses. One of the primary ways colleges and university use podcasts is to share lectures and other supplemental content. This portable, on-demand content delivered via podcasts has been very favorable among many college students. Some have said podcasting lectures has, "revolutionized education by allowing for the anytime-anywhere delivery of instructional content" and it "can be listened to easily while driving, walking, or working out in the gym" (Deal, 2007, p. 6). Some instructors even had some students create podcasts as a way to assess what they are learning on a topic. Nevertheless, the literature for podcasting in K-12 setting was limiting. The most valuable literature was by Vasinda and McLeod (2011) and Swan and Hofer (2011).

This researcher found very little literature on how teachers were creating audio podcasts in K-12 classrooms but there was some literature that dealt with the topic of "the flipped classroom". This is a strategy where teachers create classroom lectures or discussions as video podcasts for students to view at home so that the majority of class time is spent on more hands-on activities. With popular resources like YouTube, TEDtalks, and Khan Academy this is a growing trend and topic in educational technology and education redesign. The "flipped classroom" approach began as a way to help struggling or absent students. But to their surprise, students who were not struggling or absent began using the material as a way to review and better understand class lessons (Tucker, 2012). Teachers who use the "flipped classroom" model

agree that “it’s not the instructional videos on their own, but how they are integrated into an overall approach that makes the difference” (Tucker, 2012, p. 82). One teacher, Jonathan Bergmann, even confessed, “I now have time to work individually with students. I talk to every student in every classroom every day” (Tucker, 2012, p. 82). So producing video podcasts as a way to reinforce content, differentiate instruction, and reach each student seems to be the greatest opportunity for teacher-created podcasts. This supports one of the driving questions for a future research endeavor.

Finally, another way podcasting can be used to enhance student achievement is when teachers have students create podcasts. One Texas school completed action research on the efficacy of student-created podcasts with struggling readers by creating Readers’ Theatre. What they found out was that there were three major benefits to using podcast technology with this Readers’ Theatre research-based strategy: a wider audience, the permanency of the work, and using audio as a visualizing medium (Vasinda & McLeod, 2011). With a wider audience, students’ perceived value of this authentic audience was major. Plus, it allowed all parents to listen to their student’s work- not just the ones who could attend class on performance day. They also noted that the wider audience was “like being real” and the students could even recognize the growth of their struggling classmates as they participated together in the Readers’ Theatre. Students also were able to see the permanency of their work as they discovered their own voice by continuing to listen and evaluate their podcasts. Lastly, students discovered that audio had a visual side when they used audio editing software like Audacity. It enabled them to see when the volume was too loud or a pause was too long which showed the students what they needed to do in order to make their performances better (Vasinda & McLeod, 2011).

Another group that experimented with the student created podcasts was in a high school Economics classroom. It was in this study that they summarized three ways they perceived the value of their student-created podcasts. First, it significantly increased student motivation and drive (Swan & Hofer, 2011). Students were working on their podcast projects at home and because the podcast was going to be shared the teacher said, "it was nice to see that the kids really wanted to put some effort into this" (Swan & Hofer, 2011, p. 88). Secondly, it served as a meaningful but alternative way to assess student understanding. For instance, one teacher noted, "There was definitely value-added with the kids individually do it, I think, because it was a good way for me to tell, OK, well this group really understands the content, which was nice" (Swan & Hofer, 2011, p.89) As a final point, the students' podcasts enhanced their ability to creatively express themselves (Swan & Hofer, 2011).

In conclusion, incorporating podcasting in teachers 'classrooms can have the benefits of anytime-anywhere learning, increase in student motivation, higher student engagement, and alternative assessment. The goal of this research project will be to investigate some best practices with podcasting in the classroom and determine if podcasting is an effective way to improve teaching and learning in Fort Bend ISD.

Table 1. Methodology

Methodology	**Teacher Professional Development**	**Student-created Podcasts**
Question	*What kinds of training and/or resources are needed at the campus level in order for teachers to begin podcasting?*	*What impact can student-created podcasts have on student achievement?* *What lessons are learned as a result of having students create podcasts?*
Participants	Title I Elementary School Staff	One fifth grade English Language Arts teacher at a Title I Campus
Materials	Podcasting in the Elementary Classroom Training Audacity Software Gaggle (school email accounts) Headphones/Microphone set Freeplaymusic.com	Audacity Software Microphones Freeplaymusic.com
Data Sources	Teacher Surveys Professional Development Post-Evaluations Teacher Interviews	Teacher interview Student interviews Observations Pre- and Post-Assessments

Methodology

Participants

For this action research there are three groups of participants. The first group is an elementary campus staff whose principal requested Podcast Training for the entire staff. This campus was included as a way to investigate the question of teacher professional development. The next group of participants are three fourth-grade math and science teachers at a Title I campus in our district who participated in the teacher-created podcasts section of the project.

Finally, the last participant is a fifth grade English Language Arts teacher at a Title I campus in our district who participated in the student-created podcasts part of the action research.

Materials

For the teacher training I reviewed the Educational Technology Department's current course titled "Podcasting in the Elementary Classroom". The training documentation included lots or resources and educational applications but it also included information that was out of date and no longer available. So, the training material was updated. Rather than use the three-hour suggested model a new one was developed to break the three hours into three individual training sessions. The first training would be an introduction course, the second with more hands on training, and the final part would include lesson plans and best practices. Training was provided using the free open-source audio–editing software, Audacity, which is already installed on all district computers. The principal had already purchased headphone/microphone sets for computer . For the student-created podcasts, we used Audacity for recording and editing. We also used www.freeplaymusic.com for royalty-free music. For the lesson plans created we used D2SC our district's curriculum portal.

Procedures

Lastly, as way to better prepare professional development for teachers as a whole, I developed and facilitated training at an elementary school. The first professional development meeting was with an entire staff of thirty-two teachers at an elementary school. This training defined podcasting and discussed some reasons why they should be podcasting in the classroom. A couple months later the researcher facilitated a hands-on training with the entire staff in the computer lab where each participant was given a Podcast Training Guide as a visual aid to help teachers with the process and as a reference after the training. Then, on the final training the

principal invited teachers who desired to know more to come to the follow-up training. That training was composed of a much smaller group of seven.

The researcher first met the fifth grade English Language Arts at iPad training on her campus. She seemed very interested in technology and she was currently using it in many innovative ways with her students. Her principal commended her level of technology proficiency and suggested she would be a great teacher to work with. When the research project was presented she wanted to have her students create podcasts. I facilitated a one-on-one training where I demonstrated how to use the Audacity software application and where to find the royalty-free music.

After reviewing her curriculum, she chose a unit that was new to her content area: Propaganda and Media Techniques. She believed this would be a great fit for a podcasting project. For this project, students reviewed, discussed and analyzed media persuasion techniques in commercials. After identifying effective commercials and discussing how each group member was influenced by the techniques used in them, students discussed how each commercial could be made better. Then students were placed into pairs and their task was to create an infomercial for a product they invented. Once the scripts for their infomercial were written, students were given time in class to practice. The teacher scheduled lab time in advanced to ensure students would have the time they needed to create their podcasts. On their scheduled day, students brought their prepared scripts and microphones to the computer lab. I assisted the students in the computer lab on their first day. I did a short training on the software (Audacity), royalty-free music sites, and how to save their audio files to their H: drives. The students didn't complete them on the first day. So they returned to the lab two more days to complete the assignment.

Figure 1. *Six Step Podcasting Process*

Data Sources

Several instruments were used to answer the research questions. The data sources were: surveys, evaluations, interviews, observations, pre-assessments, and post-assessments. Since the goal of this research was to determine "best practices" in regard to the use of podcasting in the elementary classroom, these data sources will provide the researcher with the necessary information to share with others in presentations, trainings, or in collaboration with teachers when it comes to integrating podcasting in the classroom.

Research Question 1: What kind of training and resources are needed at the campus level in order for teachers to begin podcasting?

For research question one, a teacher survey was created prior to training using surveymonkey.com to access teacher's prior knowledge in regard to the educational applications of podcasting. It will also provide data as to what is important to them when integrating technology into the curriculum- not just podcasting. After the training, the researcher will review the post-evaluation survey provided in Avatar, which is the district's e-learning software. The teacher will also use data from the teacher interviews.

Research Question 2: What impact does student-created podcasts have on student achievement?

The best way to determine the impact on student achievement is through assessments. So the researcher will show the impact student-created podcasts have on student achievement by comparing their scores on a pre-assessment and post-assessment to a class that did not create podcasts.

Research Question 3: What lessons are learned as a result of having students create podcasts?

Another data source will be interviews with the participating teachers and some of the participating students of the student-created podcasts. A transcript of both interviews is provided in the Appendix. Finally, the researcher will take notes from observations while accompanying the teacher in the computer lab with her students when they were creating podcasts.

Data Analysis

The researcher will mainly use the information shared on the survey, teacher interviews, student interviews, and classroom observations for a qualitative and descriptive analysis. The purpose is to analyze the text and identify common themes and categories using the interviews

and surveys. Due to the nature of some of the survey questions and use of student scores this research will provide some numerical and categorical data as well.

Findings

Research Question 1: What kind of training and resources are needed at the campus level in order for teachers to begin podcasting?

The primary role of an educational technology specialist is to provide professional development for teachers that are useful in helping them meet their many instructional goals. So the researcher created a survey to determine what teachers already knew about podcasting and what was important to them when integrating technology into the curriculum.

In surveying teachers on the elementary campus prior to any training on podcasting what the researcher discovered was that many teachers were familiar with podcasting (Figure 2) but only a few had attended any training on the subject (Figure 3). See

Figure 2.

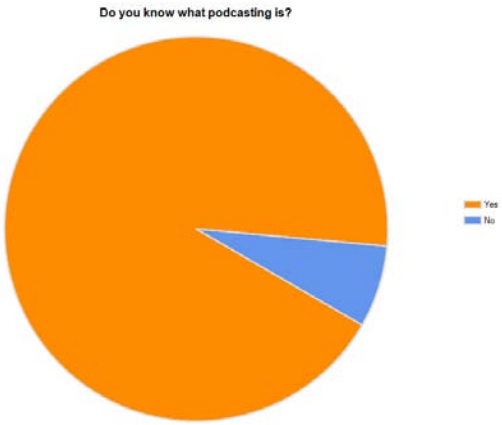
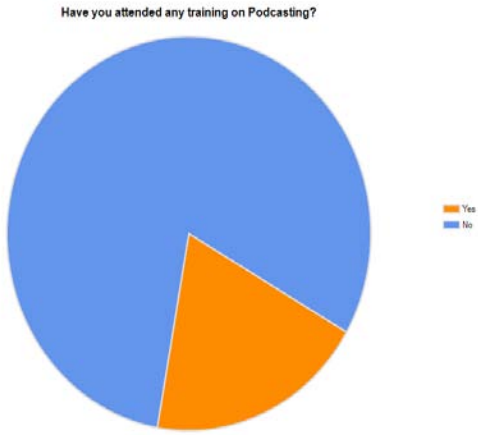
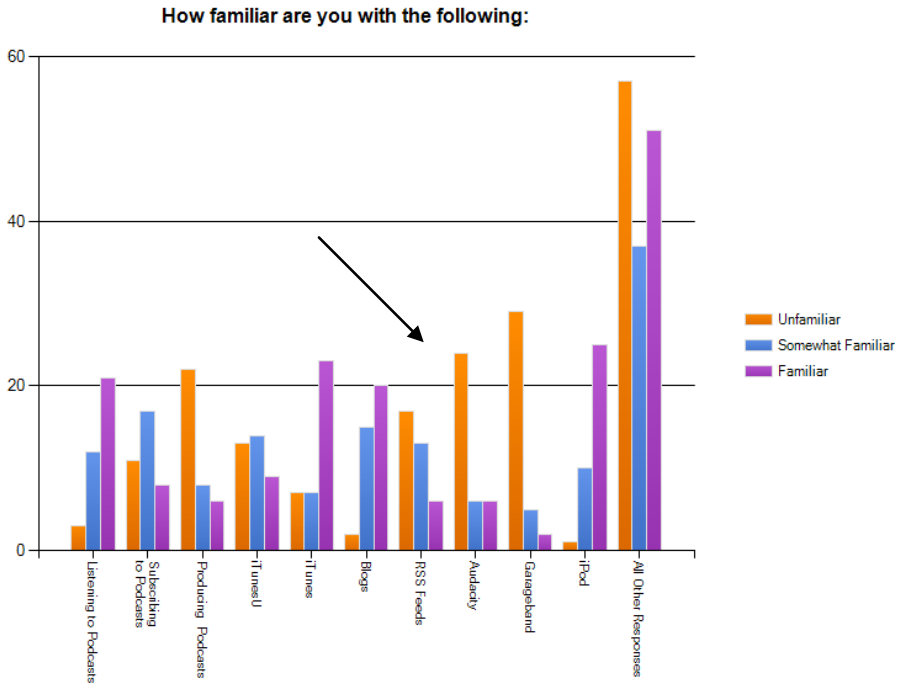


Figure 3.



Survey data also showed that many of them were familiar with some podcasting related topics such as: iTunes, blogs, and some have even listened to podcasts. See Figure 4. Still, when it comes to creating and sharing podcasts many of them were unfamiliar with this. Most of

Figure 4.



them were unfamiliar with Audacity, the software used to create podcasts, even though it is installed on every computer in the district. This was also a type of formative assessment that would help the researcher prepare the appropriate level (e.g. novice, intermediate, etc.) of documentation for technology training. For example, since, teachers were unfamiliar with Audacity there would need to be some basic training documents on how to use that software.

Another purpose to the survey was to determine what was most important to teachers when it comes to integrating technology into the curriculum. When asked, "What's most important to you when it comes to integrating technology in your curriculum?" The teachers ranked them in the following order: student interest, usefulness, professional development training, ease of use, and lastly technical support. See Table 2.

Table 2.

5. What's most important to you when it comes to integrating technology in your curriculum. Rank the following in order of importance with 1 being least important and 5 being most important.

Create Chart Download

	1	2	3	4	5	Response Count
Professional Development/Training	13.9% (5)	22.2% (8)	13.9% (5)	13.9% (5)	**36.1% (13)**	36
Usefulness	5.6% (2)	22.2% (8)	**27.8% (10)**	19.4% (7)	25.0% (9)	36
Ease of Use	11.1% (4)	**33.3% (12)**	16.7% (6)	22.2% (8)	16.7% (6)	36
Student interest	2.8% (1)	11.1% (4)	33.3% (12)	**36.1% (13)**	16.7% (6)	36
Technical Support	**66.7% (24)**	11.1% (4)	8.3% (3)	8.3% (3)	5.6% (2)	36
					answered question	36
					skipped question	0

After the training, seventeen of the thirty-six participants responded to the evaluation in Avatar's eLearning system. One participant shared that the training was a "Great course! [I] wouldn't change a thing about the course!" Another participant wrote, "I will use the information when I plan my lessons." A third participant found the "hands-on activities" most beneficial and another liked the "new technology to utilize in the classroom."

Research Question 2: What impact does student-created podcasts have on student achievement?

Student achievement data. In reviewing student scores on the pre- and post-assessments for their unit on Propaganda and Media literacy, it is evident that students who created podcast scored higher on the post-assessment than their counterparts which did not create podcasts. Table 3 shows the mean score on pre- and post-assessments between the class that created podcasts and the class that did not create podcasts. It also shows that students who created

podcasts still scored higher on the post-assessment and that they improved by 11 points. The class that did not create podcasts showed an improvement of only 7 points.

Table 3.

	Class that Created Podcasts	**Class that did not Create Podcasts**
Pre-Assessment Score	80.8	70
Post-Assessment Score	91.7	77.2
Difference	11	7.2

Research Question 3: What lessons are learned as a result of having students create podcasts?

In conducting a textual analysis of the interviews and reviewing the assessments, the data suggested four categories that can be attributed to the impact student created podcasts has on student achievement. The three categories were: (1) training, (2) alternative assessment, 3) student interest, and (4) time limitation.

Training. Recognizing that most teachers are still new to podcasting in the classroom, the teacher must be comfortable with podcasting before she begins to integrate it into her classroom. In her interview the teacher stated, "I was learning podcasting as I was teaching it. I was so excited and plunged in before practicing it thoroughly. So it slowed me down when I could not quickly answer [the students] questions and/or show students a skill." (Wallace, 2012) The students also had some training but the teacher noticed, "The students tend to learn the necessary skills faster than we do." (Wallace, 2012) The students had very little to say about the training.

Alternative Assessment. Podcasting can be another way to assess what students have learned about academic subjects and concepts. The teacher said, "during this time [when students are practicing their podcast], as students are talking with one another, they are acquiring more knowledge as they explain the content and ideas. This can lead to better understanding of the content. Content mastery is high, which is demonstrated through the final podcast and individual assessments." (Wallace, 2012) Through the added discussion time about the content students are sharing and learning more about the topic.

Student Interest. Because podcasting involves technology it was evident that students definitely were more engaged and more interested in creating podcasts. When asked what they thought about the project, one student said, "I like the project because it is fun." Another student said, "It was interesting." They liked the fact that "you can add background music" and "record your voice". One student commented that she liked that "it was new". Another student said, "it was interesting to pick your own music and make it fun." All of the students interviewed wanted to do more podcasting projects. Students were so excited that the teacher added, "Once students began, they wanted to keep going, even into recess time. Be prepared for the excitement."

Time limitations. Podcasting is an engaging learning activity for students and an alternative way to assess students. Still, because of its novelty, time presented many limitations. The new model of service for educational technology specialists changed from previous years when they were housed on one or two assigned campuses. With the current model, time for collaboration, planning, and training was critical because it needed to be scheduled in advanced. Furthermore, it needed to be mostly arranged by the participating teacher. Formerly, the instructional technology specialist scheduled the computer lab for teachers and often worked collaboratively on technology integration lessons. While time was scheduled for training and assisting students in the computer lab, the teacher still said:

> *Once you learn how to produce a podcasts, you are well on your way…Make sure you schedule adequate lab time. Your projects will take longer at first; but after you have completed one, you and your students will be able to move fairly quickly through one. It took me a week to complete the first project and two days to finish the other one. (Wallace, 2012)*

Finally, the outcomes of this research endeavor showed that teachers are not using podcasts in the classrooms because they are unfamiliar with the tools to use and podcasting's educational value. So, any professional development on the topic will need to address these issues. Secondly, students are highly interested in creating podcasts. As a result, teachers will want to consider student-created podcasts as an alternative way to assess students' content knowledge since it is shown to improve student achievement and engagement.

Discussion

Podcasting is definitely one of the digital tools that can be used by both teachers and students and applied to any content area. One of the keys to integrating this "universal tool" in the classroom is making sure teachers know how to apply it in their classrooms and teach them what tools they will need to accomplish it. One of the discoveries from this research was that teachers didn't know that there were some educational uses for podcasting. In fact, very few of them even knew about the software used to create podcasts and that the software was available to them. Through research like this on the effective integration of podcasting in the classroom, more teachers can be trained on and made aware of its usefulness such as: recording lectures for absent students, helping students manage their own learning by sharing the podcasts on the internet for students to access anywhere and anytime, finally as a way to reach the various needs of students in their classroom. Furthermore, teachers don't like having to repeat themselves but most students need repetition. Podcasting is a great way to satisfy this challenge. With podcasting teachers can share their lectures or demonstrations and students can listen or view

them as often as they need to. Hargis and Wilson believe "a podcast (a collection of real, raw, and spontaneous ideas) captures the attention of the listener and can sustain this attention to transfer the concepts into the long term memory." (Panday, 2009, p.252)

Furthermore, when teachers are planning their lessons, it is important that they consider podcasting because as Swan and Hofer put it, "podcasting is clearly a universal tool that supports the communication of content, either by teacher or student" (Swan and Hofer, 2011, p. 90) Thus, it is an alternative way to assess student's mastery of the content. The researcher found out that students who created the podcasts scored higher on post assessments. Now all of this may not be attributed to the use of podcasting but much of it had to do with the student's interest and engagement with the technology. The students in the class' experience were very similar to that of the students in the economics classes where they found that "students were so engaged in the projects that they worked beyond class times and project requirements." (Swan and Hofer, 2011, p. 88). Teachers should not incorporate podcasting for its fun factor only because when students create podcasts they are developing speaking, listening, interviewing, revising, evaluating, and communication skills. The state of Texas has recently modified the Technology Applications TEKS (Texas Essential Knowledge and Skills) for the upcoming year. These new standards closely resemble the strands of the National Education Technology Standards for Students. The strands of these standards include: Creativity and Innovation, Communication and Collaboration, Research and Information Fluency, Critical Thinking and Problem-Solving, Digital Citizenship, and Technology Operations and Concepts. As a way to help students meet the new technology standards and demonstrate mastery of their content, it would be beneficial to consider having students create podcasts. Just by incorporating a podcasting project for a group/pair of students, students are accomplishing most of these standards. They are ***creating*** original works of

expression, they are ***communicating*** with peers to publish their ideas using digital media, they are ***thinking critically*** about how to plan and complete their podcast projects, they are practicing good ***digital citizenship***, and they are learning how to ***use technology*** effectively and productively. All of these are necessary for creating learning environment that appeals to today's digital learners. As a result, it will create an environment where learning is more meaningful and exciting.

Finally, time is an important dynamic because the teacher will need time to learn the basics of podcasting so that they can best support their students. It will also be necessary to plan the time in the computer labs accordingly so the students will be able to complete their podcasts in a reasonable amount of time. It may be necessary to explain to students and parents how to download the free software at home if students need more time to work on their projects.

Table 4.

Lessons Learned in Podcasting

For Teachers	For Students
• *Listen to several podcasts to get ideas.* • *Determine the best unit and task for students to create podcasts.* • *Plan for more time than necessary.* • *Create a sample podcast so you can feel comfortable with the software.* • *Model good digital citizenship by sharing royalty-free resources and music for podcasts.*	• *Listen to several podcasts to get ideas.* • *Share the rubric/project expectations up front.* • *Communicate with students how the podcasts will be shared and inform their parents.* • *Have students create scripts and practice before recording.* • *Instruct students on where to find royalty free music for podcasts.* • *Have students use first name only*

Limitations of this Study

As stated earlier, this year the Educational Technology Department changed its model of service. In doing so, an instructional technology specialist was no longer housed on a campus where they only worked with one campus. This change greatly impacted the process for this research endeavor. Because ETS now served multiple campuses it made scheduling, planning, and training very challenging. Also, the time limitations made securing all the necessary documents and data much more difficult. Not to mention, this was the first research endeavor by the researcher.

Further implications for Future Study

This research study investigated only two of the original questions. As a result, some questions that could be investigated further are: Given the new model of the Educational Technology Department, how can ETS best support teachers with technology integration? What is the best use of the ETS' time under the new model: delivering training to students, professional development, and lesson planning assistance and collaboration, and/or modeling technology in their classrooms?

Some other general questions for other researchers are: What kinds of student assignments, assessments, projects or tasks are best suited for creating podcasts? Is podcasting or vodcasting an effective tool for differentiating instruction? What impact does the flipped classroom model have on student achievement? What are teacher attitudes toward the flipped classroom model?

Conclusion

The goal of this research was to investigate how podcasting can improve teaching and learning in the classroom. In this study teachers received professional development on Podcasting in the Elementary classroom. This training provided teachers with up-to-date

websites, references, detailed steps for using the software, and curriculum lesson plans. In this new training information included ways to share a podcast using Gaggle, the district's student email accounts, and Skyward the student management software. These applications are available to all teachers in the district at all grade levels. In addition, one ELA teacher had her students create podcasts to assess their learning of Propaganda and Media Literacy. In so doing, she discovered podcasting was not only fun but was a perfect match for this unit because they created their own audio commercials. In addition, students who created the podcasts scored higher on post assessments than their non-podcasting schoolmates.

Some recommendations for integrating podcasting in the classroom are to communicate with parents early, share student projects online, and start small. As one of the teachers stated in her interview, "it would be great to announce the teacher-created podcast lessons at a Parent Conference Night or Open House." (Thomas, 2012) Additionally, in this research students created their podcasts only for their teacher but if they were shared online, it would have given students a larger performance audience like their parents, relatives, and friends. Since parents are not always available to come to school and listen to student projects this is a great way to share student work with them. Finally, start small. If a teacher wants to create podcasts for her students, start by creating them for one unit first. If a teacher wants her students to create podcasts start with one unit. Also think about whether an educational technology specialist should be contacted to assist in collaboration or training of teachers and or students. Ultimately, once teachers discover how easy it can be for them and their students to create podcasts and find out the tools they need are already available to them, they will begin to see how this digital tool can open up new learning "pod"sibilities in their classroom.

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Appendix A
Action Research Podcasting Teacher Survey

1. Do you know what podcasting is?

Response Percent
Response Count
Yes 93.1% 27
No 6.9% 2
answered question 29
skipped question 7
1 of 5

2. How familiar are you with the following:

Unfamiliar Somewhat Familiar Familiar
Response
Count
Listening to Podcasts 8.3% (3) 33.3% (12) **58.3% (21)** 36
Subscribing to Podcasts 30.6% (11) **47.2% (17)** 22.2% (8) 36
Producing Podcasts **61.1% (22)** 22.2% (8) 16.7% (6) 36
iTunesU 36.1% (13) **38.9% (14)** 25.0% (9) 36
iTunes 19.4% (7) 19.4% (7) **63.9% (23)** 36
Blogs 5.6% (2) 41.7% (15) **55.6% (20)** 36
RSS Feeds **47.2% (17)** 36.1% (13) 16.7% (6) 36
Audacity **66.7% (24)** 16.7% (6) 16.7% (6) 36
Garageband **80.6% (29)** 13.9% (5) 5.6% (2) 36
iPod 2.8% (1) 27.8% (10) **69.4% (25)** 36
MP3 13.9% (5) 25.0% (9) **61.1% (22)** 36
Blogs 11.1% (4) 36.1% (13) **55.6% (20)** 36
Embed **58.3% (21)** 22.2% (8) 19.4% (7) 36
Podomatic **75.0% (27)** 19.4% (7) 5.6% (2) 36
answered question 36
skipped question 0
2 of 5

3. How comfortable are you with the following:

Uncomfortable Comfortable Very Comfortable
Response
Count
Learning new technology 8.3% (3) 33.3% (12) **58.3% (21)** 36
Learning new technology that will help you differentiate instruction 0.0% (0) 36.1% (13) **63.9% (23)** 36
Learning new technology that will motivate your students 0.0% (0) 41.7% (15) **58.3% (21)** 36
Learning new technology that you can immediately use in the classroom 0.0% (0) 33.3% (12) **66.7% (24)** 36
answered question 36
skipped question 0
3 of 5

4. Have you attended any training on Podcasting?

Response
Percent
Response
Count
Yes 19.4% 7
No 80.6% 29
Other (please specify)
1
answered question 36
skipped question 0
4 of 5

5. What's most important to you when it comes to integrating technology in your curriculum. Rank the following in order of importance with 1 being least important and 5 being most important.

1 2 3 4 5
Response
Count
Professional Development/Training 13.9% (5) 22.2% (8) 13.9% (5) 13.9% (5) **36.1% (13)** 36
Usefulness 5.6% (2) 22.2% (8) **27.8% (10)** 19.4% (7) 25.0% (9) 36
Ease of Use 11.1% (4) **33.3% (12)** 16.7% (6) 22.2% (8) 16.7% (6) 36
Student interest 2.8% (1) 11.1% (4) 33.3% (12) **36.1% (13)** 16.7% (6) 36
Technical Support **66.7% (24)** 11.1% (4) 8.3% (3) 8.3% (3) 5.6% (2) 36
answered question 36
skipped question 0
5 of 5

Q4. Have you attended any training on Podcasting?
1 in a graduate class, i made a vodcast and a podcast Jan 2, 2012 12:38 PM

Appendix B

Report Results

Overall Evaluation Report for Podcasting in the Elementary Classroom - Elementary

Question 1:

The Class met my expectations.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 2:

The program was well organized.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 3:

The program contained content relevant to my professional life.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 4:

The program made effective use of visual aides (i.e., overheads, video, etc.)

- Strongly Agree: 41% (7)
- Agree: 29% (5)

- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 5:

The program covered the right amount of material in the allotted time.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 6:

Program provided helpful supplementary materials (manuals, workbooks, handouts, etc.)

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 7:

The material was presented in a variety of learning styles.

- Strongly Agree: 35% (6)
- Agree: 35% (6)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 8:

Overall program rating.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 9:

The presenter possessed excellent content knowledge.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 10:

The presenter made good use of time.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 11:

The presenter responded to questions effectively.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 12:

The presenter shared valuable examples and/or personal experiences.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 13:

The presenter maintained a high level of professionalism.

- Strongly Agree: 41% (7)
- Agree: 29% (5)

- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 14:

The presenter demonstrated respect for people.

- Strongly Agree: 41% (7)
- Agree: 29% (5)
- Neutral: 29% (5)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 15:

Overall presentation rating.

- Strongly Agree: 35% (6)
- Agree: 29% (5)
- Neutral: 35% (6)
- Disagree: 0% (0)
- Strongly Disagree: 0% (0)

Question 16:

What information from this session was the most beneficial?

- All of it was great!
  5/1/2012 3:52 pm
- new technology to utilize in the clasroom
  5/10/2012 10:29 am
- hands on activities
  5/31/2012 9:44 am
- Great course !
  6/4/2012 7:51 am

Question 17:

How will you use the information in your job?

- I will use the information when I plan my lessons.
  5/1/2012 3:52 pm
- use with lesson planning
  5/10/2012 10:29 am
- in class
  5/31/2012 9:44 am

- Will apply accordingly !
  6/4/2012 7:51 am

Question 18:

Other:

- presenter was very good!
  5/10/2012 10:29 am
- Would not change a thing about the course !
  6/4/2012 7:51 am

Appendix C
Teacher-Created Podcasts

Student Viewing Tracking
4th Grade

Student Name _____

Day	Number of Times Viewed	Where?		What device?				Parent Signature
		School	Away from School	Computer	Tablet (iPad)	SmartPhone	MP3 Player	
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								
Monday								

APPENDIX D

ACTION RESEARCH PODCASTING QUESTIONS

Teacher 1 Interview: Teacher-Created Podcasts

Thomas Interview May 21, 2012

1. **What podcasts did you create for your students?** *I did long division review, Ms. Villasana did problem-solving review, and Ms. Ball did converting measurements.*
2. **Did it take you a long time to create them?** *No, not at all. It took maybe 2 minutes to record the video. Maybe 5-7 minutes outside of that to develop the problem and think about what you were going to say and the steps to the problems when you record.*
3. **At this point do you know how many students viewed the vodcasts?** *From my class and both of my classes, I am going to say none. The papers were sent home in Tuesday folders and we talked to the students about it but I don't think the papers were given to parents because when I checked Tuesday folders the next week to put things in I noticed the papers were still there. Some were still in backpacks, so I'm not even sure parents knew that everything was happening. So when I asked about it nobody said that they had watched them when I surveyed them.*
4. **What do you think we could do to make that process better?** *I think we need to make sure that we have like certain parent nights here like STAAR night, Literacy night, or something to have that information given out then or during Open House. So just to kind a plan it out and have the videos already done and even if it is review have them already done so that parents know this is where you can go to look for those videos/podcasts.*
5. **How do you think you could have been best prepared as far as training, communication as it related to creating these vodcasts?** *I think the preparation was there and that may have been because I've done it before. I would like to know the specific steps with what you did how to put the video on Vimeo and share it on the blog.*
6. **Do you think they were effective?** *No because they were not used. But then I don't know because they were not watched. I think if there's maybe a log or they have to watch it and a parent has to sign it or teacher sign it to make sure they watched it.*

APPENDIX E

ACTION RESEARCH PODCASTING QUESTIONS

Teacher 2 Interview: Student-Created Podcasts

Wallace Interview, May 22, 2012

1. **What are the podcast projects your students worked on this year?**
   a. This year, students worked on two podcasting projects. For the first project, students reviewed, discussed and analyzed media persuasion techniques in commercials. After identifying effective commercials and discussing how each group member was influenced by the techniques used in them, students discussed how each commercial could be made better.
   b. For the second project, students reviewed this year's class novels, and then began discussing the one they liked most. Discussions were based upon the plot diagram. After identifying and discussing each part of the diagram, students discussed why they liked the book, and what could have made it even better.

2. **How did these projects show you that students mastered or did not master the content?**

   Students love to podcast, especially their own thoughts. Before they are able to do so, they must collect and organize their thoughts with group members. Before students produce a final project, they podcast a practice round. During this time, as students are talking with one another, they are acquiring more knowledge as they explain content and ideas. This can lead to better understanding of the content, as well as additional information for the podcast, elimination of weak material, and the generation of ideas for future podcasts. Content mastery is high, which is demonstrated through the final podcast, and individual tests.

3. **How long did it take to do these projects?**

   Podcasting is fun and easy. Once you learn how to produce a podcast, you are well on your way. The students tend to learn the necessary skills faster than we do. Make sure you schedule adequate lab time, a couple of times per week if possible. You don't want to move too far past the curriculum being addressed in the podcast. Your projects will take longer at first; but after you have completed one, you and your students will be able to move fairly quickly through one. It first took me one week to complete a project, then two days.

4. **How did your students respond to the project?**
   When I introduced podcasting to my students, they were amazed. I began by giving a brief summary, and then allowed to listen one on iTunes. A huge buy-in. Once students began, they wanted to keep going, even into recess time. Be prepared for the excitement!

5. **Did all of your students complete the project?**
   Most students finished their podcasting projects. The students who did not complete them were the ones who struggled with the content. It took them longer to begin, and they were also the students who struggled with reading. Next time, I will make certain to pull these students for a longer time before the project, and will work with them for a longer time on the actual recordings.

6. **What obstacles, barriers, did you run into completing this project?**
   There were a few obstacles I encountered that you can avoid. First, I was learning podcasting as I was teaching it. I was so excited, and plunged in before practicing it thoroughly. So, it slowed me down when I could not quickly answer questions and/or show students a skill. Second, be sure to schedule enough lab time. Time flies quickly in the lab, and students need at least 30 minutes per day. Also remember that students need to get out all that information stored in their heads before you move on to a new skill in your curriculum. Well, it just helps. I also learned that it can't hurt to offer some cookies to the teachers who are signed up in the computer lab when you want in.

7. **What are your next steps?**
   Next year, I plan on podcasting more, and will have already created rubrics for the projects.

APPENDIX F

Unit:
Personal  **Narrative** 

Objectives: TEKS

110.16.5.15.A	Students are expected to:plan a first draft by selecting a genre appropriate for conveying the intended meaning to an audience, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea;
110.16.5.17	Students write about their own experiences. Students are expected to write a personal narrative that conveys thoughts and feelings about an experience.
110.16.5.15.B	Students are expected to:develop drafts by choosing an appropriate organizational strategy (e.g., sequence of events, cause-effect, compare-contrast) and building on ideas to create a focused, organized, and coherent piece of writing;
110.16.5.20.A	Students are expected to:use and understand the function of the following parts of speech in the context of reading, writing, and speaking:
110.16.5.15.C	Students are expected to:revise drafts to clarify meaning, enhance style, include simple and compound sentences, and improve transitions by adding, deleting, combining, and rearranging sentences or larger units of text after rethinking how well questions of purpose, audience, and genre have been addressed;
110.16.5.20.A.i	verbs (irregular verbs and active voice);
110.16.5.15.D	Students are expected to:edit drafts for grammar, mechanics, and spelling; and
110.16.5.20.A.iii	adjectives (e.g., descriptive, including origins: French windows, American cars) and their comparative and superlative forms (e.g., good, better, best);
110.16.5.15.E	Students are expected to:revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.
110.16.5.20.A.v	prepositions and prepositional phrases to convey location, time, direction, or to provide details;
110.16.5.20.B	Students are expected to:use the complete subject and the complete predicate in a sentence; and
110.16.5.20.C	Students are expected to:use complete simple and compound sentences with correct subject-verb agreement.
110.16.5.21.B	Students are expected to:recognize and use punctuation marks including:
110.16.5.21.B.i	commas in compound sentences; and
110.16.5.21.B.ii	proper punctuation and spacing for quotations; and
110.16.5.21.C	Students are expected to:use proper mechanics including italics and underlining for titles and emphasis.

TA TEKS:

The student is expected to:

1B manipulate files using appropriate naming conventions, file management such as folder structures and tagging, and file conversion

1C navigate systems and application accessing peripherals locally and remotely;

2B respect the intellectual property of others;

2C abide by the Copyright law and Fair Use Guidelines for Educational Multimedia

3B collect and organize information from a variety of formats including text, audio, video, and graphics;

3D acquire information appropriate to specific tasks;

4A individually and collaboratively draft, edit, and publish products in different mediums;

4E communicate product results using technology;

Technology Applications for this Task:
Audacity
Gaggle

Brief Description/Steps of Lesson: Students will write a memoir reflecting on lessons they learned or experiences they had in 5th grade and share their memoir in a podcast for an audience of 4th graders.

1. Student will brainstorm and generate ideas for topic for their memoir.
2. Students will listen to sample podcasts that teacher created and read mentor texts from other memoirs.
3. Students draft their memoir, revise and edit
4. After peer or teacher conferencing, revising and editing, students are ready to publish their memoir.
5. Have students find royalty-free music on freeplaymusic.com that helps set the tone for their memoir and save it on their H: in ELA folder.
6. Open Audacity and have students import their MP3 music file. Then students will record their memoirs.
7. Once students have completed their podcasts and edited it to their satisfaction, they need to save the file as an .aup (audacity project file). Then, export the file to MP3. The student can include words like constitution, Declaration of Independence, etc in their tags.
8. Students will then need to upload their finished podcast to the appropriate homework drop box in Gaggle.

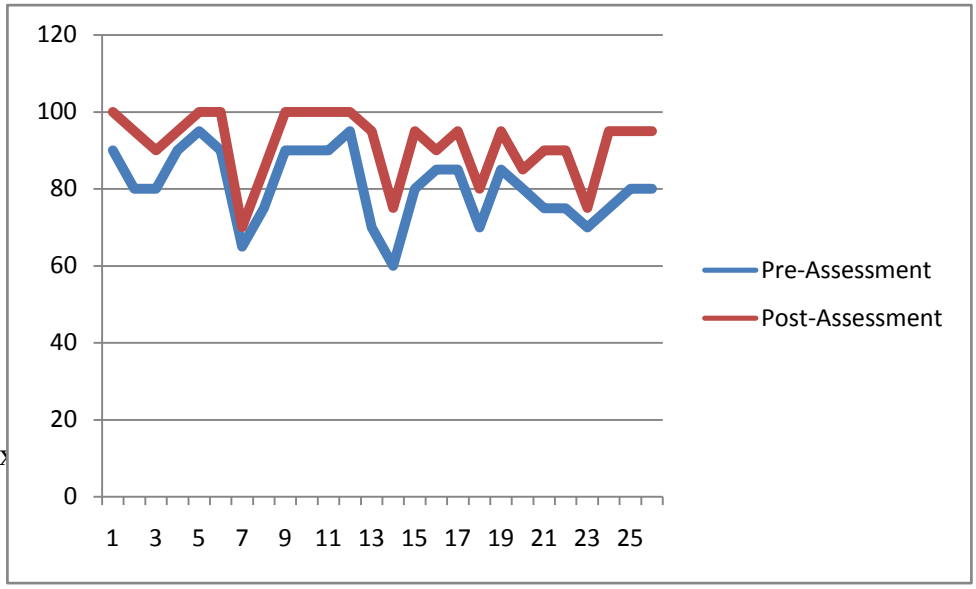
End Product:
Student memoir podcasts published on the Homework Drop Box in Gaggle. For assessment, you may want to consider the following criteria:

- *Memoir(Printed)*
- *Communication (Voice/ Language)*
- *Creativity (Tone & Effects)*
- *Digital Citizenship (Royalty-free music)*
- *Punctual*
- *Publishing*

Appendix G

Class A (Students created podcasts)

Student	Pre-Assessment	Post-Assessment	Difference
1	90	100	10
2	80	95	15
3	80	90	10
4	90	95	5
5	95	100	5
6	90	100	10
7	65	70	5
8	75	85	10
9	90	100	10
10	90	100	10
11	90	100	10
12	95	100	5
13	70	95	25
14	60	75	15
15	80	95	15
16	85	90	5
17	85	95	10
18	70	80	10
19	85	95	10
20	80	85	5
21	75	90	15
22	75	90	15
23	70	75	5
24	75	95	20
25	80	95	15
26	80	95	15



Appendix

Class B (Students DID NOT create podcasts)

Student	Pre-Assessment	Post-Assessment	Difference
1	50	55	5
2	75	80	5
3	80	80	0
4	90	100	10
5	70	75	5
6	60	65	5
7	65	75	10
8	70	75	5
9	70	85	15
10	65	70	5
11	75	80	5
12	90	100	10
13	65	75	10
14	50	60	10
15	55	60	5
16	70	80	10
17	85	95	10
18	75	80	5