What's a Podcast?
Introducing Technology in an Elementary Classroom

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April 29, 2006

Abstract

Fascinated with podcasting, I wanted to incorporate this new technology into my classroom, but I had wonderings. Would the introduction and use of podcasts affect the motivation and/or performance of second-grade students during a Mexico unit? Are there benefits or drawbacks when podcasts are integrated into the curriculum? Read on to learn about the experiences of an intern as he introduces podcasting to second-grade students.

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<u>Background Information</u>

Teaching Context

Alongside an experienced and highly motivated mentor teacher, I am teaching in a self-contained classroom with twenty-three second-grade students. My classroom is one of three second-grade classrooms at Easterly Parkway Elementary School (K-5). There are also three first-grade classrooms that, along with the second-grade classrooms, make up the primary division. Our school is located near a large research university in State College, Pennsylvania. Many of the university's international graduate students and their families live within Easterly Parkway's district lines. Thirty different home languages are represented in our school population of 367 students.

There is also a lot of diversity in my classroom, which consists of thirteen boys and ten girls. Six students have parents who were born in another country and whose first language is not English. Three of these students are part of the English as a Second Language (ESL) program at the elementary school, but only one of these students spends part of the day in the ESL classroom. There are seven students who are non-Caucasian, including three African-American children.

Several children in my class receive support from the school. Six of the students are below grade level for reading and receive support to improve reading skills and comprehension from the Title 1 program. Four students meet bi-weekly with the guidance counselor for emotional and behavioral support. There are two children in the classroom who meet weekly with the speech pathologist. One of these children is also physically and mentally handicapped, receives learning support, physical therapy, and occupational therapy, and has a wrap-around adult assisting him at all times.

Rationale, Main Question, and Wonderings

Main Question: Will the introduction and use of new technologies, specifically podcasts, affect the motivation and/or performance of second-grade students during a Mexico unit?

In the fall of 2005, I was enrolled in four method classes while student teaching, including Science Education (Scied) 458. A major focus of this class was incorporating technology into the classroom. We learned about podcasting and formed small groups to create unit-related podcasts for fifth-grade students. I was involved in the process of researching a topic, writing a script, and recording a podcast for the purpose of enhancing a school curriculum. I was very interested in the creative side of making podcasts, and I initiated the Scied 458 Podcast Awards, created a recording for the event, and had the class vote on awards for small groups and individuals. Unfortunately, our class was never informed if fifth-grade students ever had the opportunity to listen to our podcasts. During this experience, I had my initial wonderings. I began to question if the incorporation of podcasts in an elementary classroom was actually feasible and if elementary students would also become engaged and interested in the subject matter, similar to my own experiences.

Another methods class I took was Social Studies Education 430. The goal of the class was to have student teachers determine how they are going to teach dynamic social studies lessons in the future. Class discussions emphasized the importance of integrating social studies into a classroom where social studies is not considered a vital subject. I realized the importance of social studies instruction and started to wonder if I could do more to make social studies instruction a central focus in my classroom.

In early January 2006, I started brainstorming possible ideas for my inquiry. I created goals for my topic, listed the topics that interested me, and combined these ideas (Appendix A). My goals included developing an interesting and meaningful topic that complimented the school's curriculum. Also, I was aware of the opportunity for two interns to complete a podcasting project with their class and then prepare a presentation at the annual meeting of the Society for Information Technology and Teacher Education in Orlando, Florida. Knowing that podcasting was a new technology and that there was interest in this topic at state, national, and international conferences, I decided that I wanted to create an inquiry focus incorporating the use of podcasts with my second-grade social studies unit.

Having my students use podcasts was not the only reason I wanted to incorporate this technology into my classroom. I had never heard of podcasts being used with primary students, and I wanted to find out the affect podcasts would have on my classroom. My wonderings became:

- *How will the integration of podcasts enhance the existing curriculum?*
- *How will podcasts increase parental knowledge of classroom happenings?*
- *Is there an appropriate way to introduce new technology to second-graders?*
- *How much guidance and support will I need to give students to create their own podcasts?*

With my questions and brainstorming in mind, I developed a main question for my inquiry.

Will the introduction and use of new technologies, specifically podcasts, affect the motivation and/or performance of second-grade students during a Mexico unit?

While I was not chosen as a participant for the Orlando conference, I realized that my wonderings about podcasting remained and to pursue this topic could personally provide me with information on technology and education as a teacher. This information could include whether or not incorporating podcasts into the classroom would have positive effects on student motivation and the teaching of social studies and technology. My inquiry will have many implications on my future teaching, as I will experience how incorporating technology, specifically podcasts, into the classroom will be a benefit or a drawback to the students' education. I will have to decide if I will incorporate technology again in a similar fashion or if I will decide that podcasting is not the most effective means to motivate students and to enhance the curriculum.

Experts, Websites, and Literature

Since my inquiry deals with a new technology, there is no research on podcasting in an educational setting. Therefore, this section will be divided into experts, websites, and literature.

Throughout my inquiry, I was fortunate to be able to consult with Carla Zembal-Saul, an Associate Professor of Science Education and a faculty member in the Professional Development School (PDS) at the Pennsylvania State University. Dr. Zembal-Saul developed a plan for implementing a podcast project in the elementary science methods course she co-teaches. She informed me that there is no formal research on podcasting in an educational setting and allowed me to interview her on the

aforementioned podcast project. Since my inquiry project dealt with incorporating technology into the classroom, specifically podcasts, I valued her insights as she already had experience with this issue.

Dr. Zembal-Saul stated that the podcasting project required interns of the PDS program to develop podcasts based on the State College Area School District science curriculum for fifth-grade students. She described the purpose of her podcasting project in an educational setting, "The purpose was two-fold. First, interns needed to learn that content themselves in order to assist with teaching water quality stations for the trip. Second, we hoped to make the podcasts available to fifth grade teachers to either prepare their students for the stream study, or to help them process the stream study results after the trip" (C. Zembal-Saul, personal communication, April 2006). I was very interested in podcasting at the elementary school level, and the previous description was an example of how podcasting can be used to achieve goals in the classroom.

Dr. Zembal-Saul then asked the sixty student teaching interns from her methods course to reflect on teaching with technology. She mentioned how interns frequently cited this podcasting project and gave several interns' opinions. One intern said, "The science podcast assignment influenced me to consider creating podcasts in my future teaching career to enhance my students' opportunities to use their multiple intelligences" (C. Zembal-Saul, personal communication, April 2006). Another intern said, "The podcasting assignment was very beneficial because it helped me realize a different means for student learning. Podcasting is great for auditory learners and I think it can be a great supplement to lessons in a variety of subject areas" (C. Zembal-Saul, personal communication, April 2006). Throughout my inquiry, I had thought that podcasting

could supplement lessons and help learners with different intelligences. These quotes from student teachers with podcasting experiences reinforced my initial thoughts.

I asked Dr. Zembal-Saul if she believed incorporating podcasts into the classroom would always be beneficial or if there are other factors involved. She responded,

> "As with any technology tool or resource, the key to determining how effective they will be in supporting students' learning is *how* they are used. Thoughtful consideration needs to be directed at what value is added by integrating technology and whether it allows you to actually do something better with it than without it… The underlying purpose [of the podcast assignment] was still for interns to learn the content. However, by creating and producing podcasts for an audience of fifth graders, the assignment addressed other learning goals as well, such as considering how to adapt content in appropriate ways to make it accessible (and interesting) to young learners, which is no small task" (C. Zembal-Saul, personal communication, April 2006).

The ideas in this quote were used as a foundation for my inquiry research. I was confident that I could implement a podcasting project in my classroom, but I strived to integrate podcasts into the Mexico unit to educate my students in a more meaningful way than without the podcasts.

Dr. Zembal-Saul also suggested I look into Apple Computer's Educational Resources website. For background information on my topic, I decided to use this website to learn the actual definition of a podcast. According to Apple, a podcast is "audio or visual content that is automatically delivered over a network via free subscription. Once subscribed to, podcasts can be regularly distributed over the Internet

within your school's network and accessed with an iPod, laptop, or desktop computer, both Macs and PCs" (Apple Computer, 2006, para. 2). On March 3rd, 2006, I attended a professional development seminar on podcasting sponsored by Apple and the Pennsylvania State University. I learned about the iLife '06 applications, planned and created a podcast in Garage Band, learned how to share podcasts via iTunes Music Store, and how to post podcasts to websites developed in iWeb.

While there is no literature on podcasts, I found various books that researched incorporating technology into the classroom. In the book Integrating Technology: A Practical Guide, the authors mention schools should better serve the needs of today's students by integrating technology and following the four A's. These include providing *access* to technology, *assimilating* new technologies into the curriculum, *accommodating* the curriculum to meet children's needs, and finally getting students to *actively* work with technology. The book mentions how the National Science Foundation and the folks at Apple computer have funded considerable research and "in summary, the research suggests that if you provide the four A's, you can count on better attendance, better scores on the tests, more extensive and better writing, and a more positive attitude toward school" (Lengal & Lengal, 2006). The text does not directly mention podcasts, but hopefully my inquiry will have positive effects if I provide students access to podcasts and assimilate this new technology into the curriculum.

Integrating podcasts is a new skill for me to develop, along with collecting data and assessing student learning. The book Using Technology Evaluation to Enhance Student Learning gave me insights on assessments. The book noted that technology could be used for many purposes. It stated:

"Some technology proponents argue that asking for research demonstrating the educational benefits of information technology is akin to asking for research showing the educational benefits of the pencil. Both are tools that can be used for a wide range of purposes and under many different circumstances. We cannot evaluate the impact of technology per se; instead, we must define more specific practices incorporating particular technology tools or supports and evaluate the effects of these" (Means & Haertel, 2004).

This quote is very pertinent to my entire inquiry. I am using the technology of podcasts, but my data collection and my assessments will depend on the uniqueness of my inquiry plan and the exact way I carry out my evaluations.

The Inquiry Plan

Inquiry Plan Description

The first stage of my inquiry plan was to create a lesson to introduce the word "podcast" to my students and collect base line data (Appendix B). The students' initial task was for them to use words or pictures to tell me their definition of the word "podcast." Then I had students gather for a large group discussion and a morning letter about podcasts. The students read a letter explaining the concept of a "podcast" and listened to a podcast I created explaining the morning letter in more detail. The lesson concluded with a student survey.

The next stage in my inquiry plan was to have students create podcasts that correlated with the standards of the unit on Mexico. The class was divided into five small groups of students. I met with one group at a time during a Writer's Workshop

period. Each group met with me for four or five sessions, in which the students would research an aspect of Mexico, choose facts relevant for their topics, write a script based on their facts and ideas, and record their voices into my computer. The following steps were used to convert their recording into a podcast.

- Their voices were recorded into the application Garage Band and the created podcast was sent to the application iWeb.
- Through iWeb, I made a website by adding the podcast, pictures, and text and published the results into a folder on my computer.
- I copied the folder into my Penn State webspace, which transferred the podcast website onto the Internet (Appendix E3).

The final stage of my inquiry plan included carrying out further research with the students' podcasts. I created a timeline to carry out this research (Appendix E1) I sent a parent letter home with my students explaining the podcasts, informing them of the classroom website, and inviting them to the podcast culmination event (Appendix E2). The students in my classroom created visual aids and presentations to present their podcasts to their parents. A first-grade classroom allowed us to practice our podcast presentations as a rehearsal for the culmination event. After the culmination, I had the parents answer surveys to reflect on the podcasts (Appendix F). I also assessed my students with a follow-up survey similar to the base line survey and with an assessment in which I interviewed each child individually to determine if they acquired information about Mexico through the podcasts.

In summary, I introduced the concept of podcasting to my second-grade students, and every child took part in making a podcast with a small group. The podcasts were

submitted online and the parents were able to view the website at home and listen to the

podcasts during the culmination event. I concluded my research by giving my students a

follow-up survey and a post assessment.

Data Collection

Student Pre-Assessment

Before introducing podcasting to my students, I gave my students a pre-

assessment to determine their prior knowledge of podcasts. All the students were given

paper with white space for drawing and lined space for writing. I told my class that I was

going to write a brand new word on the chalkboard. After writing "podcast" on the

board, I instructed the students to take a guess at the definition by using words or pictures

(Appendix B). For students that finished early, there was an optional extension activity

to define the word "internet" on the back of their papers. Twenty-two students took the

pre-assessment.

Student Survey (Pre)

At the conclusion of my introductory lesson on podcasts, the students completed a

brief survey focusing on their opinions about podcasts and technology. Every student

received a half sheet of paper with four numbers on it. Beside each number were three

smiley faces: a sad face, an indifferent face, and a happy face (Appendix C1). I read four

questions verbally to correspond with the numbers on the students' papers.

1. Do you like using computers in school?

2. Do you want to listen to more podcasts?

3. Do you want to make a podcast?

4. Do you like podcasts?

After I read each question, I reminded the students that the sad face represented the answer 'no,' the indifferent face represented the answer 'maybe,' and the happy face represented the answer 'yes.' The students were asked to mark their choices. Twenty-three students took this survey.

Podcast Preparation Work Samples

I collected all of the students' work during the creation of each podcast (Appendix D1). Every child wrote on a piece of paper pertinent facts for the topic of his or her podcast from a variety of books and information that I provided (Appendix D2). I helped the students combine and narrow down a list of important ideas about their topic. Each student wrote a script, which included the approved information (Appendix D3). Every student used the script to record his or her voice into my laptop computer. I also collected the posters the students made for the culmination event (Appendix D4).

Completed Podcasts and Performance

When a group was finished, I uploaded their podcast online and shared it with the rest of the class. The students also performed a small presentation for their parents during the culmination event.

PDA Observations/Feedback

My Professional Development Advisor (PDA) gave me written observations and feedback for my introductory lesson on podcasting and for the culmination event (Appendix H).

<u>Parent Survey</u>

Fourteen parents attended the podcast presentations in the school library. After the students were dismissed back to the classroom, I gave each parent a survey to complete (Appendix F). The parents answered questions regarding their opinions and their child's opinions and were allowed to write any additional comments. The parents circled yes or no for the following eight questions.

1. Did you enjoy coming to school to see the podcast presentations?
2. Does your child enjoy using technology?
3. Do you want your child to learn to use technology in school?
4. Did your child know about podcasts before this year?
5. Did your child talk at home about making a podcast in school or tell you about how podcasts worked?
6. Did your child enjoy the podcast project?
7. Did you have an opportunity to view the podcast website?
8. Do you feel that making the podcast provided a valuable experience for your child?

<u>Student Survey (Post)</u>

The day after the podcast culmination, I gave the students a post-survey similar to the student pre-survey. The students circled the corresponding smiley face that represented their answer to my questions (Appendix C3). The first two questions were exactly the same as the pre-survey.   The third question was changed to "Did you like making the podcast?" The fourth question was changed to "Would you like to make another podcast sometime?" Twenty-three of my students completed the survey.

<u>Student Assessment in Content</u>

The students included many facts about Mexico in their podcasts and I decided to determine the facts that were related to the unit standards (see Data Analysis: Completed Podcasts and Performance). In order to assess if the students learned about Mexico while

making the podcast, I created a fifteen-question assessment (Appendix G2). The first eleven questions were based on the standards-related facts the students included in their podcasts. I asked two or three questions from each podcast to see if students learned information from their podcast and from their peer's podcasts. For question twelve and thirteen, I directly asked the students if they learned about Mexico from making a podcast and if they learned about Mexico from listening to the other podcasts. While not part of the typed survey, I ended the assessment by asking the students their favorite and least favorite part from their podcasting experience.

I gave this assessment to my students individually. For two days during lunch and recess, I called the students one at a time to meet with me outside the cafeteria and answer the questions. I provided a map of Mexico without any text for each student during the assessment (Appendix G3). I asked the students the following fifteen questions and wrote down their verbal answers.

1. Can you name the country above/to the North of Mexico?
2. Can you name a country below/to the South of Mexico?
3. What is the capital of Mexico?
4. Where in Mexico can you find the desert?
5. What is an animal that lives in the desert?
6. Where in Mexico can you find mountains and plateaus?
7. Are some mountains in Mexico volcanoes?
8. Where in Mexico can you find the rainforest?
9. What is a peninsula?
10. Who lived in Mexico before the Spanish arrived?
11. Can you name any of the Indians from Mexico?
12. Did you learn about Mexico from making the podcast?
13. Did you learn about Mexico from listening to the other podcasts?
14. What was your favorite part about making the podcasts?
15. What was your least favorite part about making the podcasts?

The first three questions were from the "Mexico: Information" podcast. If students answered the first two questions with an educated guess, as in 'Canada,' 'Texas,'

or 'South America,' I clarified that I was looking for the name of a country directly above or below Mexico. Questions four, five, and nine were from the "Mexico: The Desert" podcast. Questions six and seven were from the "Mexico: Mountains and Plateaus podcast," while questions eight and nine were from the "Mexico: Rainforest" podcast. The definition of a plateau, question nine, appeared in two podcasts. Questions ten and eleven were from the "Mexico: History" podcast, and the last four questions were used as an additional survey for the students. Twenty-two students took the assessment.

Data Analysis

Student Pre-Assessment (Appendix B)

I sorted the twenty-two students definitions of the word 'podcast' into similar answers. Ten of the students used the word 'pod' or 'cast' in their answers. Half of those students did not use any other descriptive words and had definitions like, "A podcast is a cast." Two of the ten students predicted a podcast was like a cast on a broken arm, one student thought it was a 'pod' on a fishing pole, and two students described a podcast as a 'forecast' and a 'broadcast.' Out of the remaining twelve students, three students wrote that they did not know the definition, and five students gave incorrect answers such as 'a U.F.O' or a 'scientific animal name." Two students drew a picture for the definition, which to the best of my judgment, the pictures did not represent a podcast or any technology. The final two students did show some prior knowledge of the word podcast. One student wrote, "A podcast is on an iPod. You can watch sports or highlights." The other student wrote "An iPod" and drew a picture of an iPod as well. I chose not to analyze the definitions for the word Internet, because that was an extension activity to keep students thinking about technology, not to collect more data for my inquiry.

Student Survey (Pre)

To analyze the data from the pre-survey, I created a table in Microsoft Word with five columns and twenty-four rows (Appendix C2). The top row had the headings of the table for the students' names and the four questions. The first column consisted of the class roster, which I organized by podcast groups (the first five names are in a group, the next five are in a group, etc.). In the rest of the columns, I typed in a sad, indifferent, or happy smiley face depending on the students' answers. The first question was "Do you like using computers in school?" Eighteen students said yes, four students were indifferent, and one student said no. The second question was "Do you want to listen to more podcasts?" I asked this question after the students heard a sample podcast I created and nineteen students answered yes, two were indifferent, and two students said no. The third question was "Do you want to make a podcast?" Sixteen students said yes, three were indifferent, and four students answered no. The final question was "Do you like podcasts?" Eighteen students said yes, three students were indifferent, and two students said no. I will continue analyzing these results when I receive the post surveys.

Podcast Preparation Work Samples

I saved all the students' work from their podcast groups (Appendix D). I was able to look through all the papers and double check that each student participated in the research of a topic and the writing of the script. I found that I had writing samples from every student in each stage of the process.

Completed Podcasts and Performance

I received a list of standards from the school's curriculum to be addressed during the primary unit of Mexico (Appendix G1). I listened to each podcast and made a tally mark by the standard when I heard a fact that helped address the standard. Once a standard received multiple tally marks, I considered the podcast successful in helping to address the standards. Four of the five podcasts addressed the geography standards, including identifying and locating places and regions, identifying the physical characteristics of places and regions, and identifying the human characteristics of places and regions. The fifth podcast addressed the history standard, specifically: identifying individuals and groups who have made significant political and cultural contributions to world history. The economics and civics and government standards received no tally marks while listening to the podcasts.

PDA Observations/Feedback

My PDA observed my introduction to podcasts lesson and the podcast culmination at the end of the Mexico unit (Appendix H). For each lesson, she wrote observations and feedback for me on a piece of paper. I read all of her comments and marked her observations that I will want to use as evidence for my claims.

Parent Survey

Fourteen parents came to the podcast culmination. Twelve parents filled out the surveys before leaving the culmination (Appendix F). At the time the data was analyzed, not all the surveys were returns. My PDA, mentor, and I agreed that these twelve surveys would be sufficient data to analyze. I read all the surveys and recorded how many parents answered yes and no to each question. Question 1: All twelve parents

responded that they did enjoy coming to school to see the podcast presentations.

Question 2: Ten of the twelve parents said their child enjoys using technology, while one parent did not know the answer, and another parent wrote, "Well, mainly Gameboy!"

Question 3: All twelve parents want their child to learn to use technology in school.

Question 4: Eleven of the parents responded that their child did not know about podcasts before this year and one parent did not know the answer. Question 5: Ten of the twelve parents said their child did talk at home about making a podcast in school or told them about how podcasts worked, while two parents said their child did not talk at home about podcasts. Question 6: All twelve parents said their child enjoyed the podcast project. Question 7: Six parents did not have an opportunity to view the podcast website, five parents did view the website, and one parent tried to view the website but had technical difficulties. Question 8: All twelve parents felt that making the podcast provided a valuable experience for their child.

Ten of the parents wrote additional comments at the bottom of the survey. All of the comments were complimentary, with one of the comments adding a suggestion to have the presentation more conducive to listening. I read all of the comments and will use some as evidence for my claims.

<u>Student Survey (Post)</u>

I used the same table from the pre-survey and changed the answers to fit into the post-survey (Appendix C4). I looked at all the responses and noted if any increased or decreased between the surveys. On the post-survey, fifteen students said they did like using computers in school, four were indifferent, and four disliked using computers in school. This differs from the same question on the original survey, in which eighteen

students liked using computers in school, four students were indifferent, and one student disliked using computers. Four students who liked using computers changed their answers during the second survey, while only one student became more favorable about using computers in school. I believe podcasting was not a reason behind the less favorable responses since students never touched a computer during the making of their podcast. The next three questions are more applicable to this inquiry.

On the post-survey, the second question, "Do you want to listen to more podcasts?" resulted in twenty students saying yes, two saying perhaps, and zero saying no. This differs from the same question on the pre-survey, which had eighteen students saying yes, three saying perhaps, and two saying no.

The last two questions from the first survey asked the students if they wanted to make a podcast and if they liked podcasts. For my second survey, I changed those questions to "Did you like making the podcast?" and "Would you like to make another podcast sometime?" While the answers to these questions cannot be directly compared between the two surveys, the post-survey questions provided direct feedback of the podcasting experience. Nineteen students stated that they liked making the podcast and three students were indifferent.   All seven students that were unsure or did not want to make a podcast in the first survey decided that they did like making their podcast. The last question on the student survey asked the students if they would like to make another podcast sometime. The results were nineteen students who would like to make another podcast, two who were indifferent, and two that would not like to make another podcast sometime.

Student Assessment in Content

From the student post-assessment, I had fifteen responses from each one of the twenty-two students. I used Microsoft Word to create a table to include the responses from the first thirteen questions (Appendix G4). The first column was color-coded by podcast groups and included every child's name. The next thirteen columns represented each question from the assessment and were also color-coded based on the podcast the question came from. Then every row had a student's name and thirteen marks to represent if he/she answered a standards-related question correctly (Y) or incorrectly (--). Therefore, one could also determine from the chart and the color scheme how the members of a particular podcast group answered their own questions versus how they answered the questions from the other podcast groups.

The first five students created the 'Mexico: Information' podcast, which corresponded with the first three questions. 77% of the entire class answered the first question correctly, 54% the second question, and 86% the third question, which can be compared to the first five students answering the questions correctly 80%, 100%, and 100%, respectively. The next four students were from the 'Mexico: The Desert' group. The answers to questions four, five, and nine were found in this podcast, and the class answered those questions 86%, 86%, and 82% correctly. The four members of this podcast answered the same questions 100%, 75%, and 100% correctly.

I found similar results for the next two podcast groups. The four members of the 'Mexico: Mountains and Plateaus' group had questions six and seven. 100% of the members answered those questions accurately, compared to 86% and 95% accuracy for the class. The four members of the 'Mexico: History' group had questions ten and

eleven, and 100% of the members answered those questions accurately, compared to 45% and 73% of the class answering correctly. After giving the assessment, I realized that question number ten, "Who lived in Mexico before the Spanish arrived?" was not a valid question. The answer I sought, Indians, is a historically inaccurate nickname for the indigenous people. The question was slightly flawed too, because the land was not called 'Mexico' in this time period, and these people continued living in Mexico after the Spanish arrived. The important fact is that 73% of the class knew the names of the people groups, the Olmecs, Mayans, and Aztecs.

The last podcast created was titled, 'Mexico: Rainforest.' The five members of that group had 80% accuracy answering question number eight, while the class was 86% accurate. This group was 60% accurate for question number nine with the class being 82% accurate. It is important to note that this group had accuracy percentages ranging from 0% to 60% for six of the remaining nine questions and had some of their best results from their own podcast questions.

For question number twelve, every student said they did learn about Mexico from making the podcast. In question thirteen, twenty-one out of twenty-two students said they learned about Mexico from listening to the other podcasts. The student who did not learn from his/her peer's podcast was an English as a Second Language student who probably had a hard time comprehending the other podcasts.

 I also read through the students' responses to their favorite and least favorite aspect of making a podcast (Appendix G5). I sorted the students' responses into similar answers. Out of twenty students that answered these two questions, half of the students responded their favorite part was recording their voices into my computer. Four other

students enjoyed 'making the podcast' the most and one student enjoyed 'all of it.' The other five responses did not involve the recording of voices on my computer. For the last question, five students responded that they did not have a least favorite part, and six students answered hearing how their voices sounded was the least enjoyable part. The remaining nine answers had varied responses.

Learning From Inquiry

What I Learned

Claim 1:

The incorporation of podcasts into the classroom can provide motivation and interest to students as they are involved with instruction.

Claim 2:

The integration of podcasts can enhance the existing curriculum as students learn more about the subject matter being studied.

Claim 3:

Appropriate use of technologies through presentations provides a way to celebrate children's work.

Claim 4:

Student interest in podcasting is expressed in student-initiated discussion outside the classroom.

Evidence

Claim 1: The incorporation of podcasts into the classroom can provide motivation and interest to students as they are involved with instruction.

The students were given a survey on the day they were introduced to podcasting and a similar survey after all of their podcasts were completed. On the first survey, eighteen students said that they wanted to listen to more podcasts, three students were indifferent, and two students did not want to listen to more podcasts. On the post-survey, twenty students said they wanted to listen to more podcasts and three students were indifferent. Similarly, four students from the first survey did not want to make a podcast. The post survey revealed that nineteen students liked making the podcast, three were indifferent, and no students disliked making a podcast. All of these results state the fact that the majority of the students in my classroom enjoyed making a podcast and would like to listen to more podcasts. Some students did not have a strong opinion, but zero percent of the students disliked podcasts or did not want to listen to more podcasts. These findings point to the claim that podcasts can provide motivation and interest among students.

In the last two questions on the student assessment, I asked the students to tell me their favorite and least favorite part of the podcast. Almost three-fourths of the class enjoyed the voice recording the most, which perhaps shows the motivation of the podcasting project compared to research projects without technology. During the individual assessments, one student commented that his least favorite part was doing research, because it was 'kind of boring.' I then asked him if it helped him do the research if he knew the recording came next. His answer yes shows that he was

motivated to learn the content first because the recording of the podcast came next. Another student commented during the assessment, "[The podcast was] fun, because you can learn and listen to your saying." This student was interested in podcasting because it allowed him/her to learn about Mexico and record and listen to his/her voice.

Additional evidence comes from the parent survey. Every parent surveyed said his or her child enjoyed making the podcast. This compliments my findings that there were no children that disliked making the podcasts. One parent commented on the survey, "The exercise was outstanding in two ways. One, it gave the kids experience with the computer and what may be available. Two, it provided a fun way to learn about Mexico." This parent appreciated how I taught technology in an enjoyable way for students to learn about Mexico. Another parent wrote, "My child really enjoyed this project and the use of technology. He was nervous about his speech, but was glad he tried it and did his best." A child nervous about his/her speech may have been unmotivated to complete a project involving his/her voice; however, this particular podcast project was enjoyable and motivating to a student who was nervous about his speech.

Claim 2: The integration of podcasts can enhance the existing curriculum as students learn more about the subject matter being studied.

The post assessment showed the students' knowledge on the information presented in the podcasts. The analysis of this post assessment stated that the entire class scored 73% or higher on nine out of the eleven standards-related questions. One of these questions, in which students scored a 45% on, was discounted due to fallacies with the

question. The class had a score of 86% or higher on six out of the ten remaining questions. The class exceeded my expectations on learned subject content. It is important to note that some students may have had prior knowledge about the assessed material.

Four out of five podcast groups scored higher than the rest of the class on the questions related to their podcasts. For eight of the questions, the group that created the podcast answered the questions 100% correctly, while the class had percentages as low as 45% and 54% correctly. This is evidence that a child who created a podcast learned the subject matter more thoroughly than a child who just listened to a podcast. The last group that created a podcast did not score as high as the class on the related questions, but the group members collectively scored higher on their questions compared to the other questions. In other words, these students learned more about the subject matter in their podcast than the subject matter from other podcasts.

During these individual assessments, I asked one student all the questions from the podcasts other than his/her own. When I asked this student the first question from his podcast, he asked me, "Do I really have to answer this question. You know I know the answer." This student did not make similar remarks during the other questions, because he knew that he was an expert on the subject matter in his podcast. After answering the two related questions correctly, the student commented, "I knew all that from the podcast. I didn't know that before the podcast, but now I do." This student was referring to the podcast he created, which shows that students can learn more about the curriculum while creating a research podcast.

One parent commented on his/her survey, "Very well done on three major points. One, the knowledge of Mexico they learned. Two, the technology they learned. Three, standing in front of a crowd and speaking." This parent observed that the podcast project contributed to the knowledge of Mexico the students learned.

Claim 3:

Appropriate use of technologies through presentations provides a way to celebrate children's work.

My PDA wrote observations from the culmination event and stated, "Having five stations of student presentations and having parents rotate was an excellent idea. The children were very proud of their presentations and worked quite well in their small groups. It was an excellent showcase of how children can use technology to enhance learning. Everyone loved learning about podcasts!" There were five centers during the podcast culmination. Each center provided a source of technology to play the podcasts. Two centers listened to the podcasts from the class website from an iBook, one center listened from iTunes on an iBook, one center listened from an iPod, and the last centered listened to the podcasts on a CD in a CD player. These various forms of technology provided the means for the students to share their podcasts. The presentations celebrated the students' work through the students speaking, sharing artwork, and incorporating technology.

My PDA spoke with each of the parents who attended the culmination event and stated to me, "Parents unanimously agreed that this presentation was a wonderful way to showcase what their children had learned about Mexico and podcasting." Having every

parent compliment the podcast presentations showed how technology could be successfully used to show children's work.

Five days after the culmination, a parent spoke with my PDA and said, "Even though my husband couldn't attend, he and my son had great fun listening to the program at home after the performance. My son was so proud to present in front of me at school and privately at home with his dad." The podcasts were available on a website on the Internet, which allowed parents to celebrate their child's work at home, if a parent could not attend the culmination at school.

Claim 4:

Student interest in podcasting is expressed in student-initiated discussion outside the classroom.

The parent survey provided evidence to support this claim. Ten out of the twelve parents surveyed stated that their child talked at home about making a podcast in school or told them about how podcasts worked. The podcasting project was interesting to the students and contributed to many discussions outside of school. One parent reiterated this point on the survey with a comment, "[My child] really enjoyed this project and the use of technology. He talked about it at home."

Another parent verbally spoke to my PDA and said, "My son was so excited about his podcast presentation and talked about it for weeks at home before the performance." This child was in the first group to create a podcast and talked about his podcast at home from the time he created it to the time of the culmination event.

Conclusions

Dr. Zembal Saul stated in my interview, "As with any technology tool or resource, the key to determining how effective they will be in supporting students' learning is *how* they are used." Through my inquiry, I have found truth in this statement. I decided to use podcasts in my classroom, with no guarantee that this particular technology tool would effectively support student learning. I used podcasts to allow students to learn and share important information about Mexico. I found this motivated students, enhanced the curriculum, and celebrated the students' work.

Since there were many positive outcomes after the incorporation of podcasts in the classroom, I am confident that I will use podcasts in my future teaching. Prior to starting my research, my opinion of podcasting was not as optimistic. This inquiry has also changed my perspective on other forms of technology. I believe that all forms of technology can support student learning, depending on how the technology is used. This thought will affect my future teaching, because I will be open to incorporating other forms of technology in my classroom.

This inquiry will have other implications on my upcoming teaching practice. I created and analyzed an assessment for my students at the end of the Mexico unit, because there were not any previous assessments for me to use. I was excited to find out the student learning that occurred as a result of the podcasts. This experience has made me eager to create and learn from original assessments in my future classrooms. Similarly, I have gained appreciation for determining my students' interests and getting feedback on my teaching and lessons. I used surveys to gather student feedback during

this inquiry. I will continue to ask students about their interests and opinions. I also plan to use the information I gather to change and improve future lessons. For example, if I found that a class was particularly motivated by a certain activity, I would be sure to include similar activities for the students during the year.

Finally, having a classroom website allowed families to access the podcasts out of school. Parents expressed that they were appreciative of this resource. I will continue to provide websites for families in the future to keep parents up-to-date on happenings in the classroom. Every parent that attended the podcast culmination was excited for the opportunity to celebrate his or her child's work. I believe inviting parents to the classroom is beneficial, and I plan to encourage parent involvement in future activities.

New Wonderings

After developing a main question for my inquiry, implementing podcasts in my classroom, and collecting and analyzing data, I now have more questions that will help guide my teaching as I continue this inquiry now and in the future.

- What would be the affect of introducing my students' podcasts to other primary classrooms at Easterly Parkway?
- After using podcasts in the classroom, would my students be more motivated and/or willing to have different technologies integrated into the classroom?
- How could the created podcasts, which are on the Internet, affect the motivation of students in other parts of the world?
- What modifications for podcast implementation would be necessary in grade levels other than second-grade?

Resources

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